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— on the —

**PLA**

**PROTRACTED WAR  
AGAINST THE PRC**

Joshua Arostegui  
Editor



## “The Army’s Think Tank”

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# The 2024 Carlisle Conference on the PLA: Protracted War Against the PRC

Joshua Arostegui  
Editor

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## Foreword

As tensions between the United States and the People's Republic of China continue to escalate in the Indo-Pacific, concerns this rivalry could erupt into conflict have increased. Given the Indo-Pacific is an economically vital region with a dense network of maritime routes and critical choke points, the expectation a future conflict between the two powers will be limited and short may be optimistic. Given the stakes, the conflict is equally, if not more, likely to evolve into a large-scale, protracted war. The People's Republic of China is preparing for that contingency. Its history and study of protracted war has led to a long-running military modernization program designed to improve the People's Liberation Army's capabilities to command and fight in a future regional conflict against the United States. Throughout 2024, analyzing China's efforts to prepare for a protracted war against the United States served as the inaugural research agenda for the US Army War College's newly established China Landpower Studies Center.

The 2024 Carlisle Conference on the People's Liberation Army, an annual Strategic Studies Institute event, served as a capstone for the China Landpower Studies Center's research by bringing together multiple panels of expert researchers to present their findings on the People's Republic of China's understanding of and capability to conduct a protracted war in the Indo-Pacific region. More than 100 participants from the People's Republic of China—watching defense and national security community of interest joined the China Landpower Studies Center as it took the lead in hosting the center's first conference in October 2024. Keynote speakers provided unique perspectives on the major concerns surrounding historical and modern-day protracted wars. Experts from the defense, think-tank, and academic fields provided their research on and analyses of how the People's Republic of China and the People's Liberation Army are preparing for a protracted war against the United States in four thought-provoking panels. Insights gained from the presentations led to comprehensive seminar discussions between panelists and conference participants, which resulted in a better understanding of how the People's Republic of China is preparing for a conflict defined by sustained attrition and strategic patience, rather than quick escalation and resolution.

The papers from the conference are included in this volume to inform policymakers, analysts, and scholars about the depth and breadth of the People's Republic of China's preparations for protracted war. This collection of research does not predict war, but it does illuminate how seriously Beijing is taking the prospect—and the costs—of a prolonged war. Only by grasping the nature of a potential protracted conflict can the United States and its allies hope to develop

Arostegui

coherent strategies that preserve regional stability while deterring aggression. This volume offers both a warning and a foundation for an informed response.

C. Anthony Pfaff  
Director, Strategic Studies Institute  
and the US Army War College Press

## Executive Summary

The US Army War College's Carlisle Conference on the People's Liberation Army was held on October 16–17, 2024, at Carlisle Barracks, Pennsylvania. For the first time, the Strategic Studies Institute's China Landpower Studies Center hosted the keystone annual event, as the center's researchers brought together China specialists from the US Department of Defense, the US Intelligence Community, think tanks, academia, and the private sector to discuss the People's Republic of China's views on and capability to carry out a protracted war in the Indo-Pacific.

The conference included four panels designed to provide better explanations to policymakers in the US government and the Department of Defense about the advantages and limitations the People's Republic of China will face in the event the People's Liberation Army finds itself participating in a protracted war in China's near abroad. The first panel's specialists presented their research on the People's Republic of China's historical and modern views of protracted war, and the People's Liberation Army's lessons learned from other countries' recent protracted wars. The second panel's senior defense analysts presented their findings on the assessed strengths and weaknesses of People's Liberation Army services in the land, air, and maritime domains. The third panel's experts outlined the People's Liberation Army's strategic- and operational-level decision-making entities, while also presenting the tensions that could occur at both levels when commanding forces in a protracted war. Finally, presenters on the fourth panel shared their impressions of how China, Russia, and North Korea could cooperate in a protracted war in the Indo-Pacific.

The panel members authored the in-depth analytic chapters found in this conference volume. Key takeaways from their panels and papers include the following.

- The People's Liberation Army and its researchers have been using the People's Republic of China's own history and recent foreign case studies to prepare for a potential large-scale conflict.
- Since a protracted war will stress the People's Liberation Army's sustainment capabilities, each service has made discernable improvements to its individual supply and service support elements, but medical and equipment support issues remain problematic.

- The People's Republic of China regularly tests its joint command-and-control structures during exercises and domestic operations, but as a potential protracted war grows wider in scope, the opportunities for a breakdown will increase at both the strategic and operational levels.
- With sufficient empirical evidence of how the People's Republic of China and North Korea are supporting Russia's efforts in the Russia-Ukraine War, China could rely on Russia and North Korea for limited resource support during a protracted war.

The conference did not assess the People's Republic of China's chances of success in a future protracted war. Rather, the conference served to inform participants and readers that the People's Liberation Army is learning from the experiences of other modern militaries and is making headway in overcoming many of the shortfalls it might face in a protracted conflict. The conference's findings should serve as a baseline for future research on and analysis of this increasingly relevant topic.

## Introduction

The rise of the People's Republic of China as the US Department of Defense's pacing threat, as well as China's increasingly aggressive posturing and activities in the Indo-Pacific, has increased the potential for a great-power, protracted war in the region. As the US military grapples with the difficulties that understandably result from large-scale combat operations in the region, the People's Republic of China has been making its own preparations for such operations.

To inform the China-watching community of interest about the progress the People's Republic of China and the People's Liberation Army (PLA) have made in preparing for protracted war, the China Landpower Studies Center at the US Army War College Strategic Studies Institute hosted the annual Carlisle Conference on the People's Liberation Army on October 15–16, 2024, at Carlisle Barracks, Pennsylvania. The conference consisted of keynote speakers and four panels designed to assess the People's Republic of China's understanding of and capability to carry out a protracted war in the Indo-Pacific. Each panel member presented their paper to stimulate follow-on seminar discussions, leading to additional insights that improved the chapters in this book.

In the first chapter of this conference volume, Jerad I. Harper sets the foundation for the rest of the book by presenting a framework for analyzing a protracted war between the United States and the People's Republic of China. Drawing insights from a 2024–25 US Army War College study, Harper helps readers understand how the Chinese Communist Party and the People's Liberation Army conceptualize, prepare for, and may fight a protracted war against a US-led coalition. He also provides a definition of protracted war, which other authors used to frame their analyses: a large-scale, long-term conflict that can last for an extended period of time, with an early protracted war phase that lasts from 30–45 days until around six months into the conflict, followed by a late protracted war phase that begins after six months.

The remainder of this conference volume is organized to mirror the topics of the four conference panels. In the first section, the authors review and analyze the Chinese Communist Party's understanding of protracted war through historical and modern lenses. In chapter 2, Daniel Rice examines the core concepts in Mao Zedong's speech, "On Protracted War," and analyzes how modern authors have adapted these ideas to contemporary Chinese strategy. His research highlights the fact the People's Republic of China views the concept of protracted war as multidimensional, extending beyond the military domain to encompass broader strategic thinking. Rice's insights provide readers a clearer understanding of how China views protracted war much differently from the West.

Dennis J. Blasko, in chapter 3, examines the theoretical underpinnings of the concept of protracted war, established by Mao Zedong in “On Protracted War,” and contrasts those theories with the People’s Republic of China and the People’s Liberation Army’s practical experiences in conflicts. According to Blasko’s research, the Chinese Communist Party has historically engaged in protracted wars, with the Second Sino-Japanese War serving as the prototypical example, and with subsequent conflicts like the Chinese Civil War, the Korean War, and the border conflict with Vietnam also exemplifying protracted wars.

To complement the previous two chapters’ emphasis on Chinese experiences with and contemporary views on protracted war, Jake Rinaldi assesses what the People’s Liberation Army has learned from studying recent foreign conflicts in chapter 4. Given the People’s Liberation Army’s lack of recent combat experience, Rinaldi’s research demonstrates the study of certain technologies, critical operations, and tactical approaches in modern campaigns like the Russia-Ukraine War and the Israel-Hamas War is key to the People’s Republic of China’s strategy for enhancing its own capabilities in a protracted war.

The second section of this conference volume provides readers with a better understanding of the People’s Liberation Army’s advances and limitations in sustaining its forces in a future protracted war. In chapter 5, Jake Vartanian analyzes the PLA Army’s ability to endure high-intensity, protracted wars in the land domain. Vartanian notes, in recent years, the People’s Liberation Army has improved its ability to mobilize reservists, regenerate combat power through equipment maintenance, and leverage the defense-industrial base, but vulnerabilities remain in the army’s medical-support functions.

In chapter 6, Conor M. Kennedy examines the development of logistics support within the PLA Navy. His research places particular emphasis on how the PLA Navy keeps its ships fueled, armed, and in good operating condition to sustain operations. Kennedy also highlights China’s integration of capabilities to replenish at sea and replenish ashore as a key support development that enables the fleet to operate further from the coast.

Eli Tirk, in chapter 7, assesses current trends in maintainer and pilot education in the PLA Air Force to determine whether the People’s Republic of China is adequately preparing its air domain forces to succeed in a future protracted war. Tirk also examines whether the educational trends are suited to support the reconstitution of personnel and the preparation of PLA Air Force infrastructure to sustain operations under contested conditions. Finally, Tirk assesses whether the PLA Air Force has met benchmarks to support multiple, competing logistical efforts in a protracted, large-scale conflict.

The challenges the People's Republic of China and the People's Liberation Army would likely face in commanding and controlling a future protracted war serve as the focus of this conference volume's third section. In chapter 8, Rick Gunnell analyzes how the Chinese Communist Party's Central Military Commission would likely make strategic decisions and function in managing a future protracted war. Gunnell explores how the Chinese Communist Party and Central Military Commission command-and-control structure operates in protracted competition and in protracted conflicts, like the one along the Sino-Indian border, and anticipates how those organizations might evolve in a protracted war.

In chapter 9, Roderick Lee evaluates whether PLA joint theater commands are capable of exercising command and control in a protracted war. He highlights friction points in the theater command-and-control system that may erupt over the course of a deliberate, protracted war with a great power. Using a Taiwan invasion scenario as the case study, Lee determines expanding and shifting areas of responsibility would likely create significant friction among the People's Liberation Army's theater commands as the war progressed.

Joel Wuthnow, in chapter 10, examines how the People's Republic of China would manage a protracted war by analyzing the impact of its decision-making practices on the outcomes. Using four scenarios based on variations in the scale of the conflict and the degree of micromanagement, Wuthnow determines, though the People's Liberation Army would face challenges in commanding forces as the scale of the conflict grew, a decentralized command model could improve battlefield performance as long as the Central Military Commission refrained from interfering excessively.

The fourth and final section of this conference volume focuses on the People's Republic of China's potential use of partner states in a future protracted conflict. In chapter 11, David R. Stone explores the constraints and potential support Russia could offer the People's Republic of China in a protracted war in the Indo-Pacific. He recognizes, in the near term, Russia's ability to assist China would be constrained due to the Russia-Ukraine War, but even if that war ended, Moscow's priority would be to rebuild its military and economic resources. Stone notes long-term strategic interests and historical tensions between Russia and China could limit the extent of Russia's support, but Moscow could provide indirect support through diplomatic assistance, military distractions, and limited economic assistance.

In chapter 12, Markus Garlauskas assesses the potential involvement of North Korea in a Chinese protracted war against a US-led coalition. Drawing on historical examples, tabletop exercises, and structured analytic techniques, he argues Pyongyang's participation would likely escalate and prolong

such a war. Garlauskas emphasizes the importance of considering North Korea's role in assessing and planning for a Sino-American war, given North Korea's potential to transform the conflict into a protracted, land-centric war with massive force requirements.

Brian Carlson authored the final chapter of this volume, which analyzes the support the People's Republic of China might seek from Russia during a protracted war against a US-led coalition. Highlighting the strategic partnership between China and Russia and their diplomatic, economic, and military cooperation, Carlson warns the People's Republic of China might seek arms sales, joint military exercises, and energy cooperation to assist in enduring a protracted war. Carlson also provides readers with an understanding of such support's implications for US defense strategy and planning.

The in-depth research and analysis that went into this conference volume's chapters will help policymakers, war fighters, and researchers better understand the clear advances the People's Republic of China and the People's Liberation Army have made in preparing for a future protracted war against the United States in the Indo-Pacific, while also outlining the vulnerabilities that remain. This conference volume will also provide a baseline for other researchers analyzing the Chinese Communist Party's readiness for and progress toward preparing for a large-scale, protracted war in the region.

**Part 1:**  
**Understanding the PRC's Views  
on Historical and Protracted Wars**



# — 1 —

## **A Framework for Analyzing Protracted War Between the United States and the People’s Republic of China**

Dr. Jerad I. Harper  
Department of Military Strategy, Planning, and Operations,  
US Army War College

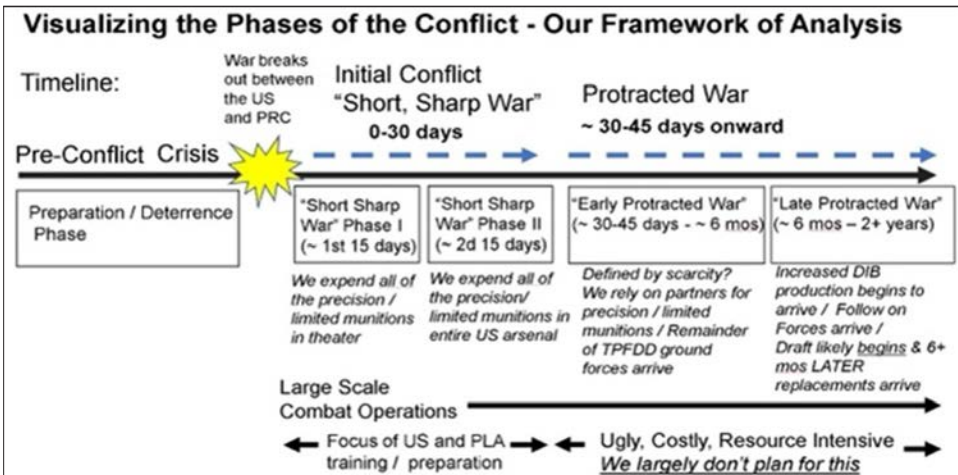
This book is a result of the 2024 Carlisle Conference on the People’s Liberation Army, which occurred at the US Army War College (USAWC) in Carlisle, Pennsylvania, in October 2024. Both this book and the conference focus on analyzing how the People’s Liberation Army (PLA) would perform in a potential protracted war with a US-led coalition. How do the People’s Republic of China (PRC), the Chinese Communist Party, and the People’s Liberation Army conceptualize protracted war? How would China fight such a war? And is the People’s Republic of China ready for such a war? Before jumping into these questions, we need to step back and operationalize the concept of “protracted war” as used throughout this book. What do we mean by “protracted war”? Specifically, when examining protracted war, this book envisions kinetic (that is, involving actual combat rather than competition), large-scale, and long-term war between the People’s Republic of China and a US-led coalition. This chapter will pull from the more US-focused analysis contained in a separate and upcoming 2025 study published by the USAWC Press, *Winning the Long War: How to Prepare for, Fight and Win a Protracted War with the PLA in the Indo-Pacific, 2025–2035*, to set up the more PRC-focused analysis of this book.<sup>1</sup>

The rise of a strong and increasingly aggressive People's Republic of China (along with the return of a revanchist Russia) has brought the renewed specter of great-power war, which has not been seen since the late 1980s, to the world stage. After emerging from decades of small wars and counterinsurgencies—or in the People's Republic of China's case, observing the United States and its allies fight in such conflicts—most modern militaries are again preparing for large-scale combat operations. But until recently, US and PRC military planning for and analysis of the challenges of preparing for and potentially fighting a war with each other have focused on a short, sharp war—one that is intense and tremendously costly in blood and treasure but lasts for a relatively short time.

Despite the overwhelming material and manpower cost of the early phases of a great-power war in the missile age of the twenty-first century and the avowed intentions of both adversaries to bring a potential conflict to a rapid close, history is replete with great-power conflicts that failed to resolve themselves after the initial clash or clashes. Great powers by disposition and definition have the will and resources to continue to wage war to achieve military and political objectives, regardless of early setbacks or failures.<sup>2</sup> This dynamic leads to a protracted war great powers keep fighting, raising the stakes, however painful and bloody they may be. Scholars have observed, “History has often punished countries that expect to fight short, decisive wars,” and such wars are “bigger, messier, and harder to untangle” than many expect.<sup>3</sup> Similarly, protraction—or at least, the similar concept of “stalemate”—is a common outcome in many war games simulating a Sino-American conflict.<sup>4</sup>

So, what would such a conflict look like? The USAWC protracted war research team in the study referenced earlier developed the following framework to describe the evolving phases of a protracted war between the United States and the People's Republic of China (see figure 1-1).<sup>5</sup> The terminology of this framework will be used throughout the chapters that follow.

## Conceptualizing Protracted War Between the United States and China



**Figure 1-1. Framework of analysis developed by the USAWC integrated research project**

The USAWC research team approached a twenty-first-century, great-power, protracted war as a conflict impacted by scarcity—initially, of precision / limited munitions and, subsequently, of fifth-generation or low-density aircraft and ships.

The USAWC framework of protracted war breaks the conflict into multiple phases.

The initial conflict that begins with the outbreak of full-scale war between the United States and the People’s Republic of China is labeled as the “short, sharp war.” This conflict is the focus of the vast majority of US and Chinese training and preparation. The short, sharp war has two phases, each of which last approximately two weeks (the precise duration of time is less critical than the overall phasing).

Time, which is important but not central to this model, is related to the central factor: scarcity. Scarcity in this case is produced by the loss of key weapons systems or the ammunition necessary to fire them. The scarcity of the key offensive and defensive weapons systems that modern militaries rely on to fight in turn produces profound changes in the nature of ongoing campaigns as militaries change the way they fight. But given the current understanding of the availability of precision munitions and likely losses and expenditures over time, figure 1-1 uses the following generalized (rather than exact) periods of time as phases.

During the first two weeks, the United States and the People’s Republic of China engage in massive, large-scale combat across all domains. Some members

of the US coalition join at the outset. Others join subsequently, during the early weeks. During the first two weeks of combat (and in some cases, much less), the United States and its coalition allies expend all precision and other limited munitions in the Indo-Pacific theater. A brief tactical pause may occur as both sides reset their forces, but major combat operations quickly resume.

The second phase of the short, sharp war also lasts approximately two weeks. In this second phase, the United States expends the remainder of the precision and limited munitions in the US and coalition arsenals (presumably flown in from outside the Indo-Pacific in the intervening days). As precision weapons become increasingly scarce, the resulting need to close with the enemy to achieve effects rather than engage through standoff results in increasingly higher casualties and further losses of platforms for the United States and other allied forces. Whereas our understanding of PLA munitions stocks is incomplete, the loss of precision munitions and the requirement to close with the enemy produce the same impact on the PRC side as well.

By around the 30- to 45-day mark, the war transitions to protracted war. In some cases, scarcities in capabilities, weapons systems, and munitions create differing conditions, and thus, various elements of the Joint Force and its allied components enter protraction at different times. But all elements will have transitioned to protracted war by a month and a half into a full-scale war between the US coalition and the People's Republic of China.

The first phase of protracted war, Early Protracted War, lasts from the 30- to 45-day mark to about six months into the conflict. This phase would likely be the most dangerous period of the war for the US coalition. The bulk of US ground forces (US Army and Marine Corps) and most of the reserve component will begin arriving in theater. But losses to coalition naval power and airpower as well as limited availability of precision munitions impede the ability to mount combined/Joint operations. The US coalition has to rely on partners that are out of contact to supply the bulk of limited munitions, which the United States and its allies are unable to produce because their defense industrial bases are still mobilizing.

Critically, during early protracted war and until wartime expansion of their defense industrial bases, the United States and its allies would essentially be the same as Ukraine during the Russia-Ukraine War, which is still ongoing as of the writing of this volume. The United States and its allies would rely on uncommitted partners to continue supplying war materiel. During this phase, if their supporting partners made the political decision to end this aid, the war efforts of the United States and its allies would grind to a halt.

The second phase of protracted war, Late Protracted, lasts from six months onward through the end of the war. During late protracted war, new coalition supply chains begin to settle into place, and expansions in the defense industrial base begin to come online. The US draft may not even begin until the Late Protracted phase. Regardless, the trained replacements the draft produces would not begin arriving until well into the Late Protracted phase, probably from about the one-year mark onward.

Ugly, costly, and resource intensive, protracted war is a test of national wills in which national mobilization and logistics assume central prominence. At present, neither side is preparing for protracted war. But a central assertion of the USAWC research team's analysis was change is needed. The United States must plan and begin preparing for protraction.

## War Termination?

Any discussion of protracted war should start with war termination: How would this war end? When thinking about the end of a war between two great powers, most Americans most likely think of World War II, which ended with a surrender ceremony on the deck of the USS *Missouri*. The next chapter explores how the People's Republic of China likely thinks about war termination.

Importantly, a twenty-first-century war between two nuclear-armed great powers would almost certainly not end in such a way. Instead of a surrender by one side or the other, a successful outcome for either side in a war between the People's Republic of China and the United States would be a negotiated political settlement that achieved conditions better than the status quo at the start of the conflict (*status quo ante*).

Both the People's Republic of China and the United States almost certainly understand these constraints, which would impact the way the war would be fought. Later chapters examine multiple aspects related to how the People's Republic of China might go about conducting a protracted war.

## How Might the War Become Protracted in the First Place?: The Centrality of Taiwan

This chapter started off by highlighting one of the inherent strengths of great powers is their ability to withstand punishment and keep fighting. But how might a Sino-American war become protracted? This question challenged the USAWC research team. During the team's research interviews, many senior leaders had

a great deal of difficulty conceptualizing how such a war might last beyond the first couple weeks. This challenge led to the creation of three potential scenarios to explain what could lead to protraction. The team used the scenarios as tools to get past the early phases and into protraction.<sup>6</sup>

As with the USAWC study, our task in this book is to examine protracted war, so the exact details of the short, sharp war are less important. But the USAWC team determined the key would be gaining control of Taiwan, a matter of immense, symbolic political importance for the Chinese Communist Party that is closely tied to President Xi Jinping's goals for national rejuvenation.<sup>7</sup> No matter how a Sino-American war would begin, sometime in the short, sharp phases of the war (the first 30 days of the conflict), the People's Republic of China would almost certainly attempt to seize Taiwan. If the People's Republic of China were to expend the massive amount of capital required to fight a war with the United States, the former would have no reason not to attempt to achieve this goal.

Thus, three ways a Sino-American conflict could become protracted follow. Whereas other scenarios may materialize, the following three scenarios provide perspective on a range of early outcomes—some favorable to the United States, others favorable to the People's Republic of China—that could lead to protraction.

**Scenario 1.** The People's Liberation Army fails to seize Taiwan, and the People's Republic of China remains at war with the United States and its coalition allies. Once committed to this endeavor and having promised reunification to its populace for so long, the Chinese Communist Party keeps trying to seize Taiwan until the cost-benefit analysis of doing so is outweighed by the risk of losing control of power in the People's Republic of China.

**Scenario 2.** Fighting continues, and the People's Liberation Army has a foothold on Taiwan. But the People's Liberation Army has not defeated Taiwanese and coalition forces. Taiwan's mountainous, highly urbanized terrain and numerous waterways present an extremely difficult operational environment. Given opposition from both Taiwanese forces and their coalition supporters, the People's Liberation Army's hopes of a quick and decisive victory are dashed, and the war turns into a long, grinding campaign.<sup>8</sup>

**Scenario 3.** The People's Liberation Army seizes Taiwan, but the United States and its coalition allies continue to fight. This last scenario is extremely problematic for the following reasons.<sup>9</sup>

One of the key findings of the PRC study was the United States and its allies cannot allow the People's Republic of China to gain uncontested control of Taiwan in a protracted war. In a major war between the United States and the

People's Republic of China (short, sharp, or otherwise), the People's Republic of China would almost certainly try to seize Taiwan and then present a *fait accompli* to the United States and the world.

One might think great powers can take a beating and keep on fighting because of their large size and abundant resources. But the problem for the United States would almost certainly be scarcity. The discussion of the protracted war framework earlier in the chapter assessed how the United States and its allies would essentially be in the position Ukraine finds itself in today during the early protracted stage (the first six months of the conflict).

If the People's Republic of China were able to seize Taiwan during the short, sharp or Early Protracted phases of the war, the former would likely be able to present the uncommitted countries the United States and its allies were relying on for munitions and other support with a seemingly predetermined outcome. Why would a country support the United States and its allies in a war they can no longer win, prolonging immense economic hardship for the country's population? Just as Ukraine's ability to continue fighting would likely end soon after the United States and Europe ended their support, the United States would similarly find itself in the same position.

Given these circumstances, although a Sino-American conflict would be a global fight, efforts to achieve or prevent a PRC *fait accompli* by seizing control of Taiwan would likely determine whether fighting would continue.

## **Transitioning to a Protracted War: The Costs of a Short, Sharp War**

Imagine a US-led coalition and the People's Republic of China are 30 to 45 days into a great-power war. What does the conflict look like? Whereas the task of this book is not to explore the short, sharp war, gaining an understanding of the costs of the short, sharp phase is important. The starting conditions for the protracted phases of the war are as follows.

1. High-intensity warfare between two great-power systems has produced enormous costs in manpower and equipment for both sides.
2. The prewar stocks of precision munitions, interceptors, and drones have almost certainly been completely expended for all combatants.

3. Still arriving in theater, the bulk of US ground forces and the reserve component are finding the air and naval forces needed to support maneuver are critically depleted, and no critical, long-range munitions or defenses are available.
4. The combatants' homelands have been ravaged by waves of cyber; space; and limited, kinetic strikes.
5. Key logistics and production chains on both sides are under threat, from the resource production site to the production site and all the way to maneuver forces engaging the other side.
6. A global economic meltdown is underway. Supply chains dependent on the People's Republic of China and the western Pacific are reorienting, but doing so will take time and cause major disruptions.

The world has not seen devastating conditions such as these since the 1940s. In some ways, these conditions would be worse due to today's long-range strike capabilities, which would be aided by space and cyber. One difference from previous conflicts is many of these impacts may be brought about by nonkinetic means, such as space and cyber. The conditions would have a range of impacts, and the devastation across the world would be enormous. Nevertheless, the war would potentially continue, depending on the will and resources of the opposing sides.

### **The Fight to Maintain or Break the Ability of US Partners to Remain in the War**

In a protracted war, far from being a constant, the US coalition would be under threat. The USAWC study envisioned a US coalition that included Japan, Australia, the Philippines, and the United Kingdom. Regardless of the coalition makeup, the United States would have to fight to maintain its partners while the People's Republic of China was seeking to fracture the coalition. For the United States, fighting to maintain its partners would involve maintaining contested logistics for military forces over extended distances as well as challenges such as protecting Japan and, particularly, the Philippines from PRC kinetic, cyber, and information attacks designed to break the countries' will. Whereas the US coalition may benefit from humanitarian support from many uncommitted countries, the coalition may very well face the challenge of providing food, fuel,

and other critically needed supplies to both Taiwan and other forward allies—potentially even Australia.

Another question for both sides would be South Korea. The USAWC study assessed South Korea would likely remain out of a Sino-American protracted war, barring North Korean intervention. South Korea would likely be fixated on the threat from the north. But such provocation or other escalation could bring South Korea into the conflict, creating further challenges for the People's Republic of China and potentially contributing a great deal of military and production capability to the US coalition.

## **Potential PRC Partners and Horizontal Escalation**

Although the United States and its coalition partners would almost certainly seek to escalate the conflict horizontally and geographically spread dilemmas for the Chinese Communist Party, the People's Republic of China would benefit from partners that are capable of creating dilemmas for the US coalition, particularly over the long run. Similarly, a protracted war could see the initiation of conflict by other partners that create dilemmas for both the United States and the People's Republic of China.

Although less formally aligned than those of the United States, the People's Republic of China is likely to benefit from countries united more by opposition to the US coalition than any internal unity. Beyond the “enemy of my enemy is my friend” dynamic, the People's Republic of China may also benefit from its Russian partners' recent major expansion of relations with Iran and North Korea. The nature of potential PRC partners makes them equally capable of entering a protracted conflict as part of a plan or merely being opportunistic and taking advantage of the situation. From the outset of the conflict, Russian posturing versus the Baltic states or Ukraine could freeze vitally needed European resources in place and make them unavailable to support the US coalition. Similarly, threat from or concern with North Korean intervention could fix South Korea and prevent its intervention. Finally, aggressive action by Iran or its Houthi proxies might disrupt coalition lines of supply through the Red Sea; these parties may even choose to attack Israel if the odds appear in their favor and Israel's patron, the United States, is consumed with a war of its own.

Unless war appears to be turning decisively against the People's Republic of China, the potential for greater horizontal escalation of the conflict increases the longer the war continues. Similarly, if the People's Republic of China appears to have the upper hand, the potential for external intervention on its behalf proportionally

increases. With the United States occupied and NATO resources stretched thin, Russia might decide to take another shot at seizing all of Ukraine or parts of it.

But not all intervention might be clearly in the US or PRC camp. Just as a protracted war might provide a chance for its adversaries to strike, Israel may choose to prosecute its own campaigns with less concern for being reined in by the United States. Similarly, Russia might not be the only one to pursue offensive operations. Depending on the course of the conflict, Ukraine might undertake its own campaigns to regain lost territory. The addition of any of these new, regional conflicts would add still more chaos to the international system, likely with numerous unforeseen impacts.

## **Potential PRC Advantages and Disadvantages in a Protracted War**

Given this book's focus on the People's Liberation Army, broadly, what are the advantages and disadvantages for the People's Republic of China in a protracted war?

Clearly, in terms of advantages, the People's Liberation Army likely starts off the war with advantages in mass (in terms of the number of both joint-force combat platforms and personnel), missile weight, and magazine depth.<sup>10</sup> As the war becomes protracted, the PRC shipbuilding capability dwarfs that of the United States and its allies—particularly, if South Korea is not an active partner.<sup>11</sup> In addition, the People's Republic of China would benefit from having much greater manufacturing capability across the board. China has a well-developed mobilization capability, and the country's authoritarian controls probably give it an advantage in the information realm, particularly in the short run.<sup>12</sup>

But a potential weakness is the PRC economic engine needs fuel. If the US coalition can weather the storm of the early phases of the war, the coalition has significant capabilities over the long term to execute a cost-imposition strategy, particularly if the coalition can get to the Late Protracted phase (approximately six months into the war). The People's Republic of China heavily relies on overseas resources gained largely by sea—particularly, energy resources. Although China has extensive rail ties to Russia, bulk petroleum and other energy resources need to be shipped by sea. Additionally, extended rail lines are vulnerable to sabotage. Aside from the vulnerability of PRC-bound shipping, large-scale combat operations would be occurring in critical shipping lanes in the western Pacific, impacting shipping insurance rates and causing an indirect blockade without the need for strikes on supply ships.<sup>13</sup>

Although the PLA mobilization system can hide the casualties in the short term, the system cannot do so forever. The enormous manpower costs of cross-strait and other combat operations would likely result in many one-child families losing their legacy, not to mention their retirement plans. What effect would this devastation have on China in the long run?

Finally, if the People's Liberation Army were subject to a steadily tightening ring of military forces, China's ability to coerce regional and international players would be severely degraded. As described above, the transition to protracted war would cause major adaptations in the global supply chains. With these economies partially or totally cut off from Chinese markets and resources, the ability of the People's Republic of China to use economic influence would correspondingly decrease. How would these impacts affect China's ability to influence international relations during wartime—particularly, over the long term, as many countries found the People's Republic of China less crucial to their economic systems?

## **Moving on to the Rest of the Book**

This chapter has laid out a framework for conceptualizing twenty-first-century, great-power, protracted war between the People's Republic of China and a US coalition. Several key issues and potential dynamics have been raised, many of which are explored in greater depth in the chapters that follow. This framework provides a common lexicon and way of thinking for this study. Admittedly, the framework was developed from a primarily US standpoint. In progressing through the chapters that follow, readers should use the framework as a lens for analysis and make their own judgments about PRC material capabilities and other critical aspects impacting the People's Republic of China's performance in a potential, protracted, great-power war.

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## Endnotes

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## “On Protracted War” in the Modern Context

Mr. Daniel Rice  
Marine Corps War College

On June 3, 1938, after a 10-month-long slow retreat in the Second Sino-Japanese War, Mao Zedong took to the stage at Yan’an. In the proceeding hours Mao delivered a speech, “On Protracted War” (论持久战), which would become the foundation for Chinese views on protracted war. Even though Mao’s speech is almost a century old, his words have been codified in Chinese Communist Party (CCP) thinking and published in volume 2 of the *Selected Works of Mao Zedong*. This series of Mao’s selected works became one of the most influential publications of twentieth-century party thought and is included in the 2011 publishing of *Selected Important Documents since the Founding of the Party*.<sup>1</sup> Since Xi Jinping became the general secretary of the Chinese Communist Party, he has renewed a strong interest in Mao’s words and theories, and their application to China’s current circumstances. Xi is thematically pulling “On Protracted War,” as part of Mao Zedong thought (毛泽东思想), back into the conversation.

This chapter examines the resurgence of traditional CCP thought in contemporary strategy, the core concepts of Mao’s “On Protracted War,” and modern authors’ adaptations of the concept of protracted war in various aspects of China’s strategy. Whereas this chapter’s research focuses on the military implications of protracted war, findings indicate China views the concept of protracted war as multidimensional and not isolated to the military domain. By analyzing trends in CCP strategic thinking, one can begin to understand how China views protracted war in a starkly different context than the West.

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Author’s Note: Translations and interpretations are a mixture of the author’s own translations and machine translations for longer passages. Where machine translations were imprecise, the original Chinese was consulted and prevails, and the author’s own interpretation and translation of the original is offered in this text.

## A Resurgence of Old Party Ideology

Xi's comments (in speeches and official CCP news) call for studying party history to achieve the goals of the Great Rejuvenation of the Chinese Nation. Furthermore, Xi is publicly beginning to link traditional People's Liberation Army (PLA) military thinking and strategy to achieving the Chinese Communist Party's modern political objectives. Whereas the ties between the Chinese Communist Party's national strategy and military strategy are not new, they have made a resurgence under Xi. Xi's emphasis on using the past to address the future is so strong, he made the theme of the 19th National Party Congress of the Chinese Communist Party (National Party Congress): "Don't forget your original intention, keep your mission in mind."<sup>2</sup> Leading up to the 19th National Party Congress in 2017, Xi began to draw correlations between China's current situation and party history. By creating connections between his interpretation of contemporary circumstances and the Chinese Communist Party's history, Xi entrenched his image as the ideological figurehead of the party before the 19th National Party Congress took place and before Xi served his second term in office. Given Xi's goal of maintaining the general secretary position in perpetuity, invoking party history may have assuaged party members who were reluctant to see a general secretary serve more than two terms.

During Xi's visit to the Red Army Long March Tongdao Turning Point Memorial Hall, which took place in the year before the 19th National Party Congress, Xi likened China's current stage to "the new Long March in the new era of reform and opening up to achieve the 'two centenary' goal, which is a continuation" of the original long march.<sup>3</sup> Furthermore, Xi set the congress's theme in the 19th National Party Congress report on October 18, 2017.<sup>4</sup> The party congress's theme solidified the importance of studying party history over the next five years. But implementing the theme would require more work. During a theme education work conference on May 31, 2019, Xi doubled down on the notion of China's "new Long March."

A few days ago, I went to Yudu, Jiangxi, to visit the starting point of the Long March of the Central Red Army. The purpose was to remember the glorious years when the Party Central Committee and the Central Red Army fought bloody battles in the Soviet area, remember when the red regime came from and how the new China was established, and remember history and the original intention. Now, we are carrying out a new Long March to achieve the great rejuvenation of the Chinese nation. The majority of party members and cadres must bear in mind the ideals, beliefs and fundamental purpose of the party, must carry forward the great

spirit of the Long March, must carry forward the spirit of struggle in the revolutionary war years that dared to fight and was not afraid of difficulties, and have the courage to overcome all kinds of difficulties, obstacles, risks and challenges, and strive to win new victories for socialism with Chinese characteristics in the new era.<sup>5</sup>

Using the lessons of history, Xi further linked the push for a more conservative CCP approach to Maoist and Marxist-Leninist thought in his post-19th National Party Congress comments on dialectical materialism and historical materialism. In a July 2020 article in *Qiushi*, the Chinese Communist Party’s official theoretical journal and news magazine, Xi tied these two Marxist principles into his theme by stating, “Not forgetting the original intention and keeping in mind the mission is a creative application of the standpoints, viewpoints and methods of dialectical materialism and historical materialism, shining with the brilliance of Marxist philosophy.”<sup>6</sup>

During the Political Bureau meeting of the CCP Central Committee on July 30—the same month the *Qiushi* article was published—Xi likened the current economic situation to a protracted war: “The current economic situation remains complex and severe, with great instability and uncertainty. Many of the problems we face are medium- and long-term and must be understood from the perspective of a protracted war.”<sup>7</sup> But that July 30 meeting was not the first time the Chinese economy was described in terms of a protracted war. In 2016, the same year Xi described China’s condition as a “new Long March,” the China International Trust and Investment Corporation (CITIC) published a book titled *A new theory of protracted war: China’s growth strategy under new conditions* (持久战新论: 新常态下的中国增长战略). The authors, both senior members of the Development Research Center of the State Council, used the theoretical framework of Mao’s “On Protracted War” to pen a strategy for continuing China’s rise. Unlike Western definitions of protracted war, which often refer to protracted war only in military terms, the authors adapted the term protracted war to explain large strategic development goals for China. Specifically, the authors adopted the concept of protracted war and the strategies in “On Protracted War” to describe how to adapt and lead under new conditions; how to realize increasing numbers of objectives and overcome the middle-income trap; and how to advance the transformation and elevation of the economy, realize modernization, and establish a firm base for the “Chinese Dream.”<sup>8</sup> Despite having a benign take on protracted war, the authors likely planted the seeds for Xi’s adoption of the phrase in a broader context. Xi also appeared likely to implement a strong military component of the economic protracted-war strategy.

During the 22nd Collective Study Session of the CCP Political Bureau in 2020, on the same day Xi drew a correlation between the economy and protracted war,

Xi stressed the need for military modernization, tying the idea of a strong military to the idea of a strong country.<sup>9</sup> The timing of both Xi's emphasis on building a strong military and his interpretation of protracted war from an economic perspective is critical. The meeting came as the Chinese Communist Party was getting ready to formulate the 14th Five-Year Plan, which the party would use from 2021 to 2025 to shape China's grand strategy. Timing also played a role in further galvanizing the adoption of a protracted war-like attitude with a strong military flavor. The year 2020 marked the 75th anniversary of China's victory in the "Chinese People's War of Resistance against Japanese Aggression" and the "World Anti-Fascist War."<sup>10</sup> The milestone anniversaries of these two wars likely created a renewed look at the whole-of-society nature of these wars and Mao Zedong's military thought at the time. A renewed CCP emphasis on holistic national security became apparent in section 15 of the 14th Five-Year Plan, which states: "A holistic approach to national security calls for the integration of national security imperatives into every aspect of national development, so as to be better able to implement our national security strategy, safeguard national security, respond effectively to both traditional and non-traditional threats, and forestall any challenges to China's modernization."<sup>11</sup>

The confluence of studying the party's past, having a fighting spirit, emphasizing Marxist principles, emphasizing the codependence of military and economic modernization, and publishing the CITIC book led to a niche, and important, resurgence of examinations of Mao's "On Protracted War." Protracted war as a concept has been elevated to strategic-level thinking, and protracted war (持久战) as a term paired with tough battle (攻坚战) appears in many different aspects of CCP governance.<sup>12</sup> The 75th anniversary of the Second Sino-Japanese War in 2020 further sparked Chinese authors to reexamine Mao's original work in relation to modern issues. Many Chinese authors have published articles examining the lessons of "On Protracted War," applying the takeaways to the needs of Xi's China. However, despite the recent increase in articles, few authors have attempted to define protracted war narrowly in a military context or to draw modern military lessons from Mao's work. For the military, a protracted war appears not to be the preferred method of conflict. According to the 2020 edition of the *Science of military strategy* (战略学) (SMS), "Under modern conditions, there are more and more restrictive factors in war, and the consumption and cost are getting bigger and bigger. Quick-fight and quick-decision (wars) are usually the first choice for directors of strategy."<sup>13</sup> Authors who draw military lessons from Mao's work often take a grand-strategic approach and some authors have discussed applying "On Protracted War" at the tactical or operational levels. In nonmilitary domains, the term protracted war is most often used in the abstract sense of a prolonged

struggle or a battle to achieve an objective like modernization, development, or even global influence.

To understand the role of “On Protracted War” in modern CCP thinking and in the People’s Liberation Army, this chapter will first examine some of the key themes of the speech and will then explore modern Chinese authors’ views of the work’s strategic or military importance.

## Mao Zedong’s “On Protracted War”

When Mao wrote “On Protracted War,” he had already written a series of books analyzing different aspects of military and Marxist philosophy. Mao’s books—*Strategic Problems of China’s Revolutionary War*, *On Practice*, *On Contradiction*, and *Strategic Problems in the Anti-Japanese Guerilla War*—each explored certain aspects of Marxism or warfare that would culminate in Mao’s “On Protracted War” speech.<sup>14</sup> As a result, “On Protracted War” carries a blend of Marxist dialectical thinking and strategic, operational, and tactical thinking. In practice, the speech aimed to define protracted war as a policy, define protracted war’s role at the strategic level, and enumerate the steps involved in pursuing a strategy of protracted war across the strategic, operational, and tactical levels. The following section will analyze certain key themes related to military strategy.

One key aspect of the work is Mao’s assessment of the character of protracted war. In Mao’s speech, protracted war takes a form distinctly different from the tactical definition of protraction.<sup>15</sup> Namely, Mao’s definition of the Second Sino-Japanese War as a protracted war comes from a strategic assessment of the two competing sides and the ability, or inability, for one side to claim a quick victory. Without one side being able to claim a quick victory, Mao posits the nature of the war must be protracted. His assessment focuses on the countries’ general patterns of development; the countries’ comprehensive (military, economic, political, and cultural) strength; which side is fighting a “just war”; and international support.<sup>16</sup> Mao assessed, “Since Japan is a powerful imperialist country and we are a weak semi-colonial and semi-feudal country, Japan is taking the strategic offensive, while we are on the strategic defensive. Japan is attempting to adopt a strategic quick-decision war, while we should consciously adopt a strategic protracted war.”<sup>17</sup> Extrapolating from Mao’s assessment, one could say the weaker side in a conflict should adopt protracted war as a strategy or policy. In the modern context, the concept of pitting the weak against the strong is not reflected in the Sino-Taiwanese relationship, but it applies to the Sino-American relationship

in a broad, whole-of-society context. This reality begs the question of whether the strategies in “On Protracted War” are applicable to the Sino-Taiwanese relationship.

One interesting aspect of Mao’s assessment of protracted war is the involvement of China, the adversary, and international support. Segregating these three arenas creates two fields of competition: the competition between China and its adversary in isolation (the internal competition), and the competition between China and the adversary on the global stage (the external competition). In addition to the two fields of competition, Mao considers the internal state of each competitor. Therefore, the competition is at home, between oneself and the adversary; and the competition is between oneself, the adversary, and the international community. Mao repeatedly emphasizes the dichotomy between internal and external throughout the speech. Mao also discusses internal and external lines. Whereas most internal and external lines follow normal conventions, Mao also introduces the idea of creating guerilla zones. These zones exist on the regular army’s external lines, or on the adversary army’s internal lines. The location of guerilla zones create situations in which the adversary is pinched between the regular army’s lines and the guerilla zones’ lines.<sup>18</sup> The larger focus of “On Protracted War” is the near and the far fights, with Mao noting the importance of encirclement and counter-encirclement, both at the local level and at the international level. This concept has significant strategic implications for modern views on protracted war because it can be adopted to analyze issues such as the role of the global community or geopolitics in great-power competition.

According to Mao, victory in protracted war (unlike quick victories) relies on the accumulation of successes in smaller engagements such that one side of the conflict is worn down and its comprehensive national strength is exhausted. In the context of the Second Sino-Japanese War, Mao states, “Our war is aimed at winning every victory, big or small, and at disarming part of the enemy and damaging part of his men, horses, and equipment in every battle. By accumulating these achievements of partially destroying the enemy, we can achieve a major strategic victory and ultimately achieve the political goal of driving the enemy out of the country, defending the motherland, and building a new China.”<sup>19</sup> In effect, Mao theorized that the accumulation of small, attainable victories would help gain momentum in the overall fight. To test his theoretical protracted-war strategy on Japan, Mao advocated the adoption of a strategic policy of protracted war. Mao supported this policy in part because he believed China could not claim victory in an existential, decisive battle. Mao assessed China was the weaker party, albeit with high potential. Therefore, deliberately enacting a protracted war policy would allow China gradually to shift the balance of the war in its favor, as its potential energy became kinetic energy. This type of thinking is reflected in certain

modern authors’ interpretations of Mao’s work in the context of China’s geopolitical and military competition with the United States.

In adopting a strategic policy of protracted war, Mao identified three distinct phases of operations: first, the enemy’s strategic offensive and China’s strategic defense; second, strategic stalemate; and third, China’s strategic counteroffensive and the enemy’s strategic retreat.<sup>20</sup> Controlling each phase requires different stratagems. The first phase requires trading space for time and leveraging mobile warfare as the main form of warfare, supported by guerilla and positional warfare at strategic points. During the first phase, the main goal is to drain the enemy’s strategic resources and to use international support to remain in the fight, forcing the enemy to culminate and transition gradually to occupation in the second phase. In the second phase, Mao describes the main form of warfare as guerilla warfare supported by mobile warfare. Further, Mao notes the length of the second phase of the war depends on the relative increase or decrease in numbers on both sides and depends on the international situation.<sup>21</sup> Transitioning to the third phase of protracted war requires one side to reach a significant level of momentum so it can transition into a strategic counteroffensive to attain the ultimate victory. Momentum is gained in the second phase through international support and through accumulating an advantage in resources, manpower, and national will. In the third phase of protracted war, China takes the offensive, using and continuing to build on the momentum from the second phase. Phase three emphasizes the degradation of the adversary’s home situation as well as the need to increase international propaganda and diplomatic work. In phase three fighting, Mao describes adopting mobile warfare as the primary form of warfare and using positional warfare to maintain key terrain.<sup>22</sup> Throughout the three phases, the goal is to avoid a decisive strategic battle in which the fate of the country is at stake—otherwise called an existential decisive battle.<sup>23</sup> But Mao mentions fighting smaller decisive battles when victory is almost certain and avoiding decisive battles when victory is uncertain. Mao’s phases of protracted war may carry significant implications in the modern context, but the strategy has some strict limitations. When China views itself as the weaker side in a geopolitical or military contest, it could adopt a similar strategy of phasing the conflict. But many of the operational and tactical advantages gained in Mao’s three phases are related to a conflict on China’s home turf. Where this scenario starts to get interesting is in asking how Mao’s phasing could be applied if the idea of China’s home turf extends beyond its land borders and into China’s periphery. With modern military systems, the theory of phased protracted war could extend outward from China proper, albeit with some technological limitations.

In terms of decisive battles, Mao advocates for “decisive battles under all favorable conditions, whether in battles or in large or small campaigns, and we

will not tolerate any passivity in this regard. Only such decisive battles can achieve the goal of annihilating and exhausting the enemy.”<sup>24</sup> Furthermore, Mao elaborates on the acceptability of casualties by noting, “considerable partial sacrifices are necessary,” and describes punishing those deemed “escapists,” which builds on a concept of national will and unity for the defender.<sup>25</sup> Furthermore, Mao emphasizes, “soldiers and civilians are the foundation of war,” and significant political mobilization needs to occur because: “Every soldier and every citizen must understand why the war is fought and what the war has to do with them.”<sup>26</sup> Mass mobilization of this kind likely forms the backbone of the “People’s War *weishe* (威慑)” concept found in the SMS.<sup>27</sup>

Mao’s original work offers some interesting and applicable lessons for modern circumstances. The most notable lesson is fundamentally, “On Protracted War” views the protraction of conflict from a strategic height. Mao does provide operational and tactical guidance for a protracted war, but his adoption of a strategic policy of protracted war in the Second Sino-Japanese War is what allowed for the weaker side in competition and conflict to prevail over its stronger opponent.

## Modern Chinese Interpretations of “On Protracted War”

Although one could analyze many lessons from Mao’s speech, Chinese authors have drawn their own lessons. “On Protracted War” appears in the 2020 SMS as one of Mao’s foundational works of military theory.<sup>28</sup> According to the 2020 SMS, depending on the duration of military activities, two strategies are available: the quick-decision strategy and the protracted strategy. This framework directly reflects Mao’s “On Protracted War.”<sup>29</sup> The SMS defines protracted strategy based on Mao’s work, stating the protracted strategy is “based on long-term war fighting, in a protracted contest deplete the enemy, accumulate small victories into big victories, gradually change the balance of power, and in the end defeat the enemy. This [strategy] is normally adopted by a comparatively weak country and is related to a defensive strategy.”<sup>30</sup> But the text then goes on to posit, under modern conditions and with the cost of modern wars, a quick-decision strategy is the preferred method for strategists. The SMS falls short of elaborating on the implications of the People’s Liberation Army finding itself in a state of protracted war. Instead of recalling Mao’s theories, Xiao Tianliang simply states, under modern conditions, strategists normally choose to fight a quick-decision war, implying protracted war is not a preferred method of fighting. But Xiao assesses Mao’s adoption of a protracted strategy was correct, considering the circumstances and the nature of the war against Japan. Less clear is how, under modern conditions, the People’s Liberation Army and China writ large would or could adopt a protracted-war strategy. One explanation may be protracted war, in a sense,

includes the broader context of great-power competition. As such, the People’s Liberation Army’s role in a protracted war would be to execute non-war or quasi-war military activities (short of inciting actual military conflict) to achieve the Chinese Communist Party’s political objectives. By using the military to achieve political objectives incrementally and avoid a decisive battle—in this case, war with the United States—China could engage in a protracted competition with the United States.

Author Yang Xin of Nanjing University has his own take on “On Protracted War.” In a 2021 article, Yang writes, “Mao Zedong’s strategic thinking of long-term victory over the enemy is a strategy to deal with the problem of war time, combining internal and external lines, and emphasizing the strategy of dealing with the problem of war space. This is a unified strategic thinking and military dialectical thinking.”<sup>31</sup> Yang then describes how, unlike many other historical and contemporary war theorists who advocate for a quick-decision strategy, Mao adopted the historically unpopular opinion and embraced a strategy of protracted war. But Mao provided his reason for adopting such a strategy: China’s comparative weakness set the conditions and a protracted strategy provided the methods for it to achieve victory. Yang finishes his article by arguing, “Mao’s strategy of long-term victory over the enemy and coordination of internal and external lines is also of guiding value for us to resolve maritime disputes and safeguard national security interests today.”<sup>32</sup> Yang’s posed hypothetical includes the resolution of Sino-Japanese territorial disputes in the East China Sea. Whereas Yang offers insight into how the described scenario may occur, success boils down to extending China’s internal and external lines and blockading Japan such that it becomes passive along China’s internal lines. This scenario reflects the second stage of protracted war, in which Yang argues China could now outlast Japan in a stalemate. Yang’s short vignette is interesting because it suggests the maritime environment could act as part of the space China trades for time and because it reimagines how China defines its strategic battlespace. Although not directly related to Yang’s article, one 2018 *PLA Daily* article echoes his idea by stating, for the combat space, “Active defense requires extending strategic defense forward, timely forwarding strategic defense positions, pushing forward the strategic defense baseline, and increasing the depth of strategic defense.”<sup>33</sup> This article recalls the first phase of protracted war in the geographic area China could use for its strategic defense. China could apply Yang’s analysis to a larger strategy for global competition against the United States by redrawing strategic interior and exterior lines in the Asia-Pacific region and across the globe.

In an August 2020 *PLA Daily* article, two authors interpreted Mao’s work from the angle of dialectical materialism. Notably, this article began a special column commemorating the 75th anniversary of the Second Sino-Japanese War,

which aimed to study China's experience in the war and adapt the resulting lessons for a modern context.<sup>34</sup> In the inaugural column, the authors point out six dialectical pairings. The authors define the two types of cognitive strategic judgment as blind, one-sided judgment and objective, comprehensive judgment (盲目片面与客观全面). The authors advocate for objective, comprehensive strategic thinking. The authors state the two types of strategic guidance are rigid response and subjective initiative (僵化应对与主观能动), and argue the subjective initiative of the Chinese people was critical in the Second Sino-Japanese War. The authors define the two types of strategic deployment and battlefields as the battlefield in front of you and the battlefield behind enemy lines (正面战场与敌后战场). The two battlefields point to the two united fronts opened against Japan: the front between the Nationalist Party and the Chinese Communist Party against Japan, and the international united front comprising Japanese citizens who were Chinese sympathizers and nations supporting China in the war. The two forces of strategic support are the material foundation and spiritual support (物质基础与精神支撑). The authors suggest spiritual support is the most important aspect of maintaining the fighting spirit of the soldiers and citizens. The two approaches to strategic resources are self-reliance and broad alliances (自力更生与广泛联盟). The authors stress both domestic unity and broad international support are necessary to win. Finally, the authors discuss the two outcomes of strategic competition: Justice will win, and aggression will lose (正义必胜与侵略必败). The authors then expound on the perceived contribution of China's Second Sino-Japanese War to the cause of humanity.<sup>35</sup> But the authors' analysis and interpretation of "On Protracted War" only affirm certain principles set forth by Mao and do not provide insight into how protracted war could be waged today. Of the dialectics presented, perhaps the most interesting is that of the two battlefields, which draws direct connections to China's idea of the community of common destiny. The concept of the two battlefields suggests the military conflict between two adversaries and the contests in each other's homelands are equally important. In the context of a protracted war over Taiwan, or with the United States, China could draw a lesson about the importance of fifth-column elements or rallying sympathizers for political gains. In the case of Taiwan, fifth-column elements or sympathizers may complicate Taiwan's defense plans and help the People's Liberation Army in an invasion, similar to how these types of forces were used in the Hainan campaign of the Chinese Civil War. For the United States, inciting Chinese sympathizers to take political action could have serious consequences for both the United States' ability to sustain and the willingness to accept a prolonged conflict with China.

In 2022, the *PLA Daily* published another article on "Grasping the new essence of protracted war," which is perhaps the most comprehensive article on modern protracted war. In the article, Hu Youcai points to six lessons: the objective necessity

of strategic choice, the sustainability of war capabilities, the relative protraction of the war process, the comprehensive diversity of warfare, the integration of attack and defense in war operations, and the proactive nature of war preparations.<sup>36</sup> Hu asserts, given the current international situation, the fundamental strategic framework of the weak versus the strong has remained the same. Hu notes protracted war aims to use time and space to change this balance of power. Further, he argues the strategy of protracted war is still alive and should be used to offset the “unnamed enemy’s” (the United States’) technological advantages. Hu then discusses how modern protracted war is more like a protraction of the war process itself.<sup>37</sup> In terms of war capabilities in strategic games, if strength is not enough to defeat the enemy, then the war process becomes protracted. In a protracted war process, Hu says, high-end capabilities enable persistent, consistent, and precise strikes that can paralyze an enemy and force it into a passive position. Therefore, Hu asserts war capabilities need to be tenacious, persistent, and robust (浑厚).<sup>38</sup> He emphasizes, in a modern protracted war, capabilities must be able to adapt to many challenges, including by surviving the adversary’s strikes and quickly counterattacking. Hu also states the nation must be able to mobilize civilian and military capabilities for war sustainment.

Hu writes modern protracted war will be a battle of the nation’s overall strength (also called comprehensive national power), with political, economic, military, scientific, diplomatic, and cultural forces all included in the nation’s integrated strategic capability. Hu implies this system needs to be built for preparedness (引而不发), but not necessarily offense; it must be capable of various strategic operations; and though the system is used in protracted war, it must also have a strong deterrent effect. In Hu’s vision of protracted war, the diversified employment of the People’s Liberation Army is key. To integrate the military into China’s comprehensive national power more effectively, Hu appears to advocate for force building (建军) to enable China to leverage military capabilities for war-fighting, nonwar, and quasi-war military activities. Outside this article, the notion of quasi-war activities is reflected in the “system of strategic *weishè* (威慑)” put forward by Xi, and includes military actions such as military coercion, border control, the establishment of no-fly zones, and limited military strikes.<sup>39</sup> Hu continues to reframe the concept of protracted war as a function of time rather than space. He asserts, due to the high efficiency and lethality of modern weapons, a modern protracted war adopts a different form and is an elongation of the war process, not the war fighting itself. Under Hu’s framework, military competition with the United States appears to be less of a force-on-force confrontation, and more of a capacity-building competition. But Hu notes, if force-on-force engagement occurs, such engagement will likely lead to a protracted conflict, as neither side would be able to secure a quick victory.

In conceptualizing a new type of protracted war categorized by an elongated war process, Hu assesses, “Today’s protracted war is a relative prolongation of the war process and war time, a relative prolongation that gradually changes the balance of power between the enemy and ourselves, and its end time is measured by defeating the enemy’s strategic intentions and achieving overall victory in the war.”<sup>40</sup> Hu emphasizes the role of peacetime war preparations in preparing and executing this type of conflict. Hu also stresses the comprehensive, strategic nature of protracted war and the need to translate comprehensive national strength into wartime strength. In the fight, Hu emphasizes the need to win the first battle and to leverage comprehensive national power fully in follow-on operations to weaken the adversary, defeating it militarily and gaining the initiative in politics and diplomacy. Doing so opens the opportunity for an adversary to strike key centers of military-power generation, including civilian power centers. Therefore, Hu asserts the need to “rely on the depth of territory and strategic internal lines, comprehensively use air defense means, combine pre-defense with mobile counterattack, and combine camouflage with protection to ensure security in all fields.”<sup>41</sup> Hu concludes his article by stating, “Winning the protracted war in the information age is not about passively ‘protracting’ after the war arrives, but about continuing to prepare for future wars in a forward-looking manner.”<sup>42</sup> In preparing for war, Hu advocates for increasing military readiness, civilian cooperation, and the coordination of economic and national defense construction. This sentiment echoes much of what Xi is calling for in discussing the duality of economic and national security. Of note, Hu mentions a need to strengthen theaters’ material reserves and strengthen reserve mobilization to minimize troops in peacetime but allow for rapid activation in wartime. For the People’s Liberation Army, Hu’s lessons ring true, with Xi emphasizing force building and being prepared to fight and win wars. Arguably, the Chinese Communist Party and the People’s Liberation Army are already adopting Hu’s description of protracted war in certain forms.

Although not focused on the military, the 2016 book *A new theory of protracted war* (持久战新论) offers some other insights into a modern protracted war strategy. Most notably, even with the book’s focus on economics and development, the section on globalization and the Thucydides trap paints a unique view of competition. In their description of globalization, the CITIC authors echo Mao’s detailed descriptions of how tactical and operational gains can build momentum. The CITIC authors posit, to use China’s late-mover advantage (后发优势) more effectively, and to maintain the revolutionary nature of the system (维持体制可改革性), “For strategy, maintaining protracted war means the need to better leverage the power of globalization, and to advance forward the benefits of globalization.”<sup>43</sup> According to these authors, globalization can bring the cumulative successes

in the struggle for development needed to alter the balance. Furthermore, the CITIC authors mirror Mao's writing on avoiding an existential, decisive battle in their description of the Thucydides trap. The authors acknowledge, in China's continued rise, the United States will feel threatened. The authors then declare that China and the United States must not and cannot fall into the Thucydides trap.<sup>44</sup> But interpreted differently, the authors may see a potential military conflict with the United States as the kind of existential, decisive battle against which Mao warns. Therefore, by continuing to gain momentum through economic development, the authors hope to forego a military conflict with the United States and set the conditions for economic victory in the Sino-American competition for global influence. Under this strategy, one can infer the People's Liberation Army must prepare to deter and, if necessary, engage the United States in military conflict. One can also infer force building is the key to preventing an existential, decisive battle.

### **Implications for the Chinese Communist Party and the People's Liberation Army**

After reviewing Mao's "On Protracted War," the recent uptick in the use of the concept of protracted war in political discourse, and Chinese authors' views of the concept, one can draw several conclusions. Whereas the Chinese Communist Party's top leadership recently appears to favor the term protracted war, the term is normally used broadly to describe the Chinese strategy for enduring and succeeding in long contests. When used in a modern context, authors and politicians usually use the term to describe China's need to maintain long-term plans, build civilian and military coordination, link economic development and national security, and accumulate smaller advantages in global competition. The works examined in this chapter appear to agree many aspects of the current domestic and global situations can be viewed from the perspective of a protracted war. Considering this agreement, protracted war can be, and is, applied to great-power competition vis-à-vis Sino-American competition. The accumulation of smaller victories, in line with the theory of protracted war, will supposedly lead to China's ultimate victory in this contest.

In studies on protracted war, the term has the most concrete usage in an economic context. Specifically, the term refers to China's need to continue growing economically, and not necessarily in competition or geography. In the field of economics, Xi's concept of dual circulation, comprising internal circulation and external circulation, directly mirrors the dualities of internal and external lines in protracted war. Xi intentionally made this connection, which is likely part of his rationale for calling to view the economic situation from the perspective

of a protracted war. But in an economic context, lines are more accurately described as consumer bases or areas of influence.

Despite the emphasis on economics, certain Chinese authors have drawn modern military parallels to “On Protracted War.” One author discussed the use of internal and external lines beyond the traditional geographic limits of China’s borders. In the author’s analysis, he proposes extending China’s internal lines to encompass Japan so China can use its whole-of-nation strength to solve the Diaoyu Islands issue. This analysis may or may not allude to Taiwan, as the context implies Japan is small enough to be completely encompassed by a Chinese blockade. Another author repeats some of these concepts, calling for creating more strategic depth by focusing on the battlespace time and space aspects of “On Protracted War.” The author argues, in a modern protracted war, one must focus on the time aspect of prolonged competition and rely on the depth of territory and internal lines. As Chinese power projection continues to grow, and China’s economic interests become more entrenched further from its borders, China’s imagined strategic and geographic interior and exterior lines may change.<sup>45</sup> One can imagine a world in which rings of Chinese ports, infrastructure, and Chinese good-consuming markets along the rim of the Indian Ocean and in the South Pacific, the second island chain, Central Asia, and beyond become China’s strategic exterior lines and the first island chain becomes China’s strategic interior line.

Another consistent theme is the prolongation of the war process, and the emphasis on preparing the People’s Liberation Army for a potential conflict with the United States, as well as diversified military activities. In the context of this theme, a strategy of protracted war emphasizes the use of the People’s Liberation Army in political contests short of armed conflict—including a renewed emphasis on military building (建军)—and increasing the People’s Liberation Army’s capabilities and capacity. These theories resonate with Xi’s desire for building a People’s Liberation Army that is commensurate with the comprehensive national power of China. By leveraging military capabilities in nonwar and quasi-war military activities, the People’s Liberation Army may be able to contribute to the gradual accumulation of political victories that aim to shift China’s position in relation to the United States from a relatively weak position to a relatively strong position.

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## Endnotes

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## China's History of Protracted War: Theory Versus Practice

Mr. Dennis J. Blasko  
Independent Analyst

For the People's Republic of China (PRC), the Chinese Communist Party (CCP), and the Chinese armed forces, the Second Sino-Japanese War (also known as the War of Resistance against Japanese Aggression) is the prototypical example of protracted war. In May 1938, nearly a year after the Marco Polo Bridge Incident, Mao Zedong delivered a series of lectures in Yan'an. Later published in essay format as "On Protracted War" (论持久战), the lectures described the strengths and weaknesses of the Chinese and Japanese situations.<sup>1</sup> Mao acknowledged the need for a tenuous second United Front between the Chinese Communist Party and the Nationalist Party, also known as the Kuomintang (KMT), to resist Japanese occupation and mobilize the population to support the two Chinese armies.<sup>2</sup> Many of the strategic, operational, and tactical principles found in Mao's essay were implemented again during other prolonged conflicts, and the principles remain relevant to understanding contemporary Chinese military doctrine.

At this point in his life, Mao had been fighting for over a decade (against the Nationalist Party and then, Japan) and studying classical Chinese and foreign military texts and Marxist doctrine. References to Carl von Clausewitz and Helmuth von Moltke are found throughout his work. Unexpectedly perhaps, only one direct quote from Sun Tzu's *The Art of War* is included in the essay—because Sun Tzu was not a proponent of protracted war. In contrast, most of the other elements of Sun Tzu's writing have been adopted by the Chinese military. Mao's and Sun Tzu's differing perspectives on protracted war were the result of China's military, political, and economic weaknesses in the 1930s; compared to its relative status in the fifth century BCE, China had nothing left to lose by fighting a prolonged war. Moreover, for Mao and the communists, China's struggle was a just war—

between semicolonial, semifeudal China and imperialist Japan—with history on the communists' side.

This chapter first examines Sun Tzu's discussion of protracted war in *The Art of War* and then quotes Mao extensively from his exposition on the subject in his famous essay. A brief discussion follows of the objectives the People's Republic of China sought to attain in its subsequent experiences with protracted war in the decades that followed. These experiences include the Second Sino-Japanese War, the Chinese Civil War, the Korean War, and the extended border conflict with Vietnam in the 1980s.

For the purposes of this chapter, a war that is not decided by the first battle or campaign—or by the opponent's initial response to an attack—becomes protracted after several months of conflict and could last for years. The context may be total war, in which the political existence of at least one party is threatened, or local war limited in geographic scope by the weapons employed or the objectives sought (something less than the destruction of the enemy).

### **Protracted War in *The Art of War***

In the second chapter of *The Art of War* (titled “Waging War”), Sun Tzu rejects the option of protracted war for both military and economic reasons.

Victory is the main object in war. If this is long delayed, weapons are blunted and morale depressed. When troops attack cities, their strength will be exhausted. When the army engages in protracted campaigns the resources of the state will not suffice. . . . Thus, while we have heard of blundering swiftness in war, we have not seen a clever operation that was prolonged. For there has never been a protracted war from which a country has benefited.<sup>3</sup>

According to Sun Tzu, choosing to conduct a prolonged campaign or conflict is a mistake. (Sun Tzu did not define when a war becomes protracted, but in his era, this time frame probably would have been considerably longer than current conceptions of protraction.) Prolonged conflict drains the strength of the military and the national coffers, especially if the state is rich. Much better to wage war quickly, without “a second levy of conscripts nor more than one provisioning.”<sup>4</sup> Best yet is “to subdue the enemy without fighting.”<sup>5</sup>

If forced to fight, Sun Tzu advised tactically, “engage” the enemy “if equally matched”; “divide” the enemy if you are twice its strength; or, preferably, attack

the enemy if five times stronger and surround the enemy if 10 times stronger. But “if weaker numerically, be capable of withdrawing; and if in all respects unequal, be capable of eluding him.”<sup>6</sup> Defense is employed when a skillful warrior’s strength is inadequate.<sup>7</sup>

But buried between these principles of offense and defense is perhaps the most fundamental law of war at any level: “Know the enemy and know yourself.”<sup>8</sup> This two-sided equation is necessary for any commander (and staff) to make accurate judgments and effective, flexible plans. As Sun Tzu explains, “When you are ignorant of the enemy but know yourself, your chances of winning or losing are equal. . . . If ignorant both of your enemy and of yourself, you are certain in every battle to be in peril.”<sup>9</sup>

As a student of Sun Tzu, Karl Marx, and Clausewitz, Mao fully understood the first words of *The Art of War*: “War is a matter of vital importance to the State; the province of life or death; the road to survival or ruin.”<sup>10</sup> Yet the only time Sun Tzu is quoted in “On Protracted War” is, buried in the depths of Mao’s text, the imperative to “know the enemy and know yourself.”<sup>11</sup> Mao would have agreed in general with most of Sun Tzu’s tactical guidance about offense and defense, the importance of terrain, deception, spies, and so forth. But Mao did not address Sun Tzu’s rejection of protracted war. Mao understood China’s conditions were different in his time than they had been 2,500 years earlier; a frail country in the 1930s, China was in an existential struggle that required a unique response that was sensitive to the strengths and weaknesses of all parties.

## Mao Zedong’s “On Protracted War”

In 1936, Mao had analyzed the CCP revolutionary war against the Nationalist Party; evaluated the war’s four major characteristics (which later would recur in the war against Japan); and determined, among other things, the Red Army must “uphold the strategy of protracted war and campaigns of quick decision” (速决战).<sup>12</sup> The four characteristics of the revolutionary war were “China is a vast, semi-colonial country,” “our enemy [the Nationalist Party] is big and powerful,” “the Red Army is small and weak,” and “victory is possible because . . . [the war] is under the leadership of the Communist Party and has the support of the peasantry.”<sup>13</sup> Mao explained, “Quick decision is sought in campaigns and battles, and this is true at all times and in all countries. In a war as a whole, too, quick decision is sought at all times and in all countries, and a long drawn-out war is considered harmful. China’s war, however, must be handled with the greatest patience and treated as a protracted war.”<sup>14</sup>

Mao's analysis of the situation in "On Protracted War" came later, after nearly a year of fighting the Japanese under the second United Front. The lectures and essay gathered in "On Protracted War" addressed the subject through the lens of Marxism, provided operational and tactical guidance, and described the national mobilization needed for the task of resisting Japanese imperialism.

The communist ideological framework provided hope for the Chinese in desperate times. According to Marxist theory, Chinese communists were fighting a just war for China as well as world peace against a strong enemy who was bound to lose.

The war between China and Japan is not just any war, it is specifically a war of life and death between semi-colonial and semi-feudal China and imperialist Japan, fought in the Nineteen Thirties. Herein lies the basis of the whole problem. . . . Japan . . . cannot stand a long war. . . . Japan has great military, economic and political-organizational power, but . . . her war is reactionary and barbarous, her manpower and material resources are inadequate, and she is in an unfavourable position internationally. . . . Our enemy, Japan, is first of all a moribund imperialist power; she is already in her era of decline. . . . The present war was launched on the eve of the general collapse of world imperialism and, above all, of the fascist countries; that is the very reason the enemy has launched this adventurist war, which is in the nature of a last desperate struggle. . . . It is proper for us to regard the anti-Japanese war and our national reconstruction as interconnected. . . . Undoubtedly Hitler will fight the great powers. . . . This war, we can foresee, will not save capitalism, but will hasten its collapse. . . . Once man has eliminated capitalism, he will attain the era of perpetual peace, and there will be no more need for war.<sup>15</sup>

In contrast, Mao argued, China was weak but headed in the right historical direction given the CCP-KMT alliance:

We are still a weak country and manifestly inferior to the enemy in military, economic and political-organizational power. Here again one can find the basis for the inevitability of the war and the impossibility of quick victory for China. . . . Although China today is not so strong as Japan militarily, economically, politically and culturally, yet there are factors in China more progressive than in any other period of her history. The Communist Party of China and the army under its leadership represent these

progressive factors. It is on the basis of this progress that China's present war of liberation can be protracted and can achieve final victory. . . . China's war is progressive, hence its just character. Because it is a just war, it is capable of arousing the nation to unity, of evoking the sympathy of the people in Japan and of winning the support of most countries in the world. . . . China is a very big country with vast territory, rich resources, a large population and plenty of soldiers, and is capable of sustaining a long war. . . . Japan's war is an unjust war that impedes progress. . . . In our country the people and the government, the Communist Party and the Kuomintang, have all raised the banner of righteousness in the national revolutionary war against aggression. Our war is sacred and just, it is progressive and its aim is peace.<sup>16</sup>

Although China had "subjugationists," traitors, and collaborators who would submit to or assist in the Japanese occupation, Mao argued, his ultimate objective in the war was to avoid national subjugation, thus achieving liberation.<sup>17</sup> "Not until we fight our way to the Yalu River can this war be considered over."<sup>18</sup> This geographic goal was important due to the Japanese occupation of Manchuria. China was fighting a war for survival, "a war of total resistance," and would require international support.<sup>19</sup>

Mao also envisioned "the rise of the revolutionary movement of the people in Japan and the Japanese colonies."<sup>20</sup> But most important was the unity of the people of China. Whereas "On Protracted War" does not use the term "people's war" (人民战争), many of the principles Mao espoused were consistent with the concept.<sup>21</sup>

The contest of strength is not only a contest of military and economic power, but also a contest of human power and morale. Military and economic power is necessarily wielded by people. . . . A national revolutionary war as great as ours cannot be won without extensive and thoroughgoing political mobilization. . . . The mobilization of the common people throughout the country will create a vast sea in which to drown the enemy, create the conditions that will make up for our inferiority in arms and other things, and create prerequisites for overcoming every difficulty in the war. . . . The richest source of power to wage war lies in the masses of the people. . . . We now have great difficulties in raising money for the war, but once the people are mobilized, finances too will cease to be a problem.<sup>22</sup>

Mao acknowledged the universal desire for a quick victory but argued circumstances did not allow for Japan's rapid defeat.<sup>23</sup> Instead, Mao argued, "China must unavoidably travel a hard stretch of road, and . . . the War of Resistance will be a protracted war and not a war of quick decision."<sup>24</sup> As Sun Tzu would agree, commanders must accurately judge the battlefield situation and adjust operational methods to changing conditions. Mao thus concluded, "From the very beginning the enemy's strength and our weakness have been relative and not absolute. . . . But circumstances are continually changing. . . . When a new stage is reached, a great change will take place in the balance of forces, resulting in the enemies defeat and our victory."<sup>25</sup>

In a section titled "The Three Stages of the Protracted War," Mao provided operational and tactical guidance for how to fight during the protracted war he foresaw in 1938 (see table 3-1).<sup>26</sup> Given Japan was on the strategic offensive during the first stage, China would assume a posture of strategic defense, employing mobile warfare to prevent the enemy from using national railroads to connect territories Japan had occupied or sought to subdue. "In the first stage of the war," wrote Mao, "the regular army operating strategically on interior lines is withdrawing but the guerrilla units operating strategically on exterior lines will advance with great strides over wide areas to the rear of the enemy—they will advance even more fiercely in the second stage—thereby presenting a remarkable picture of both withdrawal and advance."<sup>27</sup>

To execute these operations, the Chinese communists used the main forces of trained, professionally organized armies (like the Eighth Route Army and the New Fourth Army) as well as troops from the local people's armed forces in various communist-controlled military areas. Peasants augmented these troops and conducted guerrilla operations. Earlier, the Nationalist Party had mistakenly attempted to use positional war to defend cities. Whereas positional defense may be used sparingly in the first phase, the imbalance of power frequently made this strategy inappropriate. The Hundred Regiments Offensive from August 1940 to January 1941 was an example of mobile operations in northern China.<sup>28</sup> Mao expected communist forces to learn from these early combat experiences.<sup>29</sup> In retribution for the Hundred Regiments Offensive, Japan responded with its "Three Alls Policy"—kill all, burn all, loot all—to eliminate CCP bases in northern China.<sup>30</sup>

**Table 3-1. The three stages of protracted war**  
 (Source: Mao Zedong, "On Protracted War," in *Selected Works of Mao Tse-tung* [Foreign Language Press, 1967])

Enemy Posture	Chinese Communist Armed Forces Posture	Forms of Operations for Chinese Communist Armed Forces
<b>Stage I</b>		
Strategic offensive (1938)	Strategic defensive	Primarily mobile warfare, supplemented by guerrilla and positional warfare
<b>Stage II</b>		
Strategic consolidation or strategic stalemate	Preparation for the counteroffensive	Primarily guerrilla warfare, supplemented by mobile warfare
<b>Stage III</b>		
Strategic retreat	Strategic counteroffensive	Primarily mobile warfare, supplemented by positional and guerrilla warfare

In the second stage, strategic stalemate, the enemy stops his offensive and attempts to consolidate the territory. Mao did not predict when the second stage would begin, but it would "last a comparatively long time" and "be the most trying period but also the pivotal one" because China was not yet "adequately equipped technically."<sup>31</sup> Mao foresaw the second stage to be dual tracked: attrition of the enemy while building Chinese forces through the righteousness of the cause and the moral strength of the Chinese Communist Party. China's main task was to mobilize the population, stay united, and resist pessimism and calls for compromise. The nation's goal would be to build "the power to change from weakness to strength" so a strategic "counter-offensive to recover our lost territories" can be mounted in the third stage.<sup>32</sup> "Because of the unevenness in China's political and economic development," Mao explained, "the strategic counter-offensive of the third stage will not present a uniform and even picture throughout the country in its initial phase but will be regional in character, rising here and subsiding there."<sup>33</sup> How long the war would last depended "entirely upon the degree of the change in the balance of forces."<sup>34</sup> Mao mentioned a time frame of "months or years" and provided historical examples in which the weak overcame the strong by "pitting local superiority and initiative against the enemy's local inferiority and passivity."<sup>35</sup>

Moreover, many operational and tactical principles from “On Protracted War” continue to undergird modern Chinese doctrine. A few excerpts are highlighted below to illustrate the continuities between the Red Army of the 1930s and today’s People’s Liberation Army (PLA).

- **Relationship of man and technology.** “This is the so-called theory that ‘weapons decide everything,’ which constitutes a mechanical approach to the question of war and a subjective and one-sided view. Our view is opposed to this; we see not only weapons but also people. Weapons are an important factor in war, but not the decisive factor; it is people, not things, that are decisive.”<sup>36</sup>
  
- **Role of leadership.** We do not want any of our commanders in the war to detach himself from the objective conditions and become a blundering hothead, but we decidedly want every commander to become a general who is both bold and sagacious. Our commanders should have not only the boldness to overwhelm the enemy but also the ability to remain masters of the situation throughout the changes and vicissitudes of the entire war. . . Mistakes arise from ignorance about the enemy and about ourselves, and moreover the peculiar nature of war makes it impossible in many cases to have full knowledge about both sides; hence the uncertainty about military conditions and operations and hence mistakes and defeats. . . . It is possible for a commander to reduce errors and give generally correct direction, first through all kinds of reconnaissance and then through intelligent inference and judgement. . . . The flexible employment of armed forces is the central task in directing a war, a task most difficult to perform well. . . . Flexibility does not mean recklessness; recklessness must be rejected.<sup>37</sup>
  
- **Decisive nature of the offense.** The object of war is specifically “to preserve oneself and destroy the enemy” (to destroy the enemy means to disarm him or “deprive him of the power to resist,” and does not mean to destroy every member of his forces physically). . . . Attack is the chief means of destroying the enemy, but defence cannot be dispensed with. . . . In our war we strive in every engagement to win a victory, big or small, and to disarm a part of the enemy and destroy a part of his men and *materiel*. We must accumulate the results of these partial destructions of the enemy into major strategic victories and so achieve the final

political aim of expelling the enemy, protecting the motherland and building a new China.<sup>38</sup>

- **Importance of stratagem and deception.** Hence, deliberately creating misconceptions for the enemy and then springing surprise attacks upon him are two ways—indeed two important means—of achieving superiority and seizing the initiative. . . . it is often possible by various ruses to succeed in leading the enemy into a morass of wrong judgements. . . . “There can never be too much deception in war.” . . . In order to achieve victory we must as far as possible make the enemy blind and deaf by sealing his eyes and ears and drive his commanders to distraction by creating confusion in their minds.<sup>39</sup>
  
- **Friction and planning in war.** Because of the uncertainty peculiar to war, it is much more difficult to prosecute war according to plan than is the case with other activities. . . . Modern technical developments (telegraphy, radio, airplanes, motor vehicles, railways, steamships, etc.) have added to the possibilities of planning in war. . . . Tactical plans, such as plans for attack or defence by small formations or units, often have to be changed several times a day. A plan of campaign, that is, of action by large formations, can generally stand till the conclusion of the campaign, in the course of which, however, it is often changed partially or sometimes even wholly. A strategic plan based on the over-all situation of both belligerents is still more stable.<sup>40</sup>
  
- **Relations between officers and enlisted personnel.** The reform of our military system requires its modernization and improved technical equipment. . . . Nevertheless, soldiers are the foundation of an army; unless they are imbued with a progressive political spirit, and unless such a spirit is fostered through progressive political work, it will be impossible to achieve genuine unity between officers and men, impossible to arouse their enthusiasm for the War of Resistance to the full, and impossible to provide a sound basis for the most effective use of all our technical equipment and tactics. . . . A proper measure of democracy should be put into effect in the army, chiefly by abolishing the feudal practice

of bullying and beating and by having officers and men share weal and woe.<sup>41</sup>

The general theory comprises the relationship between man and technology, the role of leadership, the decisive nature of the offense, the importance of stratagem and deception, friction and planning in war, and relations between officers and enlisted personnel. Reality was not as clear-cut.

## **“Protracted War” in Practice**

Following the 1937 Marco Polo Bridge Incident, Japan’s occupation of Manchuria and the southward expansion of the Second Sino-Japanese War interrupted the ongoing and protracted Chinese Civil War between the Chinese Communist Party and the Nationalist Party. Facing an existential threat to China from Japan, the Chinese Communist Party and the Nationalist Party once more agreed to form the United Front. As the weakest leg of this triangle, temporarily allying with its domestic enemy against a foreign power seeking to conquer the country was a pragmatic decision for the Chinese Communist Party, though the decision was risky because the communists’ erstwhile KMT ally had burned them before.

Mao had appealed for Chinese unity by arguing, “[O]nly by persevering in the united front can we persevere in the war.”<sup>42</sup> Nevertheless, from early 1939 onward, the Nationalist Party attempted to restrict CCP growth and retake areas under communist control.<sup>43</sup> Clashes such as the New Fourth Army Incident in 1941, when KMT forces ambushed CCP units south of the Yangtze River, did not break the United Front but strained the partnership and resulted in public relations victories, both domestic and international, for the Chinese Communist Party and Mao as an individual.<sup>44</sup> Mao did foresee “Hitler will fight the great powers,” but the CCP leader did not predict Japan would attack the United States and the European colonial powers in Southeast Asia.<sup>45</sup> Tokyo’s overreach resulted in international help and support for China, if not quite the “international anti-Japanese united front” Mao saw as necessary for victory.<sup>46</sup>

Japan’s December 1941 Pearl Harbor attack and offensive in Southeast Asia resulted in sizable numbers of Japanese forces being committed to theaters outside China, to the benefit of Chinese forces and civilians. Nevertheless, over the following years, Japan’s occupation and campaigns in China tied down huge numbers of personnel and weapons to the benefit of the Allied powers. According to Jonathan Spence, when Japan surrendered in 1945, the Japanese Imperial Army had 900,000 troops in Manchuria and nearly 1.25 million more in China proper.<sup>47</sup>

Although Mao's three phases of protracted war looked good on paper, the Second Sino-Japanese War did not play out as predicted. Granted, Chinese forces were mostly on the strategic defensive from 1937 to 1940, and the war entered a painful strategic stalemate after the 1941 Hundred Regiments Offensive. But the third phase, a CCP strategic counteroffensive, never occurred. Rather, Japan resumed its offensive on the mainland with the Ichigo campaign in the summer of 1944. Japanese forces pushed south from Wuhan to Changsha and on to Guilin, attacking KMT forces, and from Guangdong to Liuzhou to seize Allied air bases used to bomb Japan.<sup>48</sup> Japanese offensives in central China continued into the spring of 1945—successfully, toward a US air base at Laohekou, Hubei, and unsuccessfully, at Changde and Zhijiang, both in Hunan.<sup>49</sup> Yet at the same time, the allies were advancing in all other regions of the Pacific, including in Myanmar, where KMT divisions were employed. The tide had turned against Tokyo, and Chinese forces had contributed to the victory. But the decisive battles had been fought outside China. With a lot of help from its friends, China had prevailed in its existential fight. One can therefore interpret the Second Sino-Japanese War as one phase in the much longer Chinese Civil War.

The Chinese Civil War had begun after the end of the first United Front, in the summer of 1927. One can consider the next 10 years to be the first strategic defensive phase of a protracted war. From 1927 to 1937, CCP forces sought primarily to survive by retreating from the KMT onslaught; this period was epitomized by the Long March, the formation of multiple CCP bases or soviets, and five KMT encirclement campaigns to reduce the bases.<sup>50</sup> With the beginning of the Second Sino-Japanese War, also known as the War of Resistance against Japanese Aggression, the Chinese Civil War entered a strategic stalemate phase; this second phase included the uneasy political truce of the second United Front and intermittent, inconclusive conflict between Chinese forces. After Japan's defeat, both sides looked to expand (or maintain) their areas of political control while accepting the surrender of Japanese forces and incorporating their weapons into their own units.<sup>51</sup> Fighting continued even during the interregnum of George C. Marshall's mission to negotiate a ceasefire agreement between CCP and KMT forces, leading to the mission's failure in January 1947.

Even before Marshall had left China, Mao was shifting strategy and tactics for the strategic offensive phase of protracted war. The communist leader sought to annihilate the enemy force through quick-decision battles in mobile war and the incorporation of KMT prisoners and defectors into CCP formations:

[The Nationalist Party] is now not only the main source of our arms and ammunition, but also an important source of our manpower. Complete annihilation demoralizes the enemy's troops

and depresses his followers; it raises the morale of our troops and inspires our people. A quick decision makes it possible for our troops either to wipe out the enemy reinforcements one by one or evade them. Quick decision in battle and campaign is a necessary condition for the strategy of a protracted war. . . . In the present civil war, as conditions have changed, so should the method of fighting. The concentration of our forces for mobile warfare should be primary, and the dispersal of our forces for guerrilla warfare should be supplementary. Now that Chiang Kai-shek's army has acquired more powerful weapons, it is necessary for our army to lay special stress on the method of concentrating a superior force to wipe out the enemy forces one by one.<sup>52</sup>

Over four months from late 1948 into 1949, massed CCP field armies, each with hundreds of thousands of troops and heavy weapons, fought three campaigns: Liaoning-Shenyang, Huaihai, and Beiping-Tianjin. As the field armies began campaigning, Mao informed commanders they could expect to fight until 1951.<sup>53</sup> Instead, Chiang Kai-shek had already begun a retreat to Taiwan. The Chinese Communist Party had saved itself but had not achieved its ultimate objective of destroying the party's rival. Ironically, this task was postponed indefinitely with the outbreak of war on the Korean Peninsula in June 1950, when the US 7th Fleet was dispatched to the Taiwan Strait to prevent a Chinese assault on Taiwan. The Chinese Civil War remained unresolved, and within a year, the People's Republic of China was involved in another protracted war, though one with limited objectives on the Chinese side.

The initial PRC involvement in the Korean War, which China refers to as the War to Resist US Aggression and Aid Korea, was aimed at preventing a major foreign military presence on China's borders along the Yalu River. The Chinese People's Volunteers Force began its strategic offensive by crossing the Yalu River, using guerrilla tactics of night movement and surrounding smaller enemy positions. Chinese propaganda portrayed the United States as imperialist, recognizing the "current situation shows that the war will be a long one."<sup>54</sup> By the summer of 1951, the war had reached a stalemate of positional trench warfare that lasted for two years before an armistice was signed. Whereas the People's Republic of China achieved its limited objective of keeping US forces well south of the Yalu River, the main point of contention in negotiations was whether all Chinese prisoners would be returned home.<sup>55</sup> Chinese leaders demonstrated their will to extend a bloody fight to avoid the political embarrassment of some PLA soldiers not wanting to return to the mainland. Whereas 14,000 prisoners chose to be repatriated elsewhere, China eventually compromised on this less-than-existential issue.

China also fought its next protracted conflict, the Sino-Vietnamese War, from 1979 to 1987 for limited objectives. This border conflict with Vietnam was likewise resolved through negotiations. The month-long PLA campaign beginning in February 1979 did not accomplish China's strategic objective to persuade Vietnam to withdraw its troops from Cambodia; in part, the People's Liberation Army was ineffective in this campaign due to internal disruption from the Cultural Revolution. Because of demonstrated PLA ineffectiveness during the Sino-Vietnamese War, starting in the summer of 1980, the People's Liberation Army began "artillery diplomacy," as Edward C. O'Dowd called it, along the Sino-Cambodian border. In May and June 1981, artillery diplomacy was followed by two limited attacks into Vietnam from China's Guangxi and Yunnan border areas, with smaller skirmishes through 1982 and 1983. At the same time, China supported training for Laotian guerrillas operating behind Vietnamese lines in Cambodia, Laos, and Vietnam. In early April 1984, the People's Liberation Army responded to Vietnamese attacks on China's Cambodian friends with multiple battalion-sized infantry incursions into Vietnam. Later that month, the People's Liberation Army unleashed an offensive with multiple divisions from Yunnan toward Hà Giang and the hills of Laoshan Qu. The battle of Laoshan continued into July, but the People's Liberation Army did not penetrate deeper than five kilometers into Vietnam. Division-sized operations were conducted through 1986, but Vietnam refused to withdraw from Cambodia. In the last major ground operations of the conflict, the People's Liberation Army fired extensive artillery barrages from Guangxi and launched a series of division-sized attacks into the Huyện Vị Xuyên district of Vietnam in January 1987. Throughout these years, the People's Liberation Army rotated units to the front from all over China to conduct these operations.<sup>56</sup>

Seven years of indecisive conflict had battle hardened a portion of the PLA Army, spurred the need for military modernization and reform, and demonstrated PRC willingness to use prolonged military force for a political objective. The People's Liberation Army achieved its goal of Vietnamese withdrawal from Cambodia, but this achievement occurred after a series of negotiations, begun in 1987, that had included all the belligerents as part of the Sino-Soviet political normalization process. Vietnam's withdrawal had been one of "three obstacles" to normalization, alongside the Soviet occupation of Afghanistan and the installment of Soviet troops in Mongolia, that were identified by the People's Republic of China.<sup>57</sup>

In short, Mao's 1938 theory of protracted war never came to fruition in China's revolution as Mao had predicted. Still, China's experience influenced other revolutionary movements in the twentieth century, including during the First Indochina War (Vietnam's war against France) and, later, the Vietnam War. For the four historical examples examined above, table 3-2 summarizes PLA

objectives, the applicability of Mao's theory about the three phases of protracted war, and the actual conduct and results of each protracted conflict.

**Table 3-2. Difference between theory and practice in Chinese protracted conflicts**

	Chinese Objectives	Strategic Defensive	Strategic Stalemate	Strategic Offensive	Result
War Against Japan	<b>Existential:</b> Survive Japanese invasion.	<b>1937</b>	<b>1939</b>	<b>1944–45:</b> Japan on strategic offensive.	<b>Victory:</b> Primarily because of allied actions.
Chinese Civil War	<b>Existential:</b> Survive KMT attempts to destroy the Chinese Communist Party.	<b>1927–37:</b> Long March and KMT encirclement campaigns.	<b>1937–45:</b> Second United Front during war against Japan.	<b>1946–47:</b> After Marshall mission.	<b>Unresolved:</b> Nationalist Party not eliminated.
Korean War	<b>Limited:</b> Protect borders and return all prisoners of war.	Not applicable.	<b>1951–53</b>	<b>1950–51</b>	<b>Negotiated truce:</b> With buffer zone, some prisoners of war not returned.
Border Conflict with Vietnam	<b>Limited:</b> Achieve Vietnamese withdrawal from Cambodia.	Not applicable.	<b>1980–87</b>	Not applicable.	<b>Negotiated settlement:</b> Part of Sino-Soviet normalization process.

## Conclusions

Historically, the People's Liberation Army has experienced protracted war as the weaker military party in each conflict. This experience may not be the case in future protracted wars as the People's Liberation Army proceeds with its long-term strategy for military modernization.<sup>58</sup> Defense planners in the United States (and elsewhere) now appear to assume any conflict with China is likely to become protracted, requiring significant changes to the United States' force structure and defense industrial base.<sup>59</sup> As potential participants in a future conflict with China prepare for the worst, the balance of power (scorecard) among the

various forces and capabilities will vary over time according to the combatants, timing, location, geography, and objectives.<sup>60</sup>

To date, the People's Republic of China has faced only one nuclear power in prolonged warfare—the United States, during the Korean War, when the People's Liberation Army had no nuclear weapons of its own. That situation, too, has changed. Nuclear proliferation undoubtedly affects Beijing's risk calculus as the People's Liberation Army expands its nuclear arsenal. In addition, China's economic situation has improved to the point where the People's Republic of China and the Chinese Communist Party have much more to lose today—at least, economically—than the Chinese communists did in past conflicts. Thus, understanding China's national objectives in prosecuting a modern protracted war is important because they may range from limited goals to PRC or CCP survival. Historically, negotiations have proven successful in ending protracted conflicts, but only after China has made its political points.

China's previous long wars did not follow the three-stage pattern Mao predicted. Nonetheless, modern PLA doctrine has retained most of Mao's doctrinal guidance from 80 years ago, albeit updated with modern technologies. Readers of *PLA Daily* regularly encounter the principles outlined above, including the continuing instruction by Xi Jinping to develop the strategy and tactics of people's war (发展人民战争战略战术).<sup>61</sup>

As US Army strategist Rick Chersicla has observed, “Sun Tzu and Mao do not represent a Chinese way of war that is markedly different from the West, but they do demonstrate that the astute strategist who is aware of both history and the specific strategic context is capable of crafting theories that can be influential for decades—or even centuries.”<sup>62</sup> Based on China's theory and practice of protracted war, the Chinese Communist Party and the People's Liberation Army are constantly adapting to changing situations and developing unexpected solutions and methods of operations. Whether in a protracted war or a campaign of quick decision, the Chinese armed forces will aim to execute military theory and doctrine that harken back to both Sun Tzu and Chairman Mao, updated by advanced technologies and lessons learned studying other countries' wars. But this execution will be controlled by a political system that is unique to China. Be prepared to be surprised.

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## Endnotes

1. Mao Zedong, "On Protracted War," in *Selected Works of Mao Tse-tung* (Foreign Language Press, 1967), 2:113–31. Citations to this source are identified by the paragraph number (paras. 1–119) where the quoted text appears. A Chinese-language version can be found at <https://www.marxists.org/chinese/maozedong/marxist-org-chinese-mao-193805b.htm>.
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3. Sun Tzu, *The Art of War*, trans. Samuel B. Griffith (Oxford University Press, 1963), 73. Subsequent citations refer to this translation. For an alternative translation with Chinese characters, see Sun Tzu, "孙子兵法 - *The Art of War*," trans. Lionel Giles, Chinese Text Project, n.d., <https://ctext.org/art-of-war/ens>. Whereas wording and section numbers differ between these two translations, the main thrust is the same.
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5. Sun Tzu, *Art of War*, 77.
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7. Sun Tzu, *Art of War*, 85.
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10. Sun Tzu, *Art of War*, 63.
11. Mao Zedong, "On Protracted War," para. 81.
12. Mao Zedong, "Problems of Strategy in China's Revolutionary War," in *Selected Works of Mao Tse-tung* (Foreign Language Press, 1965), 1:179–254.
13. Mao Zedong, "Problems of Strategy," 196–98.
14. Mao Zedong, "Problems of Strategy," 245.
15. Mao Zedong, "On Protracted War," paras. 9–10, 12, 15, 25, 57.
16. Mao Zedong, "On Protracted War," paras. 11, 58.
17. Mao Zedong, "On Protracted War," para. 18.
18. Mao Zedong, "On Protracted War," para. 38.
19. Mao Zedong, "On Protracted War," para. 119.
20. Mao Zedong, "On Protracted War," para. 119.
21. In a 1945 report, Mao described people's war with respect to the war against Japan and applied the term to the Chinese Civil War against the Nationalist Party. See Mao Zedong, "On Coalition Government," in *Selected Works of Mao Tse-tung* (Foreign Language Press, 1965), 3:255–320.
22. Mao Zedong, "On Protracted War," paras. 48, 66, 142.
23. Mao Zedong, "On Protracted War," para. 29.
24. Mao Zedong, "On Protracted War," para. 17.
25. Mao Zedong, "On Protracted War," paras. 32–33.
26. Mao Zedong, "On Protracted War," paras. 35–38.
27. Mao Zedong, "On Protracted War," para. 52.
28. For different interpretations of the success of this campaign, see "What Is the Hundred-Regiment Campaign?," *China Daily*, September 3, 2020, [http://eng.chinamil.com.cn/2020special/2020-09/03/content\\_9896154.htm](http://eng.chinamil.com.cn/2020special/2020-09/03/content_9896154.htm); and Jonathan D. Spence, *The Search for Modern China* (W. W. Norton, 1990), 464. Spence writes, "Despite the courage with which the attacks were carried out, none of . . . [China's] objectives was attained."
29. Mao Zedong, "On Protracted War," para. 41.

30. "The Hundred Regiments Offensive," Academy of Chinese Studies, n.d., <https://chiculture.org.hk/en/photo-story/3240>.
31. Mao Zedong, "On Protracted War," para. 37.
32. Mao Zedong, "On Protracted War," paras. 37–38.
33. Mao Zedong, "On Protracted War," para. 44.
34. Mao Zedong, "On Protracted War," para. 50.
35. Mao Zedong, "On Protracted War," paras. 50, 82.
36. Mao Zedong, "On Protracted War," para. 48.
37. Mao Zedong, "On Protracted War," paras. 62, 81, 85, 87.
38. Mao Zedong, "On Protracted War," paras. 68, 71.
39. Mao Zedong, "On Protracted War," para. 83.
40. Mao Zedong, "On Protracted War," para. 88. Note: These observations parallel Helmuth von Moltke's saying "No plan of operations reaches with any certainty beyond the first encounter with the enemy's main force."
41. Mao Zedong, "On Protracted War," para. 113.
42. Mao Zedong, "On Protracted War," para. 40.
43. Rana Mitter, *Forgotten Ally: China's World War II, 1937–1945* (Houghton Mifflin Harcourt, 2013), 223.
44. Mitter, *Forgotten Ally*, 225–28; and Spence, *Search for Modern China*, 464–66.
45. Mao Zedong, "On Protracted War," para. 57.
46. Mao Zedong, "On Protracted War," para. 119. In this paragraph, Mao defines three conditions for China to defeat the Japanese: "[F]irst, the establishment of an anti-Japanese united front in China; second, the formation of an international anti-Japanese united front; third, the rise of the revolutionary movement of the people in Japan and the Japanese colonies." Mao concludes, "From the standpoint of the Chinese people, the unity of the people of China is the most important of the three conditions."
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## **PLA Learning from Modern Protracted Wars Abroad**

Dr. Jake Rinaldi  
China Landpower Studies Center, US Army War College

### **Introduction**

Xi Jinping has emerged as the most influential civilian leader in recent history, overseeing the People's Liberation Army (PLA) and solidifying his authority through sweeping reforms that centralized military power under his command. This consolidation has empowered Xi to adapt the PLA swiftly to achieve strategic objectives, enhancing its readiness for integrated operations across the land, sea, air, space, and cyber domains. Efforts to centralize military power included the dissolution of general departments and their reorganization under the Central Military Commission (CMC), diminishing the autonomy of the military and establishing direct accountability to Xi Jinping as CMC Chairman. Consequently, the PLA is now positioned to change more quickly and effectively than it could under previous leaders.

One of China's primary challenges lies in its limited direct experience with large-scale ground combat since 1980. Whereas China has contributed significantly to international peacekeeping efforts, with more than 40,000 personnel being involved in 25 UN missions, China's last major conflict involving conventional military forces was the 1980–87 Sino-Vietnamese border conflict. During this conflict, the Chinese military employed infantry, tanks, and artillery but did not deploy any offensive airpower. Since the Sino-Vietnamese border conflict, the PLA has not engaged in a major military campaign for decades. Moreover, China's last direct conflict with the US military was during the Korean War, over 70 years ago. China had brief naval clashes with South Vietnam in 1974 and with Vietnam in 1988, but the PLA has not participated in any large-scale

naval battles. Consequently, analysts in the People's Republic of China (PRC) must draw from historical and foreign conflicts to inform preparations for future large-scale military contingencies.

The PLA systematically studies both contemporary and historical conflicts, integrating insights from these studies directly into its theories of warfare. Unlike the study of China-fought wars, which is subject to political limitations, Chinese scholars and analysts enjoy more latitude in examining foreign military engagements.<sup>1</sup> Central to the examination process are regular study sessions, attended by senior Chinese Communist Party (CCP) leaders, where experts delve into military strategy and related fields. Learning from foreign military engagements can shape the course of PLA military development, which is particularly evident in major changes made to Chinese military strategy after the Gulf War.<sup>2</sup> One key source of data on foreign military engagements is the *World Military Review* [外国军事学术], a journal published by the World Military Research Department of the PLA Academy of Military Science, in which dozens of experts analyze and disseminate military lessons learned from abroad.

More broadly, the PLA enhances combat readiness through peacekeeping operations, large-scale military exercises, and the study of foreign conflicts. Each method provides unique benefits: Peacekeeping fosters international coordination but limits combat training due to strict rules of engagement. Conversely, exercises offer controlled feedback but lack the absolute realism of actual combat scenarios. Studying modern protracted wars, central to this chapter, offers critical insights into unit proficiency, equipment performance, and tactical effectiveness. Studying foreign conflicts enables the PLA to analyze real-world combat dynamics and derive valuable lessons across all operational levels. This method of analysis also presents drawbacks, such as the uncertainty of observing from afar and the challenges of applying lessons from foreign conflicts to China's unique operational context.

Ultimately, the central aim of this chapter—to study what lessons the PLA is learning from modern protracted wars—is critical to US defense planners' understanding of PLA capabilities both now and in the future. American scholars have previously studied the PLA from this perspective.<sup>3</sup> This chapter enhances the existing scholarship by analyzing Chinese sources on recent protracted wars and examining the role of modern technology in these conflicts, providing a more comprehensive understanding of the PLA's present learning and strategic development.

## PLA Learning from Russian Failures in Ukraine

The PLA must prepare for several contingencies, including an invasion of Taiwan, potential escalations with India, and conflicts on the Korean Peninsula, all of which could turn into protracted wars. This section identifies various lessons Beijing is internalizing from the Russia-Ukraine War that may be relevant to a future protracted war. The first area of PLA learning focuses on intelligence and counterintelligence operations in protracted-war scenarios. The second area delves into the role of cognitive warfare in influencing global narratives, mobilizing international support, and deterring [威慑] other countries from intervening in a protracted war. The third area concerns the need for strategic reserves to withstand international sanctions. Finally, the fourth area targets the challenges posed by low-cost, asymmetric capabilities, as demonstrated by Ukraine and increasingly by Taiwan, and the need to develop effective countermeasures to protect large systems in a future protracted-war scenario.

Chinese scholars are closely studying the Russia-Ukraine War for insights into intelligence operations that are critical to success in protracted warfare. Zhang Gaoyuan from Peking University attributes Russia's losses to weak command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) systems.<sup>4</sup> Zhang highlights how Ukraine's allies have secured robust C4ISR with dual-use technologies like drones, Starlink satellites, and open-source information from social media.<sup>5</sup> These elements have been vital for Ukraine's battlefield intelligence. Zhang recommends China prioritize research on digital technologies for intelligence acquisition and security, recognizing their importance in regional conflicts.<sup>6</sup>

Scholars in the PRC have expanded on Zhang's analysis to argue advanced technologies, including new C4ISR systems, artificial intelligence-augmented weapons and sensors, and space systems, have given rise to a more involved form of proxy warfare termed "avatar war." Zhao Hai, director of the International Politics Program at the National Institute for Global Strategy and research fellow at the Chinese Academy of Social Sciences, compares traditional proxy wars to patron states "giving blood," whereas modern proxy wars are akin to "getting into another person's neural system."<sup>7</sup> According to Zhao, advanced systems like satellite support, artificial intelligence systems, and drones become "more deeply involved and integrated into [the] other person's direction system," facilitating greater "control over where they can deploy, how they will fight, and ultimately what they need to continue the fighting."<sup>8</sup> Based on this analysis, Zhao asserts the United States is exemplifying "avatar warfare" in Ukraine and in the Indo-Pacific region, specifically highlighting US military support for Taiwan.<sup>9</sup>

Reinforcing the emerging Chinese concept of proxy warfare, He Zhichao and Chen Xia from the PLA Air Force Command College recently published an analysis in *World Military Review* that describes Ukraine's integration with NATO's information systems. He and Chen emphasize the deployment of digitized communication systems and automated information systems for command at the brigade level and above.<sup>10</sup> According to the article, NATO integration significantly enhanced Ukraine's command and control, underscoring the notion of "avatar warfare," where external systems deeply influence a state's military operations. Additionally, He Xun and Yu Zhiyun from the PLA National Defense University examine US military assistance to Ukraine, discussing advancements made in Ukraine's command, control, communications, and computer systems.<sup>11</sup> He and Yu detail efforts to overcome interoperability barriers between Ukraine and NATO, noting improvements in situational awareness, command and control, and airspace security—further illustrating the depth of external influence characteristic of avatar warfare.

In addition, scholars in China are drawing lessons from the Russia-Ukraine War on the need for robust counterintelligence measures in the event of a protracted conflict. In a war-fighting context, these measures include disrupting enemy C4ISR as part and parcel of systems warfare. On the domestic front, Huang Bin, former deputy general manager of the Aviation Industry Corporation of China, publishing in *Defense Science & Technology Industry*, asserts the need to strengthen national security education and create a counterespionage network across political, economic, military, cultural, public health, and Internet domains.<sup>12</sup> Huang sees this comprehensive approach as crucial to maintaining operational security in a future protracted war.

As a result of the Russia-Ukraine War, Beijing also recognizes the increased strategic importance of cognitive warfare in shaping global narratives and deterring foreign intervention in a future conflict. A paper authored by scholars from the Renmin University of China Chongyang Institute for Financial Studies underscores the need for China to leverage international law to position itself on the moral high ground. The authors emphasize the necessity of harnessing big data, machine learning, and generative artificial intelligence to "build a psychological line of defense, respond to the intrusion of Western ideology, and win international moral support."<sup>13</sup> Furthermore, this paper stresses the importance of decoupling Taiwan and Ukraine in the global court of public opinion as a pivotal step toward establishing cognitive and psychological dominance in preparation for future conflicts.<sup>14</sup> Delinking the Taiwan conflict from Russia's war in Ukraine would allow China to mitigate international opposition and criticism, decreasing the likelihood of external interference or support for Taiwan in a future invasion scenario. Overall, effectively managing escalation and deterring US intervention are

central objectives of China's cognitive-warfare strategy. Localizing conflicts and controlling their intensity are crucial cognitive-warfare objectives for the PLA in protracted-war scenarios.

In addition to fighting in the cognitive domain, China is preparing to increase its strategic reserves and fortify itself against international sanctions in anticipation of protracted conflicts, taking cues from the ongoing Russia-Ukraine War. In an analysis for the Aviation Industry Corporation of China, Huang Bin writes, "Modern warfare consumes a staggering amount of materiel—especially in a protracted war of attrition," emphasizing the need for increased reserves of munitions and equipment in light of Russia's substantial resource consumption in its conflict with Ukraine.<sup>15</sup> Concurrently, China is observing Russia's strategies for adapting to global economic sanctions, including facilitating smuggling, implementing capital-outflow controls, hoarding gold, and using a shadow fleet for energy exports.<sup>16</sup> Moreover, Xu Poling, director of the Department of Russian Economy at the Chinese Academy of Social Sciences, highlights how Russian financial and fiscal policy, including secure backup plans for international reserves and resilient settlement systems, helps manage inflationary pressures and stabilize urban populations, preventing political and social instability within Russia.<sup>17</sup> From these observations, the scholars conclude China must strengthen its logistical and economic institutions to ensure resilience against sanctions during a prolonged conflict.

Importantly, scholars in China do not adopt lessons wholesale from other countries' wars or contexts but instead adapt those lessons to fit China's geopolitical context. For instance, Zhao Hai from the Chinese Academy of Social Sciences recognizes the economic impact of sanctions on the PRC would be far more severe, due to China's higher level of interdependence with the global economy, than that Russia has faced.<sup>18</sup> China's self-perceived vulnerability may explain the new rhetorical emphasis on "strengthening domestic economic circulation" [增强国内大循环], which, according to state media, means reducing external dependency by increasing technological self-reliance and domestic demand.<sup>19</sup>

Chinese analysts have derived several core lessons from the Russia-Ukraine War that are specific to war fighting. In the main, Beijing recognizes the need to counter low-cost, asymmetric capabilities. One key takeaway not focused solely on specific technological fixes is the length of time required to generate effective countermeasures to new tactics and capabilities. As observed in past conflicts, protracted warfare inherently involves multiple rounds of innovation to counter an adversary's innovation. Beyond having superior equipment on day one, effective war fighting requires the ability to out-innovate the enemy throughout the duration of a conflict. Recognizing a future adversary like Taiwan would employ

asymmetric capabilities to offset conventional weaknesses, the PLA is focused on devising specific countermeasures to maintain a technological and strategic edge during a protracted war.

Asymmetric warfare also features in an analysis of China's potential future conflicts based on the Russia-Ukraine War. In this analysis, Wang Shushen, a director at the Institute of Taiwan Studies at the Chinese Academy of Social Sciences, quotes Taiwan's Quadrennial Defense Review as emphasizing asymmetric operations, including "long-range precision strikes and acquiring advanced counterair, sea control, and ground defense weapons."<sup>20</sup> These weapons are characterized as being "small, mobile, accurate, lethal, numerous, dispersed, inexpensive, and easy to use, along with a high degree of operational flexibility and battlefield survivability."<sup>21</sup> Man-portable air defense systems, such as the Stinger missile system, exemplify the type of weapons technology discussed in Wang's analysis.

Zhao Xiaozhuo, a researcher at the PLA Academy of Military Science, further conceptualizes asymmetric capabilities in an article in *China Security Studies*, a journal run by the Ministry of State Security.<sup>22</sup> Zhao emphasizes the Armed Forces of the Russian Federation's inability to achieve air supremacy over Ukraine was largely due to the effectiveness of Stinger missiles, particularly against low-flying Russian aircraft. Zhao highlights the low cost and high impact of systems facilitating asymmetric operations:

The price of one Javelin missile is several tens of thousands of U.S. dollars, the price of one Stinger missile is only \$100,000, and many drones cost only a few thousand dollars each. However, the tanks they have destroyed are worth hundreds of thousands to millions of dollars, and the helicopters and fixed-wing aircraft they have shot down are worth millions to tens of millions of dollars.<sup>23</sup>

This quote illustrates how scholars in China are learning about the dynamics of protracted conflict and are considering how cost and production have impacted the conventional balance.

More explicitly, researchers from the PLA Air Force Command College argue Ukraine has successfully retrofitted antitank missiles, rockets, and heavy-caliber machine guns to various vehicles to counter the deficit in main battle tanks and infantry fighting vehicles.<sup>24</sup> The researchers comment, "Ukraine concentrated its limited resources on acquiring asymmetric advantages through special operations, command and control, information networks, cognitive psychology, and unmanned operations," thereby countering the Russian military's superior conventional forces.<sup>25</sup>

In response to the evolving character of warfare observed in the Russia-Ukraine War, the PLA is beginning to study countermeasures against asymmetric capabilities.<sup>26</sup> Scholars emphasize the need for advanced technologies to protect major weapons systems. Huang Bin advocates prioritizing solutions to counter asymmetric attacks on aircraft, tanks, and armored vehicles from Western-made man-portable missiles such as the Stinger, FGM-148 Javelin, and Starstreak, as well as swarms of unmanned aerial vehicles (UAVs) like the Switchblade.<sup>27</sup> Huang specifically calls for close cooperation with the PLA to develop and upgrade efficient systems for situational awareness on the battlefield, ensuring effective deployment in future multiservice, joint operations.<sup>28</sup>

A more specific example of the PLA's learning is the importance it ascribes to the tank cage (应对笼) in defending against low-cost, asymmetric capabilities. Ukraine and, to some extent, Russia use cage armor on their tanks. This armor consists of thin metal pieces that extend outward from the tank's main body, creating standoff distance. The armor's design is effective because incoming projectiles detonate upon impact with the cage, preventing penetration of the main armor and reducing the likelihood of shrapnel penetration. Additionally, the crew experiences reduced exposure to explosive forces due to this protective measure. The tank cage allows military units to maintain protection while executing fires on adversaries.

In one recent article from PRC state media, the author highlights various types of tank protection, starting with basic add-on armor and mesh structures to defend against rockets and shaped charges; and moving to more sophisticated passive measures, like explosive reactive armor, that reduce the impact of incoming projectiles.<sup>29</sup> Finally, the focus shifts to advanced active-protection systems, including both soft-kill systems that disrupt missile guidance and hard-kill systems that intercept and destroy incoming threats, with an emphasis on improving detection and response capabilities to counter modern threats like drones and loitering munitions. Hence, to protect PLA equipment and forces, these analysts are considering different ways to counter the low-cost, asymmetric capabilities used in Ukraine.

At the strategic level, Chinese scholars link the challenges of asymmetric capabilities and supporting intelligence, surveillance, and reconnaissance infrastructure with China's strategic stability vis-à-vis the United States.<sup>30</sup> Researchers at the PLA's National University of Defense Technology argue the US military's asymmetric capabilities enhance forward defense, as the United States deploys a precision-strike network along the first island chain and configures an integrated antimissile system and optimized reserve forces in the second island chain.<sup>31</sup> The researchers argue these deployments tip the balance of strategic stability in favor of the United States, posing a significant threat to China.<sup>32</sup>

Consequently, Zuo Xiyong, a professor at the School of International Studies at Renmin University of China, implies US forward defense will drive China to expand its nuclear arsenal further.<sup>33</sup>

At the level of national policy, Chinese scholars highlight lessons from coordination between Russia and Belarus during the Russia-Ukraine War which may be relevant to China's own strategic partnerships. Wang Tong, a researcher at the Army Academy of Armored Forces, discusses the establishment of the Russia-Belarus Joint Defense Committee, which coordinates joint exercises, logistics, and information sharing.<sup>34</sup> This collaboration is further supported by complementary equipment transfers, bolstering sustainment in a protracted context despite disparities in technological advancements. The author also highlights the creation of regional army groups (区域军队集群), where both Russian and Belarusian forces are stationed together and follow a common defense plan, as a model for coordinated defense and deterrence. These elements of collaboration between Russia and Belarus may become relevant considering the growing strategic alignment between authoritarian states, the tense security environment in the Indo-Pacific, and growing US and allied capabilities that could make a protracted conflict more likely.

## **PLA Learning from Conflicts in the Middle East and North Africa**

The PLA is actively preparing for counterinsurgency operations, recognizing them as a central challenge in future protracted wars. Beijing considers the development of military capabilities for this type of warfare crucial, particularly to pacify the population following an invasion of Taiwan.<sup>35</sup> Learning from US and Russian urban-warfare and counterinsurgency experiences in the Middle East informs PLA preparations.

From studying modern protracted wars, the PLA has gleaned successful counterinsurgency and urban-warfare operations require a coordinated approach using units from a lower echelon to achieve information dominance, accurate precision fires, and manned-unmanned teaming simultaneously—all underpinned by comprehensive intelligence assessments that identify targets, establish routes, and locate enemy forces. From Israel's 2009 Operation Cast Lead against Hamas, Chinese analysts learned initial intelligence operations should facilitate a "mosaic target database" (马赛克目标数据库) that records information on the enemy's leadership, weapons channels, and combat capabilities in one system for commander consideration.<sup>36</sup> The First Libyan Civil War provided other critical lessons for the PLA in modern intelligence operations. Western forces infiltrated

Muammar al-Qaddafi's cellular networks and communication databases, leveraging these breaches to "relay target data to NATO intelligence centers."<sup>37</sup>

Moreover, due to constraints such as the risk of collateral damage, restricted weapon ranges, and limited access, the PLA has come to understand decentralized, small-unit operations are more appropriate in urban settings characterized by dense arrays of houses, buildings, and streets. As a result, the PLA views urban combat as a "battle of squad leaders' decisions."<sup>38</sup> Russian experiences in the Syrian Civil War have taught PLA strategists urban warfare demands the coordinated deployment of small units at the company level, encompassing antiarmor, sniper, and mortar units; artillery units; and aviation assets, including drones.<sup>39</sup>

Based on insights from foreign protracted conflicts, the PLA is also recognizing the need for small teams to integrate effectively with armored units. This imperative was established after Operation Cast Lead, in which the Israel Defense Forces used heavily armored D-9 bulldozers and engineers to create corridors through buildings, bypassing potential ambush sites and minefields.<sup>40</sup> The October 2006 battle of Ad Diwāniyah, south of Baghdad, also demonstrated to the PLA new tanks with "advanced combat systems, global positioning, electronic maps, and thermal imaging sights enhanced battlefield awareness," mitigating the previous vulnerabilities of armored units historically seen as unsuitable for night and urban combat.<sup>41</sup>

In response to lessons learned from modern protracted wars, the PLA has prioritized the development of drone technology for urban-warfare contingencies following a potential invasion of Taiwan. Chinese analysts note, "Drones can overcome the complex environment of high-rise buildings and narrow spaces in cities, providing a wide field of view from above to effectively complete reconnaissance tasks."<sup>42</sup> The PLA Army unveiled its first armed reconnaissance drone, the KVD-002, in 2023.<sup>43</sup> This drone boasts up to 30 hours of air-surveillance capability and includes an air-to-ground strike package, significantly enhancing reconnaissance and operational flexibility in urban environments. Furthermore, the PLA's 179th Light-Combined Arms Brigade of the 71st Group Army recently conducted an urban-warfare exercise incorporating unmanned ground vehicles.<sup>44</sup> Looking ahead, the PLA will continue to promote intelligent control systems capable of directing multiple UAVs, unmanned ground vehicles, and loitering munitions simultaneously, enhancing these weapons' ability to respond in complex urban-warfare scenarios.<sup>45</sup> Chinese scholars like Zhang Gaoyuan from Peking University echo this point, emphasizing China, with its leading civilian UAV technology and companies like DJI dominating the global market, should leverage its strong foundation to enhance military-civil fusion and improve its capabilities to monitor UAV intelligence.<sup>46</sup>

Regarding the use of unmanned systems, recent PLA analyses have increasingly emphasized “human-machine coordination” or “manned-unmanned teaming” (有人-无人协同). Outlining this concept in a discussion on urban operations, Qian Daichao and Zhao Xiangang emphasize, whereas unmanned systems can mitigate some issues related to blocked reception in “urban canyons,” the complex terrain of urban warfare often includes “dead zones” lacking proper visibility.<sup>47</sup> In such environments, intelligent weapons alone may not suffice, highlighting the essential role of human operators in clearance and control operations.

After gathering the necessary intelligence to identify targets and predict outcomes, PLA learning emphasizes precision fires are central for urban warfare. The PLA has learned from foreign protracted wars to “select weapons and compatible ammunition” for precision fires to “achieve the incapacitation of the enemy’s urban defense system.”<sup>48</sup> Targets include “command and control centers, high-tech weapon systems, large troop formations, utilities such as water, electricity, and gas supply facilities, and rear bases.”<sup>49</sup> Referencing experiences from the Iraq War, Fan Gaoyue, a researcher at the Academy of Military Science’s Foreign Military Studies Department, notes US forces employed precision-guided weapons in combination with psychological warfare, using leaflets and broadcasts to “demoralize Iraqi forces and complement military actions.”<sup>50</sup> Du Wenlong, an assistant researcher in the Campaign and Tactics Department at the Academy of Military Science, highlights, during the Iraq War, precision fires were highly susceptible to adverse weather conditions as well as common tactics such as camouflage and jamming.<sup>51</sup> In studying modern protracted wars, the PLA has absorbed the importance of long-range precision fires and possible enemy countermeasures in counterinsurgency campaigns.

From the perspective of strategic culture, one can anticipate significant distinctions between how China and the United States will conduct urban-warfare operations. The United States places a strong emphasis on adhering to the law of armed conflict, prioritizing the avoidance of civilian casualties. For instance, prior to the siege of Fallujah, US forces allowed civilians to evacuate before targeting the city’s infrastructure. This approach reflects moral considerations and aims to prevent enemy concealment among civilians and diminish popular support for adversaries. China, especially under Xi Jinping, has not demonstrated a commitment to human rights. Therefore, Chinese military operations will probably involve aggressive and potentially premature attacks on infrastructure and civilian targets. The concept of military-civil fusion further reinforces the PLA’s view nearly anything can serve military purposes, possibly undermining considerations for target discrimination. Chinese literature on war also observes the United States has a strong aversion to casualties, implying the PLA does not share similar concerns.<sup>52</sup> Whereas both countries may employ indirect fire to target

command-and-control centers and utilities, China's specific emphasis on these tactics underscores the ominous implications for ethical standards in future urban-warfare operations conducted by the PLA.<sup>53</sup>

## Conclusion

This chapter has examined the PLA's ongoing learning from modern protracted wars. Moving forward, one must closely observe Beijing's capacity to absorb the PLA's insights and incorporate them into China's strategic and operational frameworks. Future research should focus on monitoring the PLA's development of strategic reserves and increased production capabilities to counter international sanctions, PLA strategies and capabilities designed to counter low-cost threats such as Stinger missiles and other man-portable air defense systems, and PLA advancements in human-machine coordination and the deployment of cutting-edge combat drones.

To counter new strategies and capabilities that could result from the PLA's learning, US policymakers and defense planners should implement an integrated defense strategy, deploying relevant capabilities and training across the Indo-Pacific region. First, conducting in-depth research and analysis—drawing lessons from urban warfare in Ukraine and assessing how the PLA views allied and partner defenses and urban resilience—is essential.<sup>54</sup> Understanding the PLA's approach and identifying whether it delegates sufficient autonomy to small, ad hoc, or special forces units will provide critical insights to shape our own countermeasures against the PLA's lessons learned from modern protracted wars.<sup>55</sup>

Second, investing significantly in anti-ship and anti-submarine mines, modeled after Ukraine's successful deployments in the Black Sea, will be vital to creating effective maritime dead zones against the PLA. Enhanced smart-mine technology, capable of network connectivity and self-repositioning, offers improved accuracy and reduced risk to noncombatants. These naval mines would act as a low-cost, asymmetric denial weapon to counter PRC aggression in multiple areas of operations, including the Taiwan Strait.

Third, granting our allies and partners access to robust early-warning systems comprising radar, sensors, and satellite networks like Starlink will enhance situational awareness and response options. Detecting the movements of the PLA's frontline forces would also assist with the disclosure of strategic intelligence before a conflict, fomenting international cooperation and support for US efforts. Furthermore, enhancing electronic-warfare capabilities to disrupt adversary communications, GIS, and incoming missile-guidance systems will be critical to disrupting China's

operational effectiveness and preserving allied and partner assets during a future protracted war.

Fourth, strengthening urban defenses in Taipei and other key cities is critical to a successful deterrence-by-denial strategy to counter PLA learning from modern protracted wars in the Middle East. This strategy includes hardening critical infrastructure and enhancing resilience against urban attacks. Additionally, the deployment of obstacles and fortified positions, including using innovative defenses like tank cages and leveraging Taiwan's rugged terrain, enhances survivability and resilience against PLA offensive operations.

Fifth, the United States and its allies must enhance training for military personnel.<sup>56</sup> The California National Guard's Urban Operations Planner Course should be expanded to include allied forces. Moreover, US training activities should encompass Taiwan's 2.5 million reserve personnel and nearly one million civil-defense volunteers.<sup>57</sup> Existing training facilities must be adapted to reflect the unique scale and complexity of Asian cities, which differ significantly from cities in US training scenarios.<sup>58</sup> Expanded training would enhance allied and partner capabilities and would provide a testing ground for urban tactics and techniques to prepare for a future protracted war.

Sixth, the United States should bolster ballistic-missile and artillery capabilities in the Indo-Pacific and ensure an ample ammunition supply. Both artillery and ballistic missiles serve as cost-effective force multipliers for targeting high-value Chinese assets and supporting anti-air and area-denial efforts. This strategy is especially relevant considering the emphasis PRC analysts place on fielding and countering low-cost, asymmetric capabilities. Likewise, given the PLA's emphasis on unmanned operations, the PLA also needs to address potential vulnerabilities in its ground unit urban warfare capabilities. Providing US allies and partners with advanced counter-drone measures and systems will exploit these weaknesses and bolster urban-defense readiness.<sup>59</sup>

Finally, China's draconian measures in Tibet, and more recently in Xinjiang, foreshadow what would very likely follow the PLA's pacification of an allied or partner population. Thus, China's growing capabilities, combined with the violent aftermath of a protracted conflict and counterinsurgency campaign, underscore the critical importance of our efforts to study how China would conduct protracted warfare in diverse contexts and scenarios.

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**Part 2:**  
**Assessing the PLA's Operational  
Endurance in the Land, Maritime,  
and Air Domains**



# — 5 —

## **PLA Operational Endurance in the Land Domain**

Mr. Jake Vartanian  
China Landpower Studies Center, US Army War College

The People's Liberation Army (PLA) Army recognizes large-scale operations introduce a high degree of intensity and encompass a multitude of forces dispersed across a large span of time and space.<sup>1</sup> The PLA Army also finds horizontal escalation or third-party intervention would preclude a decisive victory and alter the state of operations, resulting in protracted war.<sup>2</sup> This chapter defines protracted war as a state of conflict that exceeds 30 days. Whether the People's Liberation Army is capable of enduring in a high-intensity, protracted conflict in the land domain will be determined by its ability to mobilize reserve forces, regenerate combat power through maintenance and health service support functions, and leverage its defense-industrial base. The PLA Army faces vulnerabilities within its maintenance and medical-support systems that will challenge its operational endurance in the long term. But the People's Liberation Army's optimized reserve force structure, growing mineral independence, and significant defense manufacturing capacity are likely sufficient for the PLA Army to sustain operations beyond 30 days of conflict.

### **Manpower and Reserve Force Mobilization**

As of 2024, the PLA Army maintained an active force consisting of an estimated 965,000 personnel, whereas the People's Liberation Army possessed a reserve force consisting of an estimated 510,000 personnel. But some evidence suggests the number of reserve personnel might be lower.<sup>3</sup> The number of reserve personnel allocated to each service is also unknown. In recent years, the reserve force has almost certainly been reformed to support theater commands more effectively during joint operations, indicated by a *National Defense* journal article, a new reserve force

law, and recent reports on the force's restructuring. The People's Liberation Army's reserve force is a significant source of manpower to replenish active-duty personnel, and in wartime, reserve force units would be the first units to be mobilized.<sup>4</sup> Thus, though the reserve force is smaller than the active force, it maintains a high level of operational readiness and is poised to support operational units during war.

The People's Liberation Army likely drew inspiration from the Armed Forces of the Russian Federation, having recognized the efficacy of Russia establishing joint reserve force headquarters subordinate to each theater. Russia's reserve force organization streamlines the mobilization and deployment of reserve personnel to replace regular personnel with related occupational specialties.<sup>5</sup> With a growing inventory of modernized equipment, reserve forces subordinate to each PLA theater command will likely be the principal units mobilized to replenish combat-attributed units during protracted conflicts. Although the decisive point at which reserve forces will be deployed is unknown, these units present an available pool of replacements to reorganize operational units and improve the force's endurance. The People's Liberation Army's new approach is much more rapid than mobilizing divisions or recruiting, training, and deploying an entirely new cycle of conscripts. The reformed organization of the PLA Army's reserve force will enable it to provide the manpower and resources necessary to reorganize combat-attributed units and restore combat power during a period of protracted conflict.

## **History and Current Restructuring of the PLA Reserve Force**

Historically, the reserve force has been subjected to numerous reforms designed to align it better with China's evolving strategic objectives. In the wake of the People's Liberation Army's 2017 restructuring, four inadequacies in the reserve force were identified, warranting a new iteration of reforms. These inadequacies were: an underdefined role, a suboptimal force composition, an irrational force organization, and outdated equipment. Considering its four inadequacies, the reserve force needed to adapt to improve its support of each service during informationized operations and "fill the necessary gaps within the joint operations system of systems." To meet these goals, PLA Army officials declared the reserve force would need to transform into a high-quality, efficient force and stated, "the restructure and reform of the reserve force must align with the pattern of 'theater-based operations' and 'service-oriented construction' under the control of the CMC."<sup>6</sup> The likely implication was reserve forces would need to transition away from divisions under provincial military districts and toward modular units, which would be subordinate to each service component throughout the five theater commands and two military districts. The proposed reorganization was recently referenced in a report of seven

“army reserve bases” (陆军预备役基地) subordinate to theater army headquarters.<sup>7</sup> Placing the operational control of reserve units under theater commands optimizes the mobilization and application of reserve forces to replenish frontline units as intended. Along with these various reforms, the reserve force has also garnered higher degrees of prestige and importance, first evidenced by its 2011 issuing of the Type 07 uniform, and later by the 2022 Reservists Law of the People’s Republic of China, which revamped the reserve force’s training and rank structure, placing the reserve force on par with the active-duty force.<sup>8</sup> Furthermore, a growing inventory of modernized equipment is being fielded within the PLA Army’s reserve force, which parallels active-duty units.<sup>9</sup>

The PLA Army reserve forces’ new model and equipment modernization will increase the force’s interchangeability with operational units, and the ability to reorganize operational units actively, as opposed to mobilizing entire divisions with outdated equipment. Given the PLA Army’s maintenance-system vulnerabilities (discussed in the next section), the land operations subcenter commander will likely rely on the PLA Army’s ready reserves to reorganize combat-atritted units and provide endurance to the force.<sup>10</sup>

## **Force Regeneration Capacity**

### **Maintenance Operations and Challenges**

The PLA Army’s logisticians recognize maintenance operations are essential to sustaining the demands of combat power, and affirm modern joint operations warrant a high degree of speed and lethality that could pose challenges for the timeliness and effectiveness of wartime maintenance operations.<sup>11</sup> Assuming the People’s Liberation Army possesses the requisite logistics-mobilization capacity to project and sustain combat power during the first 30 days of a conflict, the People’s Liberation Army will likely struggle to regenerate and sustain combat power in the land domain beyond 30 days because of insufficient maintenance capabilities and limited improvements. The People’s Liberation Army’s maintenance system is fraught with systemic issues, including an insufficient number of systems, parts, and personnel and insufficient maintenance command and control, which will likely hinder the system’s timeliness and effectiveness during protracted, high-intensity operations.

### **Lack of Spare Parts, Personnel, and Equipment Standardization**

The PLA Army’s logisticians identified a deficiency in wartime equipment maintenance as one of the foremost limitations affecting the People’s Liberation Army’s overall logistical capability during large-scale operations. The logisticians

identified the primary weaknesses in equipment maintenance as a lack of spare parts on hand for maintenance units and a limited number of rear maintenance personnel to conduct sustainment-level maintenance tasks.<sup>12</sup> In 2019, analysts at the PLA Army Military Transportation Academy determined the People's Liberation Army's equipment maintenance is also constrained by a "low degree of universality" (通用程度不高) of equipment and parts, deficiencies in equipment support standards, and difficulty supplying equipment and parts.<sup>13</sup> In practice, these challenges likely result in lengthy lead times for part requests, reduced repair-cycle times, and insufficiently timely and effective equipment maintenance on the battlefield. These problems are likely exacerbated by other deficiencies such as a systemic lack of pride in the maintenance profession, disparate levels of proficiency among maintainers, and a heavily bureaucratic command organization that complicates material requests, as discussed in a 2023 RAND Corporation report.<sup>14</sup> Most critically, the efficiency of the maintenance system will be impeded by command-and-control challenges.

### **Command and Control**

One of the more salient challenges PLA Army maintenance operations face is support commanders struggle to control maintenance actions such as establishing support priorities, allocating the appropriate number and type of maintenance units to provide support, and managing constraints such as location, equipment priority, and repair times, while being adaptive to situational changes.<sup>15</sup> The PLA Army's initial research on equipment maintenance decision making occurred in 2017, when researchers at the People's Liberation Army's Army Academy of Armored Forces examined equipment maintenance decision making for support commanders based on the US concept of battle-damage assessment and repair.<sup>16</sup> Despite the 2017 study, command weakness remains, as evidenced by a 2023 study from researchers at the People's Liberation Army's Army Academy of Armored Forces, which readdressed the issue of maintenance action control, deeming it "an exceedingly urgent problem facing maintenance operations at present that demands a solution."<sup>17</sup> Such deficiencies in command and control will likely lead to the misallocation of resources, which will greatly reduce the efficiency of the maintenance system in a protracted conflict. The resulting implication would be a backlog of repairs, an overtaxed maintenance force, and a slow regeneration rate for combat-damaged equipment.

### **Evidence of Maintenance Proficiency**

In contrast to the multitude of sources that belabor the limitations of the PLA Army's maintenance system, a 2020 quantitative analysis conducted by the PLA Army Engineering University determined maintenance units at various

echelons were capable of conducting field and sustainment maintenance tasks on 29 combat-damaged self-propelled rocket artillery systems within a prescribed time period.<sup>18</sup> But a more recent academic publication on maintenance capability evaluation from the People's Liberation Army's Information Engineering University addressed current evaluation models' lack of adherence to realistic wartime conditions—theoretically reducing the credence of the 2020 study.<sup>19</sup>

### **Improvements to the Maintenance System**

Since 2017, organizations within the People's Liberation Army have proposed various improvements designed to remedy manpower shortages and increase the efficiency of the maintenance system. But many of these improvements will likely yield limited results in the long term.

### **Advancing Military-Civil Fusion**

In light of the weaknesses surrounding the People's Liberation Army's maintenance system, scientists at the Beijing Institute of Radio Metrology and Measurement proposed integrating contractors into two tiers of the maintenance system (Ministry of Industry and Information Technology/equipment manufacturers, and theater support centers) to leverage technically proficient civilian personnel better and facilitate sustainment-level maintenance services and tasks. Although the status of the scientists' proposed reform is unknown, leveraging civilian contractors could augment the labor force and yield a higher quantity of restored vehicles in wartime. But two challenges mentioned in the Beijing Institute of Radio Metrology and Measurement's research were a lack of effective communication between tiers of the maintenance system, and pluralistic management.<sup>20</sup> These problems must be resolved before civilians can fully integrate into the maintenance system, further complicating the dual management of civilian and military resources.

### **Process Reforms**

In 2017, the PLA Army implemented reforms aimed at addressing maintenance-efficiency issues by optimizing maintenance-task organizations through a shift from consolidation to specialization. In other words, the PLA Army began organizing maintenance-repair teams according to objects (for example, chassis, bodywork, or electrical systems), as opposed to equipment type (for example, tracked vehicles or wheeled vehicles). For example, medium-level repair (中修) tasks on wheeled armored vehicles could be undertaken by a task organization formed by individual units specializing in wheeled chassis, weapons systems, fire-control systems, optical systems, electrical systems, and communication systems.<sup>21</sup> The gains in operational efficiency the PLA Army intended to achieve

by specializing repair teams were instantiated by a 2019 maintenance exercise conducted by the 74th Service Support Brigade (BDE), in which electrical-system teams and chassis teams were dispatched to repair transmission systems while fire control-system teams and communications teams inspected and repaired other disabled systems.<sup>22</sup> Despite the increased efficiency specialization may yield, the overall efficiency of the PLA Army's maintenance system will likely still be strained by the various issues mentioned earlier in this chapter. Furthermore, studies show consolidation tends to prove more efficient than specialization in the long term.<sup>23</sup>

### **Cannibalization of Enemy Ground Equipment Parts**

Unit 32670 of the People's Liberation Army's Joint Logistics Support Force advocated for the cannibalization of parts during an island-landing campaign, in which the austerity of the operational environment dictated short-term solutions to maintenance problems.<sup>24</sup> But the feasibility of cannibalizing parts is questionable. Although PLA Army units may benefit from limited ammunition interoperability between their organic equipment and Taiwan's army equipment (30mm and 105mm rounds), the starkly disparate configurations of indigenously designed PLA Army armored equipment likely prohibit significant exchanges of parts with the Taiwan army's Western-derived armored equipment for the purpose of field modifications. Inversely, exchanging parts with North Korean armored equipment will likely benefit PLA ground forces during a prolonged conflict on the Korean Peninsula, to a limited extent. The Korean People's Army Ground Forces largely field old Soviet-era T-55 tanks, which will provide an increased level of compatibility due to PLA tanks deriving from those systems. Despite this compatibility, the age of the systems and the maintenance of systems beyond their expected service life will likely preclude any meaningful impact on the battlefield.

With such limitations surrounding the PLA Army's maintenance system and with such limited improvements, the large-scale regeneration of tanks, artillery, infantry fighting vehicles, and other ground equipment to support operations becomes untenable. As evidenced by the Russia-Ukraine War, inadequate maintenance capabilities lead to underperformance on the battlefield.<sup>25</sup> With the maintenance system facing unresolved systemic challenges, the People's Liberation Army will likely struggle to meet maintenance requirements at scale during protracted, high-intensity combat operations in the land domain. Maintenance operations constitute a key requirement for the People's Liberation Army to regenerate combat-attritted units and prolong endurance in the land domain. Health service support constitutes another key requirement and is discussed in the next section.

## Health Service Support

The PLA Army's logisticians estimate a large-scale operation could result in 120,000 casualties, though the logisticians do not specify the duration of a notional conflict.<sup>26</sup> As a point of reference, the number of Russian casualties reached up to 300,000 within 18 months of the Russia-Ukraine War, with 170,000 to 180,000 of those casualties accounting for wounded troops.<sup>27</sup> Although the People's Liberation Army's casualty estimate is an undercount compared to the figures generated by the Russia-Ukraine War, the need for effective health service support during large-scale, protracted operations is clear. Regarding the People's Liberation Army's joint medical-support capabilities, the China Maritime Studies Institute reported:

The PLA believes that joint logistics medical capabilities are relatively strong, capable of establishing 46 field hospitals and 43 brigade medical aid posts, and process 36,000 patients a day. Military rear hospitals will be able to admit 70,000 patients after expansion. Local medical facilities will provide additional support. Field medical equipment has improved and medical supplies can support up to 600,000 troops. Combat medical support can meet the needs of 18,000 wounded, and wartime medical reserves can support up to 500,000 troops for 30 days.<sup>28</sup>

Most of the cited estimates were made in 2006, roughly 10 years before the People's Liberation Army reformed its medical system and integrated an improved medical-support structure which incorporates group army (GA) hospitals, Joint Logistics Support Force central hospitals, theater-command general hospitals, and PLA general hospitals above the battalion and BDE echelons.<sup>29</sup>

The People's Liberation Army now has a multitiered medical-support structure that will likely enhance medical-treatment capabilities beyond the capabilities reported by the China Maritime Studies Institute, due to the increased size and scope of health service support. For instance, GA hospitals each contain 501 beds and Joint Logistics Support Force-administered theater-command general hospitals can establish field hospitals with 1,000 beds, as demonstrated during the COVID-19 pandemic.<sup>30</sup> Additionally, the Joint Logistics Support Force's 904th Hospital in the People's Liberation Army's eastern theater contains over 1,500 beds alongside state-of-the-art, intelligent medical-treatment technology.<sup>31</sup> Despite the increased size and scope of PLA medical support, the People's Liberation Army states combat medical units at all echelons are inadequately trained and need improvement to treat casualties better on the battlefield.<sup>32</sup> In other words, vulnerabilities within

the People's Liberation Army's medical system reside in the training and capabilities of personnel, rather than in the system's structure.

Although some training improvements are becoming institutionalized at the GA and BDE echelons that may mitigate such vulnerabilities, weaknesses prevail within the combined-arms (CA) battalion's medical platoon—the first echelon of the PLA Army's medical system. Improvements to medical-platoon training have also become more institutionalized. But units exhibit limited medical evacuation (medevac) capabilities and therefore do not train at scale to meet the demands of protracted, large-scale, high-intensity operations. Given the importance of immediate care to the odds of survival, weaknesses at the first echelon portend an inability to fulfill medical-support requirements in a high-intensity, protracted war at all echelons.

### **New Training Model of Medical-Support Personnel: Group Army and Brigade**

Training improvements in GA and BDE-level medical care have likely increased the effectiveness of casualty medical treatment at those echelons but have not resolved the problem of incommensurate medical-platoon training. Among the health-service organizations mentioned, the GA hospital is a key component of the PLA Army's system for generating medical-support capabilities and the GA hospital directs medical-unit support during both peacetime and wartime. During wartime, the GA hospital functions as a campaign-level medical-support element with a tactical-level application, performing level-three medical care as well as reinforcing or substituting less capable BDE medical stations in performing level-two medical care.<sup>33</sup>

To augment BDE-level medical treatment, the new "24+N+X" training model was created for GA hospital personnel.<sup>34</sup> The intent of the new training model was to increase modularity among GA hospital personnel, creating a total of 24 health-service units to provide level-two treatment functions BDE medical capabilities previously lacked. The model also aims to incorporate supplementary units that match the operational environment (N), as well as units versed in traditional Chinese medicine (X). In practice, the GA mobile-rescue module (机动救护模块) can reinforce an inundated BDE mobile-rescue group in medically evacuating casualties at the battalion casualty-collection point or battalion aid station, assuaging the heavy demand for medevacs to the next-level medical-treatment facility. The efficacy of BDE-level medical support increases as a result.<sup>35</sup>

The PLA Army Medical University deemed the new task-organizational framework to be decidedly effective in bolstering BDE-level medical support.<sup>36</sup>

Therefore, the framework has likely been implemented throughout the PLA Army. In 2021, the 75th Group Army Hospital conducted a training exercise in which it integrated modules to augment tactical-level support. The GA hospital provided personnel to reinforce the BDE surgeon and assist in medically evacuating casualties to the BDE medical station.<sup>37</sup> In 2024, the 83rd Group Army Hospital conducted an exercise in which hospital personnel were “embedded” within field medical personnel, thus forming the “vanguard” of health service support.<sup>38</sup> Furthermore, civilian members of GA hospital staff have been increasingly integrated into tactical-level medical-support training, where they perform field treatment tasks “strictly adhering to training standards.”<sup>39</sup>

With the institutionalization of the new training and the integration of civilian personnel to bolster organic medical-support capabilities, the combat effectiveness of GA- and BDE-level medical personnel and the survivability of combat units will likely increase at the GA and BDE echelons. Clearly, GA hospital personnel can remedy deficiencies within the CA BDE medical company. But weaknesses remain within the CA battalion’s medical platoon—the lowest echelon in the PLA Army’s medical-support system.

### **Limited Training at Scale: Combined-Arms Battalion Medical Platoon**

The PLA Army CA battalion medical platoon is roughly analogous to the US Army CA battalion medical platoon—it operates closest to the line of contact and is responsible for emergency medical treatment, casualty acquisition, medevac, and establishing the battalion aid station and casualty-collection point.<sup>40</sup> The medical platoon’s ability to provide initial emergency treatment to casualties within 10 minutes and to medevac those casualties to a higher-level medical-treatment facility within one hour is regarded as essential for the survivability of soldiers on the battlefield.<sup>41</sup> Although more realistic training has likely improved the medical platoon’s ability to perform immediate medical care, medical-platoon units do not train at scale to meet the demands of large-scale combat operations, particularly regarding medevac. Consequently, medical platoons would likely struggle to fulfill medical-support requirements in a high-intensity, protracted war.

### **Current Training and Outcomes**

By 2020, standards for medical-support training had proliferated across the entire People’s Liberation Army, though discrepancies in training remained, such as “unclear thinking, unscientific planning, and an inaccurate focus.”<sup>42</sup> Such discrepancies prompted the creation of a new force-on-force training model for the medical platoon, designed to improve realistic training conditions and better prepare the medical platoon for the rigors of combat.<sup>43</sup> Since 2020, training

realism has likely taken root in medical platoons. In 2022, a “realistic-combat medical support” (实战化卫勤保障) training iteration emphasized improving battalion-level medical personnel’s lifesaving capabilities under combat conditions.<sup>44</sup> One year prior, in 2021, a “realistic-combat lifesaving” (实战化救治) training exercise conducted by a unit subordinate to the 72nd Group Army demonstrated the new “field medical care model,” where wounded infantrymen performed self-aid/buddy aid (自救互救) before an armored ambulance was dispatched to recover the casualties at their points of injury and evacuate them to the battalion aid station.<sup>45</sup> The casualties were reported to have been successfully treated within the “platinum 10 minutes.”<sup>46</sup> The addition of self-aid and buddy aid in this exercise is particularly notable, as it demonstrates an emphasis on basic casualty treatment at the individual level pending more advanced medical care.

Further evidence suggests the People’s Liberation Army is emphasizing immediate lifesaving skills, using nonmedical combat units to assist dedicated frontline medical-support personnel such as members of medical platoons. In 2023, the People’s Liberation Army’s National University of Defense Technology held a “Self-Aid/Buddy Aid Competition,” during which soldiers navigated obstacles and performed various immediate lifesaving skills such as artificial respiration, cardiopulmonary resuscitation, tourniquet application, and buddy carries to build proficiency.<sup>47</sup>

Medical-platoon personnel have increasingly demonstrated various immediate lifesaving measures including hemorrhage control, airway management, splints, stabilization, and shock prevention, in addition to casualty acquisition and medevac.<sup>48</sup> Despite the growing realism and emphasis on immediate lifesaving measures in training and exercises, medical platoons demonstrate limited medevac capabilities and therefore do not train to meet the scale of modern, high-intensity combat operations, which likely reduces the platoons’ readiness levels.

## Medevac

Throughout the training and exercises mentioned in the previous section, medical platoons lack the resources and manpower necessary to meet the demands of high-intensity, protracted operations. For example, in each exercise, no more than two ZBD-04 or ZBL-08 armored ambulances were dispatched to evacuate an unspecified number of wounded personnel.<sup>49</sup> Assuming the number of ambulances observed during medical-platoon training is standard, the medevac equipment employed during training and exercises is clearly lacking. Both a medical journal and the Joint Logistics Support Force’s 965th Hospital corroborated the lack of transport capacity in 2022, highlighting transport capacity as a critical limitation of mobile-medical-team training.<sup>50</sup> Moreover, the PLA Army Medical University

reported a battalion aid station contains only two ambulances, lending credence to the assumption the number of ambulances observed during medical-platoon training is standard.<sup>51</sup> In contrast, the US Army's CA battalion medical platoon is assigned six armored ambulances to conduct medevac.<sup>52</sup> Limited medevac capabilities can explain Russia's markedly low three-to-one wounded-to-kill ratio. For reference, in Iraq and Afghanistan, the US Army's effective medical care resulted in a 10-to-one wounded-to-kill ratio.<sup>53</sup> With a lack of medevac equipment, PLA Army medical platoons will likely face challenges in evacuating wounded personnel to the next-level medical-treatment facility within the prescribed one-hour time frame.

Sufficient medical support will be a key element in sustaining PLA land-domain forces for a protracted period. Despite the institutionalized improvements to medical-support training at all echelons, the People's Liberation Army is likely not poised to meet the demands of medical support during protracted, high-intensity operations in the land domain due to a lack of training at scale, indicated by a deficiency of medevac equipment among PLA medical platoons. The odds of survival hinge on the timeliness and effectiveness of immediate casualty treatment, as well as the speed of evacuation. With vulnerabilities residing at the first echelon of the PLA Army's medical system, subsequent medical care to support protracted operations becomes less tenable. Consequently, the PLA Army will likely suffer a low wounded-to-kill ratio in a high-intensity, protracted war.

## **Overarching Considerations for Endurance**

### **Defense-Industrial Base: Defense Minerals**

China's growing stockpiles, domestic production, and imports of minerals, metals, and rare earths from allied states have likely improved its self-sufficiency and reduced vulnerabilities within its wartime supply chains. These factors, coupled with China's increased defense manufacturing, will likely ensure China has a secure supply of essential inputs for its fabrication of military parts and equipment during a period of protracted conflict. The US Defense Logistics Agency lists various metals, minerals, and rare earth elements that have strategic military applications.<sup>54</sup> Of the materials on the agency's list, China maintains considerable stockpiles of iron ore in addition to minerals like aluminum, cobalt, copper, and zinc. Second, China mines 90 percent of the world's gallium, 88 percent of the world's magnesium, 81 percent of the world's tungsten, 80 percent of the world's bismuth, and 77 percent of the world's natural graphite.<sup>55</sup> In total, 18 of 37 defense-related minerals are concentrated in China, and 14 others are concentrated in countries diplomatically or commercially aligned with China.<sup>56</sup> For instance, approximately 40 percent

of China's rare earth elements are imported from Myanmar and over 25 percent of China's aluminum is imported from Russia, with China's nickel imports from Russia growing as well.<sup>57</sup> During a conflict, these states would be unlikely to cut off their supplies of rare earths and aluminum, given the states' strategic and commercial alignment with China.

Chinese firms are also investing in new lithium projects throughout the Global South—namely in Zimbabwe, Namibia, and Argentina.<sup>58</sup> With an increasing overreliance on lithium imports from US partners and allies, Chinese firms' new investment projects will likely build resilience within China's lithium supply chain, mitigating supply disruptions caused by factors such as export controls during a protracted conflict.

A secure supply of the aforementioned minerals, metals, and rare earths will likely facilitate the unfettered production of military parts and equipment for the People's Liberation Army to apply in the land domain. During a protracted war, if China exploits its mineral independence and fully leverages its manufacturing base in the same way Russia did during the Russia-Ukraine War, China will likely reconstitute its army at a faster rate.

### **Chinese Defense Production—Russia-Ukraine Comparison**

In 2024, China reported a 7.2 percent increase in military expenditures, totaling \$232 billion and accounting for roughly 2 percent of China's gross domestic product.<sup>59</sup> In step with this increase in spending, Chinese defense manufacturing has also risen, with five Chinese state-owned defense enterprises ranking among the top 12 in the world in terms of revenue. Among these five enterprises, China North Industries Group Corporation Limited—which is responsible for the research, development, and manufacturing of much of the People's Liberation Army's ground equipment—rose in rank to eighth, up from its ranking in ninth place in 2023, representing a key component of China's defense-industrial base.<sup>60</sup>

In comparison to Russia, China possesses a robust defense manufacturing capacity that will likely yield a greater quantity of ground equipment than Russia if fully mobilized. An increase in defense spending to 6 percent of its gross domestic product and the mobilization of its defense-industrial base are significant factors that have led Russia to reconstitute its army after suffering tremendous losses from two years of fighting in Ukraine.<sup>61</sup> In peacetime, Russia was producing around 20–30 new tanks a year. In wartime, Russia produces an estimated 400 new tanks per year with an additional 800 tanks being refurbished.<sup>62</sup> In peacetime, China can produce approximately 200 China North Industries Group Corporation Limited–manufactured ZTZ-99A main battle tanks and 100 ZTQ-15 light tanks annually.<sup>63</sup> At its current state of production,

China's output equals 75 percent of Russia's new tank-production capacity after Russia's significant shift to a wartime economy.

China's steady increases in defense spending and manufacturing already put China's peacetime production on a wartime footing compared to Russia's wartime production capacity. During a period of protracted war, an additional increase in defense spending and the mobilization of China's defense-industrial base would likely yield a greater output of tanks and other ground equipment to reconstitute a depleted force.

## Conclusion

Horizontal escalation and third-party intervention will be the lead causes of the People's Liberation Army's engagement in a protracted conflict.<sup>64</sup> Regardless of the conflict's primary location—on the Korean Peninsula, along China's borders, or across the Taiwan Strait—the People's Liberation Army's success will stem from its ability to sustain land combat beyond 30 days. The People's Liberation Army's ability to achieve this sustainment hinges on the military's ability to mobilize its reserve forces, regenerate combat power through maintenance and health service support capabilities, and leverage its growing defense-industrial base.

Analysis of these key elements of operational endurance shows the People's Liberation Army is presently equipped to sustain high-intensity combat operations in the land domain beyond 30 days of conflict, with several caveats. Vulnerabilities reside within the People's Liberation Army's ability to regenerate combat-attributed units and spur operations in the land domain. The PLA maintenance system is systemically flawed, and weaknesses within the first echelon of the PLA medical system limit the service's ability to evacuate frontline casualties and enable escalatory medical care in a contested and degraded environment. In the long term, these vulnerabilities will likely impede the People's Liberation Army's ability to salvage combat-damaged equipment and transfer wounded personnel back to the front, inherently limiting overall force endurance. But the People's Liberation Army has self-identified most of its weaknesses, which may lead China to develop and implement organizational reforms soon. Further research is required on maintenance and medical-system improvements that could better equip the People's Liberation Army for protracted operations in the land domain in the next five to 10 years.

Despite the People's Liberation Army's vulnerabilities, China's growing strategic-mineral independence provides the foundation for military manufacturing during a protracted war. Coupled with a robust defense manufacturing capacity, China will likely have a greater reconstitution capacity than Russia at its point

of culmination in Ukraine. From a manpower standpoint alone, the People's Liberation Army likely possesses sufficient reserve forces and an optimal structure to mobilize reserve forces rapidly and efficiently, greatly enhancing its ability to endure beyond 30 days. Furthermore, if reserve forces are depleted, the People's Liberation Army can opt to surge support using active-duty personnel from other theater commands.

Still, as evidenced by Russia's performance in Ukraine, manpower alone is enough to stay in the fight regardless of operational gains.<sup>65</sup> If lessons are to be learned from the Russia-Ukraine War, China's robust labor force of roughly 780 million personnel constitutes a viable pool of recruits to be inducted, trained, and deployed to feed a stream of new, minimally trained troops. Additionally, the People's Liberation Army maintains sizeable stocks of antiquated Type 59 tanks that can be recommissioned, just as Russia recommissioned its T-62s.<sup>66</sup> Although the quality of personnel and equipment may not be high, quantity still has a quality all its own.

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## **Logistics of the PLA Navy in Support of Operational Endurance**

Mr. Conor M. Kennedy  
China Maritime Studies Institute, US Naval War College

### **Introduction**

In April 2018, General Secretary Xi Jinping held the largest naval parade in People's Republic of China (PRC) history south of Sanya city in the South China Sea, himself conducting the inspection from the destroyer *Changsha*.<sup>1</sup> With an armada comprising 48 ships and 76 aircraft, the parade was a message to the world announcing the People's Liberation Army (PLA) Navy (PLAN) would become a world-class military, and Xi commanded it. Hidden from view was the vast effort that went into holding the event, a result of Xi's inspection of the PLAN headquarters on May 25, 2017. The entire PLA Navy, including its commander and political commissar, was heavily involved in putting the event together, designing the procession, ensuring its security, conducting fleet parade training, and performing many other tasks to pull off the event.<sup>2</sup>

In such a domestically and internationally historical event for Xi, logistics support was critical. Various types of petroleum, oil, and lubricants (POL) in the tens of thousands of tons were transferred to the area to support the ships and aircraft that needed to be promptly refueled. Multiple medical support sites were established across the region to provide support to the tens of thousands of personnel involved. The forces maneuvering to and from the parade area had to be meticulously tracked to ensure anything needed was supported. Spare parts and equipment and technical support forces, including both military and civilian, were readied to ensure emergency repairs could be performed and all platforms

were in good operating order. These preparations had to be conducted for both the ships and the aircraft of the parade as well as the numerous security and auxiliary forces supporting the event.<sup>3</sup>

The naval parade took place just under five years after Xi had the Central Military Commission (CMC) call a special conference, the Military Conference on Logistics Preparation for Military Struggle (全军军事斗争后勤准备工作会议), in Beijing for the entire People's Liberation Army. The purpose of the conference was to study major theoretical and practical issues involved in building a logistics support system that could prevail in modern warfare, support the modernization of forces, and transform toward informatization.<sup>4</sup> Three years later, Xi would preside over the ceremony creating the Joint Logistics Support Force at the Central Military Commission's 2016 military logistics work conference.<sup>5</sup> At the conference, Xi would direct the military to clean up its logistics system so all logistics work would be focused on combat and victory in future warfare. A powerful military required an equally powerful logistics system, one Xi has placed great emphasis on strengthening.<sup>6</sup>

Logistics development has been particularly critical to the development of the PLA Navy's endurance. Each of the PLA Navy's past three five-year plans (FYPs) has heavily emphasized logistics construction as critical to the service's strategic transformation.<sup>7</sup> With the official shift in naval strategy to "Near Seas Defense and Far Seas Protection" and Xi's requirement to build a "world-class navy," many facets of the PLA Navy's transformation would place greater requirements on the service's logistics system.<sup>8</sup> This transition has been referred to as "the transformation of naval logistics in the new era" (新时代海军后勤转型建设).<sup>9</sup> At the end of the 13th FYP, Xi would order the promulgation of the "military logistics regulations" (《军队后勤条例》) in December 2020. Whereas the text is unavailable, reports indicate it codifies and standardizes many aspects of the newly reformed logistics system, such as command and supporting relationships, integration into the new joint operations command system, improvements to combat readiness and war-fighting support practices, as well as other improvements.<sup>10</sup> Shortly after the promulgation, the PLAN Logistics Department held a meeting to explain the regulation and its relevant content for the navy, unify understanding, and outline specific requirements. Studying and strictly implementing the guidance of the regulation was made an important task for the wider naval logistics enterprise to promote "high-quality development" of naval logistics.<sup>11</sup>

The logistics of the People's Liberation Army has received significant attention from top leadership for decades, a necessary guarantee for a multidecade-long modernization of China's military. Significant advancements were made over this period, from the addition of more capable replenishment ships to the upgrading

of infrastructure and support practices. This chapter examines PLAN logistics support development, focusing on how it keeps ships fueled, armed, and in good operating condition to sustain operations. A significant portion is dedicated to POL support due to its importance in sustaining the propulsion and power of the fleet. Logistics discussions of the PLA Navy have often concerned the desire to integrate both ashore and afloat support activities closely to enable the fleet to operate further from the coast.<sup>12</sup> Thus, this chapter is divided into sections on replenishment at sea and replenishment ashore.

## Replenishment at Sea

Without a significant network of overseas naval bases, the PLA Navy will depend highly on its at-sea replenishment capabilities to sustain far-seas combat operations. The PLA Navy began its learning journey in at-sea replenishment after the service built two *Fuqing*-class replenishment ships, the first of which was delivered in 1979. This period entailed significant challenges and failures from which to learn. In the decades since, the PLA Navy has made significant strides in these capabilities for a peacetime navy, gradually expanding its operations farther from coastal bases in the twenty-first century.<sup>13</sup> The PLA Navy's development of underway replenishment underpins the service's ability to continue operating within and beyond the first island chain, allowing China to create strategic depth by engaging potential adversaries in the far seas.

The entrance of the single, converted-tanker, Type 908, *Fusu*-class replenishment ship *Nancang* (later *Qinghaihu*) into service with the South Sea Fleet in 1996 was an important step forward for at-sea support. The *Nancang* was the first PLAN ship to use "hydraulic tension compensator" (液压张力补偿) technology, enabling a supply ship and receiving ship to maintain a tensioned span wire despite their relative motion.<sup>14</sup> With a trained crew, the *Nancang* was able to conduct alongside, astern, and vertical replenishment simultaneously and could carry 23,000 tons of cargo, including 9,630 tons of fuel.<sup>15</sup> The ship also gave the PLA Navy its first taste of a replenishment capability with long legs, enabling task forces to span the Pacific Ocean for the first time and travel across the globe with relative ease.<sup>16</sup> Despite its leap in replenishment performance, the ship's primary shortcoming was slow speed, topping off at 15 knots with a full cargo load, and the ship's single shaft propulsion. The ship's speed was well below the typical cruising speed of the surface action groups or carrier task forces under development.<sup>17</sup> Though the ship is still active in the fleet, this limitation restricts the scope of the ship's service in the PLA Navy.

Following a delay due to geopolitical tensions in the Taiwan Strait in the 1990s, the PLA Navy would soon develop its next generation of replenishment ships, the *Fuchi* class.<sup>18</sup> The Type 903, *Fuchi*-class replenishment ship has been the workhorse of the PLA Navy's far-seas deployments. The ship has enabled continuous deployment of naval escort task forces (NETFs) to the Gulf of Aden for anti-piracy escort missions since the end of 2008. At the commencement of the Gulf of Aden deployments, the PLA Navy had two new Type 903 ships, which would have to serve consecutive task-force deployments in the region to maintain coverage. Most of all, these deployments provided an excellent learning experience for the replenishment ships and the ships of task forces to conduct logistics management and equipment maintenance independently and test the ships' overall endurance.<sup>19</sup>

The development of the Type 901 fast combat support ship (AOE) is a major milestone for PLAN logistics, signifying much greater capacity for far-seas endurance. With its seven supply stations (three on the port side and four on the starboard side), the ship, which was designed to support PLAN carrier-strike groups, is fast enough (25 knots) and has sufficient capability to conduct bulk-liquid and dry-cargo replenishment for large capital ships like aircraft carriers, amphibious assault ships, and other combatants in the task force. In addition, the ship also has hangar space for two heavy or medium helicopters to conduct vertical replenishment.<sup>20</sup> Furthermore, the ship has capacity for 20,000 tons of diesel fuel, 5,000 tons of aviation fuel, 1,000 tons of fresh water, 3,000 tons of ammunition, and 500 tons of dry cargo.<sup>21</sup> The first ship of the class, the *Hulunbu*, was delivered to the Northern Theater Command Navy in September 2017, and the second ship, the *Chaganbu*, was commissioned into service with the Southern Theater Command Navy (formerly the South Sea Fleet) in February 2019.<sup>22</sup>

Lastly, the PLA Navy operates a fleet of 37 auxiliary oil transport ships (AOTs) of varying classes that ferry petroleum products across the navy's bases, stations, and units. The AOTs are primarily tasked with near-seas POL replenishment missions, ranging as far as the Spratly Islands.<sup>23</sup> Geographically, the majority are assigned to the Eastern Theater Command Navy and Southern Theater Command Navy; 16 are assigned to the former, and 15 are assigned to the latter (see table 6-1).<sup>24</sup> At least some of these AOTs can conduct astern replenishment of ship fuel to surface combatants.<sup>25</sup> Table 6-1 indicates the allocation of auxiliary oil replenishment ships (AORs) and AOTs in each theater command navy. The blue section includes AOE and AORs, both of which are capable of deploying with task forces into the far seas and providing the task forces with comprehensive support.

**Table 6-1: Fuel replenishment ships in each theater command navy**

Vessel Classes	ETCN	STCN	NTCN	Total
<i>Fuyu</i> AOE	0	1	1	2
<i>Fuchi</i> AOR	3	3	3	9
<i>Fusu</i> AOR	0	1	0	1
<i>Fujian</i> AOT	7	5	4	16
<i>Fuxiao</i> AOT	1	0	1	2
<i>Fubai</i> AOT	1	3	0	4
<i>Fuchang</i> AOT	2	3	1	6
<i>Fushi</i> AOT	4	4	0	8
<i>Jinyou</i> AOT	1	0	0	1

An unknown number of commercial cargo ships and product tankers are also organized into the strategic delivery support shipping fleets. Most likely, these ships are mostly involved in the transportation of cargo to and from PLAN distribution sites. But some ships are more closely involved in supporting naval units directly. For example, some commercially operated product tankers are organized into units of the strategic delivery support force and have been modified to be capable of underway replenishment. In September 2016, the 5,000-ton product tanker *Ruiyuan-5* of the Zhejiang Ruiyuan Shipping Company (浙江瑞远海运有限公司) was returning from a regular delivery when the ship received orders to participate in a multiservice exercise. The captain of this vessel was already in possession of his copy of *Guidelines for Implementing National Defense Requirements* (贯彻国防要求使用指南), and the vessel was equipped for astern replenishment. During the return journey, the captain's work was to connect the vessel's cargo holds to a previously installed replenishment system on the vessel's stern, allowing the ship to refuel naval ships directly while underway. The captain also cleared out spaces reserved for military command and embarked PLA personnel and prepared to receive them and switch over to military communications systems.<sup>26</sup> Commercial enterprises, which provide essential extra capacity for the PLA Navy, may serve to reduce some logistical burdens on units that are focused on more specialized capabilities.

## Methods and Emulation

The PLA Navy frequently publicizes its ability to conduct underway replenishment, recognizing such operations distinguish advanced navies from unadvanced ones. State news and PLA footage portray many of the same practices

in which other international navies participate, including the use of methods of approach, messenger lines, span wires, distance markers, hose rigs, saddles, probes, pelican hooks, and other measures necessary for the safe and efficient transfer of cargo. The PLA Navy conducts underway replenishment in various sea states both day and night, and the service proudly advertises these achievements.<sup>27</sup>

The PLA Navy had to undergo the long process of gaining proficiency in the complex procedure of underway replenishment. Over time, the PLA Navy made gradual improvements; learned from international navies; and, critically, learned from mistakes and failures. In 2004, when the South Sea Fleet's combat support ship flotilla was established, its primary mission was near-seas logistics, keeping the flotilla's ships close to home. As the PLA Navy began going further seaward, it started to encounter and eventually resolve many fundamental problems in supporting naval endurance. In one embarrassing exercise in 2004, a replenishment ship failed to replenish its receiving ship successfully due to the lack of a correct connection, forcing the exercise to stop. Moreover, one flotilla ship, the *Qinghaihu*, was not equipped for nocturnal replenishment until 2006. The *Qinghaihu*, which was often only assigned to support individual ships, did not spend much time at sea. The realities of fleet support quickly forced the *Qinghaihu* and other support ships to improve and update practices to complete missions at any time and in any weather.<sup>28</sup> The PLA Navy has advanced its ability to conduct alongside, astern, and vertical underway replenishment. Whereas it began the development of these capabilities decades behind other militaries, the PLA Navy would eventually make breakthroughs because support was increasingly needed to meet the service's goals.

Combat support ship flotillas have some of the busiest ships in the PLA Navy, providing significant opportunities for practical training. The combat support ship flotilla of the East Sea Fleet (former name of the Eastern Theater Command Navy) reported in 2013 the flotilla tasks its ships nearly 3,700 times on average per year, referring to the aggregate count of individually tasked ships (动用舰艇近3,700艘次).<sup>29</sup> Whereas the specific tasks to which the flotilla is referring are unclear, each activity offers an opportunity for crews to learn. Combat support ship flotillas train and hone their crews' skills via integrated training with the fleet's force logistics support system, allowing the crews to conduct comprehensive exercises in organized, integrated training (集成训练) between the "logistics force system" (后勤部队系统) and the "unit logistics system" (部队后勤系统). The intended results are logistics support ships capable of rendering support in challenging conditions and weather states thanks to the integration of training with logistics support activities.<sup>30</sup>

The AORs are often kept stocked so they can deploy quickly without awaiting lengthy cargo loading. According to the captain of the AOR *Qiandaohu*, AORs typically maintain fully stocked levels of fuel and water so once a task

is received, the ships can put to sea quickly at any time. In this account, the captain's ship was given 35 hours to prepare to deploy as part of a task force to search for the missing Malaysia Airlines flight 370 in 2014, which it was able to do because the ship already had much of the needed cargo.<sup>31</sup>

A PLAN prime support effort, the supply of POL, which ensures fleet units are fueled for maneuvers, may coincide with other support activities. The PLA Navy conducts POL replenishment operations based on the operational requirements of task forces and joint campaigns, with an ever-increasing focus on long-distance operations with extended supply lines. In an April 2020 article in the *Journal of Military Transportation University*, several authors from the PLA Army Logistics Academy and the Northern Theater Command Navy Support Department describe POL support as a combination of rear, shore-based support forces; forward base, POL support forces; and mobile support forces at sea. Rear, shore-based support forces comprise various POL handling units based out of PLAN support bases and the joint logistics support centers.<sup>32</sup>

Forward base POL support comprises fixed and mobile POL support forces in overseas bases or afloat in forward areas far from rear, shore-based support. Overseas POL-support bases, which are typically fixed sites located on remote islands and reefs (that is, areas of the South China Sea), possess the facilities to conduct the entire sequence of receiving, storing, testing, and distributing POL resources. Afloat support bases involve the pre-positioning of POL support forces at sea to conduct the mobile stockpiling and transfer of POL in support of operational forces.

Mobile support forces at sea include “maritime mobile replenishment formations” (海上机动补给编队) and “maritime mobile transport formations” (海上机动运输编队). The maritime mobile replenishment formations refer to the AORs and AOEAs that provide direct support for task forces, moving to and from the “resupply area” (补给海域) near combatant operations and the forward-support POL base, providing a “sustained support capability.”<sup>33</sup> Maritime mobile transport formations chiefly comprise PLAN and civilian oil tankers and fast-transport ships that are organized to run rear, shore-based POL to the forward-support bases to keep them supplied.<sup>34</sup>

The nature of the support depends on the specific maritime conditions and whether friendly or adversarial forces are involved. These support activities can carry out “accompanying” (伴随), “cyclic” (回合), or “on-demand” (应召) methods, depending on how closely integrated the support ships are with combatants during operations. The following is a scenario offered by the authors of the article in which task forces are departing for combat operations in a distant ocean.

Task forces top off their POL and then depart their berths. When they approach the operational sea area, oilers first refuel screening ships while large warships refuel escort ships. The oilers then refuel the large warships, thereby reducing the duration of POL replenishment prior to combat. When the formation heads to the operational sea area for combat missions, the oiler sails to a predetermined area to stand by for the formation to complete its mission or when it requires replenishment, whereupon it conducts rendezvous or on-demand support.<sup>35</sup>

The authors' description highlights the importance of reducing preparation time for combat operations. Ships are extremely vulnerable during the underway replenishment process, requiring planners and crew to complete replenishment as soon as possible.

Combat support ship flotillas of the PLA Navy have improved their efficiency in underway cargo transfer. Whereas earlier periods focused on getting the basics down and achieving successful replenishment, current training focuses on optimizing performance. During an evaluation of the Type 903 AOR *Chaohu's* underway replenishment performance in 2023, the captain was described as requiring operations to adhere to the “four limits” (四个以内), referring to the following requirements when conducting underway replenishment: Ships must keep their heading error within  $\pm 0.5$  degrees, speed must be kept within  $\pm 0.4$  knots, cable connection must be completed within eight minutes, and rigging recovery must be completed within six minutes. The chief of replenishment (补给长) of the *Chaohu* explains these requirements apply to all ships of the combat support ship flotilla.<sup>36</sup>

Combat support ship flotillas are seeking to conduct more complex support methods to sustain distant-ocean operations involving replenishment between AORs. Auxiliary oil replenishment ships (AORs) of the PLA Navy have not traditionally conducted replenishment of other AORs; rather, PLAN AORs have primarily delivered supplies to task-force surface combatants. In September 2013, reports indicated the newly commissioned Type 903A AOR *Chaohu* had recently conducted the PLA Navy's first at-sea replenishment between two AORs during sea trials.<sup>37</sup> But this operation was not the norm. Later, in September 2022, two replenishment ships of the Southern Theater Command Navy's combat support ship flotilla carried out a “bidirectional replenishment exercise” (双向补给演练) that involved the AOR *Honghu* and AOE *Chaganhu*. As the deputy head of replenishment (副补给长) of the *Chaganhu* states, “[D]uring distant-ocean missions, the support capability of a single supply ship is limited. It is necessary to continuously strengthen the mutual replenishment capabilities of similar ships to provide continuous support for oceangoing combat formations.” The

exercise was completed at the dock, simulating at-sea replenishment procedurally. Once completed, the flotilla evaluated the exercise and conducted an assessment to root out any problems.<sup>38</sup> The intended end state, as suggested in this dockside evolution, is the use of a Type 903 AOR to resupply the Type 901 AOE's attached to PLAN carrier-strike groups or amphibious task forces conducting extended deployments in the far seas.

### **“Let Every Drop of Fuel Burn with Combat Power”**

The PLA Navy values fuel economy and efficiency in fleet operations, but these considerations were not always such an issue. Early coastal or near-seas operations did not require sustainment of task forces for extended periods of time. In the twenty-first century, the PLA Navy has begun to learn the immense logistics requirements of supporting task forces operating in distant oceans. The Gulf of Aden deployments gave the PLA Navy a sense of the logistics challenges and fuel consumption of task forces on extended deployments. In the beginning, mission completion, considering the mission's international significance for the PLA Navy, was of utmost importance. As such, mission completion overrode cost considerations and resulted in wasteful practices, especially in fuel management. Moreover, the PLA Navy lacked replenishment ships, and overseas acquisition of POL was difficult. Many government entities were involved, advance teams were sent into the supplying country to make arrangements, and the PLA Navy relied heavily on China Ocean Shipping (Group) Company (COSCO) (中远集团) to act as an agent for procurement. Many problems related to support planning, procurement agreements, and monitoring systems occurred because the task forces lacked guiding regulations, standards, and documents, creating risk and uncertainty in overseas supply.<sup>39</sup> Some help was on the way with the production of the *Manual on Naval Escort Ship Supply Support* (海军护航舰艇给养保障指导手册) for the fifth naval escort task force in 2010 by the Navy Logistics Department's Quartermaster, Materials, and POL Department. This guide reportedly regulated predeployment supply preparation, overseas port replenishment, and the handling of leftover funds and materials after returning to base upon mission completion.<sup>40</sup>

The NETF operations, which were low intensity, provided a low-risk test for logistics support capabilities. Early deployments were treated more seriously and met with an intensity of action. But as subsequent deployments rotated in, the piracy threat became more subdued. Later crews participating in the naval escort task forces would begin their deployment excited to confront real-world pirates, only to be disappointed by the lack of action. Whereas crew were proud to have helped to ensure safety in the sea lanes, the warships had by then become a deterrent against the predation of pirates. Furthermore, the naval escort task forces would

escort many ships early in the program but would find fewer and fewer merchant vessels requesting escorts during subsequent deployments.<sup>41</sup> Demand for NETF protection was lacking.

The lack of demand led to a focus on economy of force in these extended operations to reduce the burden on supporting units and cost to the navy. Escort operations of the PLA Navy cover over 500 nautical miles between the Gulf of Aden's eastern entrance ("Point A") and the western entrance ("Point B").<sup>42</sup> This short distance and the typically slower speeds of commercial vessels allowed task-force ships to economize fuel consumption by running split plant—that is, running on two out of four engines with one engine on each shaft. When running split plant, engine crew would often conduct maintenance on the two down engines. For example, the Guided Missile Frigate (FFG) *Weifang* was caught with two engines down when orders came in March 2015 to evacuate PRC nationals from Yemen. The *Weifang's* crew had to bring the ship back to full plant quickly and maintain an intensified watch over the engines and other systems.<sup>43</sup> The reduced demand on escorts would sometimes also leave ships on "drifting standby" (漂泊待机) at either entrance to the Gulf of Aden, further reducing fuel consumption.<sup>44</sup> Thus, according to one PLAN expert, NETF ships typically conduct a replenishment once every three weeks.<sup>45</sup> This frequency reflects a lower intensity of operation and, thus, a lower consumption of fuel resources for the task forces. Nonetheless, the NETF operations would provide support planners critical experience in fuel planning and use and how to anticipate increased usage, reduce the frequency of replenishments, and plot courses and speed to balance gallons per mile with operational considerations.

In addition to the year-round NETF deployments, the PLA Navy's expanding missions and training requirements placed significant strain on the service's POL support system. In particular, the increasing use of the PLA Navy in diversified missions, such as international search and rescue, military diplomacy missions, and the protection of overseas interests such as the newly launched Maritime Silk Road initiative emphasized a navy with greater operational range. Surface combatants of the PLA Navy, depending on their operating status and mission considerations, typically can go no longer than half a month without replenishment, according to one "ship rigging squad" (帆缆班) noncommissioned officer serving aboard the AOR *Qiandaohu*.<sup>46</sup> In particular, no other requirement would likely burn as much fuel as the stronger emphasis placed on combat readiness and the normalization of "far-seas training" and "combat-readiness patrols."<sup>47</sup> The PLA Navy would conduct seven far-seas training deployments in 2012 alone, in addition to all other service activities.<sup>48</sup> Combat-readiness training (战备训练) accounts for over 80 percent of annual fuel consumption for the entire People's Liberation Army. The release of updated versions of the *Outline of Military*

*Training and Evaluation* would emphasize combat realism and readiness in unit training, further increasing fuel consumption.<sup>49</sup> For the PLA Navy, training and specific missions would account for over 95 percent of fuel use, highlighting the quickly growing problem of POL consumption, supply, and conservation.<sup>50</sup>

To improve fuel-use practices and reduce consumption, the General Logistics Department launched an initiative to conserve POL resources in 2009, which led to the joint release of the *Regulations on POL Conservation and Management* (军队油料节约管理规定) by the four general departments in December 2009, forming the regulatory basis for all POL conservation management. The regulations involved the consideration of resource use in the planning for combat readiness, training, and equipment use. At the time, naval ships and air force aircraft accounted for over 70 percent of the entire People's Liberation Army's fuel consumption, a figure that has likely rocketed upward as the PLA Navy increasingly operates in the far seas. The regulations require naval ships conducting training, patrols, escorts, and port visits to operate at more "economical speeds" (经济航速航行) when mission conditions permit the ships to do so. Additionally, warships must connect to shore power when it is available at docks rather than relying on generators. The regulations contain language requiring the development of standard POL products and the maximization of indigenously developed products. The release of the regulations also coincided with a broad set of standards used to evaluate annual POL use for various units and platforms; the standards are closely tied to POL supply and consumption standards. The new evaluation system will give every unit a grade on the unit's POL usage, conservation, efficiency, and recovery.<sup>51</sup>

With its ships, submarines, and aircraft as "major users" of POL, the navy must implement multiple measures across the force to manage POL use more effectively and increase efficiency over the subsequent years. Some regulations target the POL technical support groups (油料技术保障大队) and their practices in distribution and delivery. The regulations also include infrastructure improvements to replace aging depots and pipelines that consistently experience leakage. For example, some of the North Sea Fleet depots urgently needed to replace their leaking subterranean gas and diesel tanks; as a result, the depots installed new underground networks in 2013. Other parts of the depot were upgraded, replacing old tanks with industry-standard, external-floating-roof tanks (内浮顶) to prevent evaporative loss of stored gas fuel.<sup>52</sup>

Other changes in the name of conservation would generate better logistical practices for warship fuel accounting. Apparently, some destroyer flotillas still lacked formal procedures for requesting POL supply before mission deployment. The PLA Navy reported in 2013 a South Sea Fleet destroyer flotilla was establishing formal procedures, the *Flotilla Regulations on POL Supply Management* (支队油料供应管理规定), which would create a standard process for each ship to request and receive

supply before departure. Even though PLAN units had kept records of fuel use per individual ship since at least 2005, the flotilla reportedly began implementing a Ship POL Record Book (舰艇油料记录簿) and other accounting and reporting forms for each ship. This practice standardized the recording and statistical reporting of each ship's POL levels, ensuring accurate and timely reporting of the times at which ships refueled and defueled and how much fuel was consumed per day. This standardization enabled each ship to have an accurate record of its annual fuel consumption, savings, and the times when usage exceeded allowances. These records form the basis of the flotilla's POL final accounting.<sup>53</sup> Whereas these developments were meant to improve POL conservation, they also suggest ship POL management practices were not uniform and flotillas lacked an accurate accounting of demand and supply.

Efficiency in fuel management in relation to the operating status of surface ship engines and generators was increasingly important during this period. Personnel of the PLA Navy exclaimed ships like the DDG *Haikou* of the 9th Destroyer Flotilla would consume nearly a tanker's truck of fuel when operating at full speed. A report indicated in 2014 this flotilla, after years of collection and research in the far seas, produced the *Detailed Management Rules for Warship POL* (舰艇油料精细化管理细则). The document provides very detailed rules for navigational and support planning and greater details on when more economical speeds should be adopted. The document also gives guidance on POL conservation measures, such as practices for managing ship power and when to switch to a single generator.<sup>54</sup>

During this period of conservation and evaluation of the navy's POL consumption, the General Logistics Department prepared revisions to two key standards used in the supply of POL to the fleet: the Naval Warship POL Consumption Standard (海军舰艇油料消耗标准) and the Naval Warship POL Supply Standard (海军舰艇油料供应标准), released in September 2015. Together, these standards form the basis for calculating ship POL demand, determining ship POL allocation, and organizing ship POL support. These standards replaced their previous versions from 2006 and 2007, respectively, that were in sore need of updating, considering the PLA Navy's expanding missions, expanding fleet by both number of hulls and their displacement, and major training reforms. This process represented a combined effort by the four general departments, the PLAN headquarters, naval units, and relevant academies. The process of updating the standards involved nine years of extensive data collection during operations in varying conditions and varying propulsion and power-plant operating conditions and on different ship types. Additional maneuvering standards were added to account for exercises and temporary tasks, new standards were created for old and new classes of ships, and models were adjusted to calculate demand

and supply to reflect actual fleet POL consumption. The implementation of ship POL recordkeeping and the meticulous collection of data performed during the navy's period of fuel conservation were likely critical to the design of these two standards. Log materials such as ship technical files, docking logs, voyage logs, and diesel-engine work records were reviewed to formulate the new standards. The standards began to implement a training-intensity correction coefficient to account for increased training burdens on units and regulate the total supply of POL incrementally for the subsequent years. Importantly, more accurate estimates of POL consumption were essential to meet the supply requirements of far-seas training and Gulf of Aden escort deployments.<sup>55</sup>

The PLAN Logistics Department's Quartermaster, Materials, and POL Department (海后军需物资油料部门) was also evolving its approach to POL supply during this time to meet growing requirements in fleet training and deployment over farther distances. Traditionally, the PLA Navy relied on "shore-based support" (岸基保障) as well as "a sole accompanying support" (单一伴随保障) for the POL replenishment of ships, but the service recognized these forms of support would be insufficient for meeting future demand. The newly adopted approach was described as an "all domain-type POL support system" (全域型油料保障体系) that would entail "resource sharing across the services, joint military, police, and civilian operations, and simultaneous implementation domestically and abroad" (军兵种间资源共享、军警民联合运作、国内外异地同步实施). The POL Support Department (海军油料保障部门) was focused on four main efforts: accelerated construction of battlefield support facilities and equipment and an optimization of "combat readiness POL reserves"; careful conduct of POL supply and improving the level of support to meet demand both ashore and at sea; increased levels of informatization system-wide; and attention given to innovations in support mechanisms, policies, force structure, and military-civilian fusion. Overall, the department worked to overhaul the POL system from the top down, with a focus on the transformative development taking place across the PLA Navy.<sup>56</sup>

As PLA reforms made major changes to the military logistics system over the proceeding years and the PLA Navy continued to commission new platforms and equipment, the standards would need updating again. In March 2021, the CMC Logistics Support Department issued a new system of consumption standards for the People's Liberation Army and People's Armed Police. For the PLA Navy, the new standards, the *POL Consumption Standards for Navy and Coast Guard Ships* (海军、武警部队舰艇油料消耗标准), also covered the China Coast Guard. Echoing the previous standards, these standards form the basis for evaluating unit conservation efforts and calculating POL support requirements for combat-readiness training missions. The standards

include many new equipment systems the force now uses.<sup>57</sup> This set of standards likely underpins current PLAN POL support fleetwide.

Although much of this section described rather mundane functions in POL management across the fleet, the section served as an illustrative example of how the PLA Navy's effort to achieve incremental and sustained improvement over time has gradually enhanced the service's ability to cope with larger-scale fleet sustainment. This sustainment would be crucial in a potential prolonged conflict at sea.

## Replenishment Ashore: Keeping the Fleet at Sea

### Shore Service Departments

Located in bases and flotillas, the PLA Navy's shore service departments (岸勤部) keep the fleet running by performing various logistics and technical support functions for warships. The departments include auxiliary ship squadrons (辅助勤务船中队), communication stations, equipment repair stations, medical clinics, dock-management offices, warehouses, and other entities for providing warship support.<sup>58</sup> These forces are critical to the regular refueling, rearming, and repairing of ships as well as the reconstitution of these forces in wartime.

The fleet is stationed at and supported by multiple naval bases, including comprehensive support bases (综合保障基地) and support bases (保障基地), across coastal provinces. In addition to the two comprehensive support bases established during the 12th FYP (Qingdao and Sanya), the major reforms during the 13th FYP added the Zhoushan Comprehensive Support Base under the eastern theater command. In addition to catering to the logistical needs of aircraft carriers, the establishment of these bases is meant to scale up PLAN fleet logistics and push it further outward where possible. The bases focus on the navy's operational needs for future, joint combat operations, including support for multiple ship types, large task forces, high-intensity support, and wide-ranging operation support.<sup>59</sup>

Recent years have seen attempts to increase the efficiency of PLAN naval base support for task forces and ships deployed at sea. For the basics, these bases are proficient at rendering requested support as quickly as possible. This support has been achieved through various innovations and the upgrading of procedures and methods. For example, task-force provisioning of food represents a relatively quick turnaround for some units. Using an "online procurement system platform for supplies" (给养物资网上采购系统平台), supply units have received orders from returning ships and rapidly had support ready for their arrival. In 2019, a Southern Theater Command Navy comprehensive support base received an order

to provision several ships, requiring the base to complete provisioning within two hours. The base reportedly completed the support task in 45 minutes.<sup>60</sup>

The Qingdao Comprehensive Support Base, established in 2012 as the PLA Navy's first base for supporting aircraft carriers, reported some of its efforts at increasing efficiency in early 2021.<sup>61</sup> The base's shore service department changed its methods for receiving support requests and carrying them out. In the past, the department would receive materials requests after a ship had berthed and then fulfill them. This process was slow, reactive, and insufficient to meet the needs of rapid and precise support in war fighting. Now, the base has set up a mechanism for support forces to contact receiving ships to ascertain their needs and fulfill them before the ships arrive in port. The support scheme entails "ships making orders while at sea, which are then prepositioned ashore, and then they are immediately replenished once berthed" (海上下订单、岸上先预置、靠港即补给).<sup>62</sup> This support concept has also been adopted at the other comprehensive support bases.<sup>63</sup> Once a support request comes in, the various support units on base erupt into a flurry of activity and prepare to be dockside upon the ship's arrival.<sup>64</sup> With this new link in the support process, the bases are better able to anticipate requirements, complete ship support rapidly, and get ships deployed again quickly. Critically, such superior preparation and coordination enables the base to conduct multiple loading lines per ship (同时开展多条装载线), greatly reducing support times. Personnel are also now trained in multiple skill sets so they can assist in other support element tasking when needed.<sup>65</sup>

For berthed ships, instead of seeking out various support departments, the ships access a single point of contact on the dock. For example, arriving ships that were not familiar with the procedures of the Qingdao Comprehensive Support Base had trouble finding the right functional departments. Today, each dock has established an "integrated support point" (综合保障点) that is run by the service support group (勤务保障大队), which directly interfaces with each ship, receives all subsequent requests, and ensures they are fulfilled by the base's various support elements. These requests include POL requests, equipment repairs, cultural services, and many other matters. Moreover, support personnel go aboard each vessel to hand the captain a service manual to guide each ship during the support process. These processes concentrate all support requests at a single point next to the ship, ensuring efficiency and precision.<sup>66</sup>

Naval bases have overseen infrastructure improvements to produce important efficiency in the provision of support. For example, large docks with railway cargo cranes and trenches for large-diameter pipelines and various electrical cables have been built. These docks provide support to the capital ships (that is, carriers, landing helicopter assault ships, etc.) and allow more frontage to be dedicated

to specific support tasks. The docks in the Qingdao Comprehensive Support Base previously had specific berths where pipelines enabled fueling. On these docks, crew had to spend significant time shifting ships around to facilitate replenishment. Major renovations to the base's dock surface have allowed larger-diameter pipelines and riser pipes to extend to more berths, allowing multiple ships to replenish more efficiently.<sup>67</sup>

The shore service departments of some bases are using port-monitoring platforms to improve coordination and integrate support forces in the provision of ship support. For example, the Zhoushan Comprehensive Support Base shore service department uses the “digital military port integrated management platform” (数字化军港综合管理平台) in the duty room of the base's military port-management support group (军港管理保障队), enabling support coordinators to access all pertinent information on warships, their statuses, and the activities being performed in support of the warships in real time. Covering all support points from docks to depots, this information is provided by a combination of remotely monitored information systems, such as the smart POL terminals of the Military Petroleum Project (军油工程), a military-wide platform; these terminals allow support coordinators to monitor fueling from depot to ship in real time. The PLA Navy reports in the past, support involved warships applying for berths and replenishment. These requests would need to receive several approvals from various departments, including port management, quartermaster, POL, and others—a process that could consume hours before any support activity began. Coordination of the support became inefficient and difficult to monitor if multiple ships requested support at the same time. Through the informatization efforts previously described, the procedures have reportedly become much more efficient now.<sup>68</sup>

Shore service departments at the support bases in each theater command navy have long provided direct logistics support to task forces operating in distant areas. The naval escort task forces would alternate deployed task forces from the three sea fleets, the logistics support of which would fall onto each respective fleet and its support bases. In 2009, a South Sea Fleet support base began having a commercial ship deliver supplies to the 1st naval escort task force.<sup>69</sup> This practice, which became part of the support model for some time, was augmented by increasing commercial sourcing abroad. In general, distant task-force deployments were supported by accompanying AORs, remote technical maintenance support, and emergency support that was pushed forward when needed. Parts could be delivered via commercial air carriers. A support network would be gradually built—an effort that involved commercial partners; overseas PRC enterprises; and, eventually, the opening of the first PLAN overseas support base, augmenting the overseas network with additional support nodes, in 2017.<sup>70</sup>

This network would break down for a period during the COVID-19 pandemic, when port calls were restricted. For example, the Qingdao Comprehensive Support Base was responsible for keeping the Northern Theater Command Navy's 36th escort task force replenished during its mission in the Gulf of Aden (the task force could not replenish in port due to COVID-19 restrictions). After receiving the task force's request, the base's shore service department prepared nearly 35 tons of provisions and coordinated their delivery by a merchant vessel. Described as "an extraordinary measure," this service would become an important task for the base during COVID-19. In 2020, the base delivered over 1,200 tons of provisions to frontline units that could not replenish according to normal procedures.<sup>71</sup>

Support coordination between these various support nodes was conducted at higher levels. Prior to 2017, the PLA Navy had a dedicated Blue Shield Command Post (蓝盾指挥所) in Beijing, likely at PLAN headquarters, to oversee far-seas operations directly. Use of the command post began early during the deployment of naval escort task forces to support task-force ships more effectively. Later, the post was used to command other far-seas training deployments directly. The command post was meant to simplify command procedures and flatten the command structure, giving task-force commanders some degree of autonomy in command.<sup>72</sup> Maintaining a 24-hour watch, the Blue Shield Command Post provided command support and information support and coordinated logistics and equipment support. The command post also had personnel to provide support in psychological counseling and medical services.<sup>73</sup> Whether this command post still exists, has been renamed, or been subsumed under another entity is unclear.

Civil-military fusion is likely easier to execute ashore than at sea. Naval units often draw on the expertise of defense industries and technical research institutes to enhance support activities. For example, naval bases are reportedly shifting military-civilian support methods from singular, temporary arrangements to longer-term, cooperative relationships that integrate societal, technical, and logistics support resources into the lifespan of equipment. A North Sea Fleet submarine base's support process reportedly underwent this shift, with the base signing long-term agreements with dozens of entities for equipment support. The base reported using the fuel and water ships of commercial bunkering companies alongside a submarine while dockside replenishment was being conducted. Special, external companies and institutes are also involved in the provision of more specialized maintenance, such as rapid torpedo maintenance.<sup>74</sup>

Commercial entities are a core component of PLAN sustainment. The PLA Navy—and the People's Liberation Army, more broadly—have long emphasized "socialization" (社会化) in the provision of logistics support to forces. For instance, key individuals across PLAN logistics uniformly highlight the importance

of close integration of civilian logistics support in both domestic (that is, shore-based support) and overseas procurement and support.<sup>75</sup>

### **Petroleum, Oil, and Lubricants**

Providing POL support is difficult due to the many challenges inherent in POL handling, storage, and transport. The PLA Navy’s “lifblood” is drawn from shore-based stores—the most convenient means of delivering POL to the fleet. Before the geographic expansion of its missions, the PLA Navy preferred to rely on its own support network. With the advent of the new naval “all-domain” support scheme, in which the PLA Navy must deliver POL to fleet units wherever they need to operate, the system needed to open up and integrate.<sup>76</sup>

During the 2010s, the PLA Navy’s POL support network was increasingly becoming a bottleneck. The South Sea Fleet in particular was wrestling with this issue. With fuel demand multiplying several times over, the fleet’s storage depots had too little capacity and were distributed unevenly geographically, requiring significant construction and updating. The fleet’s organic transportation capacity was also limited.<sup>77</sup> To fix some of these issues, joint support (including civilian support) would prove critical. According to the head of the South Sea Fleet Logistics Support Department in 2016:

On the basis of continuously improving the large-scale joint logistics fuel support model between the fleet and units of other services and arms, we are making full use of societal resources to improve the fuel delivery mechanism and extend the range of support through strengthening military-civilian fusion. The Fleet Logistics Department has initially established an all-domain petroleum allocation system that “shares resources between services and arms and jointly operates inside and outside of military and civilian areas,” achieving a complete range of petroleum support, timely allocation, and strong supply.<sup>78</sup>

Although not a new concept, the incorporation of civilian support became increasingly important in mitigating the lacking naval POL support infrastructure and enhancing endurance and flexibility in the support system. The PLAN POL Support Department (海军油料保障部门) reportedly had an important role in coordinating and communicating with the general departments, the PLAN Operations and Training Department (海军作训部门), the Military Region Joint Logistics System (军区联勤系统), local refining enterprises (地方炼油企业), and fuel carriers (油料承运方) to form a regional POL allocation and supply system (区域型油料调拨供应体系) that met requirements and could handle

special-case requests.<sup>79</sup> One such special-case request came in when the Type 903 AOR *Qiandaohu* was attached to Task Force 171 in its mission to participate in the joint exercises of Rim of the Pacific Exercise 2014 off Hawaii. The PLA Navy activated its “emergency POL supply support measures” (油料供应应急保障机制) to coordinate support between the general departments and major PRC oil and gas company China Petroleum and Chemical Corp. (Sinopec) to arrange temporary refinery production. The PLA Navy requested Zhoushan-based refining company Zhenhai Refining and Chemical Company and its embedded military representative office raise the necessary fuel sources in time for the mission. With personnel dispatched to the facility and oil docks, the company was able to make 5,000 tons of diesel fuel available to the task force in 10 hours. Similar special-case requests have fulfilled missions in far-seas training, search-and-rescue efforts for Malaysia Airlines flight 370, deployments of naval escort task forces in the Gulf of Aden, and other events.<sup>80</sup>

The greater incorporation of civilian resources has reportedly helped the PLA Navy to fulfill urgent surge requests for POL through joint support agreements with logistics departments, allowing petrochemical companies to build a supporting relationship near “fleet POL supply points” (舰队油料供应点) or act as POL supply agents directly for some remote units. For example, in the summer of 2016, the South Sea Fleet ordered its logistics department to replenish over 30 types of ships with 7,000 tons of fuel in support of an urgent tasking. The size of the request, both in volume and types of POL resources, had the department contacting oil and gas state-owned enterprises in Guangdong and Hainan concurrently, with requests going out to naval depots within those jurisdictions. The combined efforts of civilian and military resources were able to complete predeparture preparations half a day ahead of schedule.<sup>81</sup>

The PLA Navy sometimes replenishes certain ships directly using petrochemical or bunkering companies. For example, in 2016, an AOR of the South Sea Fleet received tasking while at sea that required large volumes of diesel fuel. The AOR had a long trip back to port to get replenished, so the South Sea Fleet got approval for the ship to use a local petrochemical company directly, allowing the AOR to berth at the company’s dock to take on the needed fuel.<sup>82</sup> In an earlier case, the Qingdao Support Base (later renamed the Qingdao Comprehensive Support Base) had civilian companies provide all the food, water, and fuel for a warship in late 2010. Civilian support forces conducted the replenishment from the pier and on the water, with China Marine Bunker (PetroChina) Co. Ltd. (中国船舶燃料青岛分公司) providing a product tanker and water ship alongside which to replenish.<sup>83</sup> Whereas industry is inherently involved in POL supply, the PLA Navy is working to integrate industry suppliers into POL support operations directly.

The PLA Navy uses the Military Petroleum Project to coordinate the service's storage and distribution of POL resources. This platform was developed by the General Logistics Department's Quartermaster, Materials, and POL Department and approved as a National Internet-of-Things Demonstration Project by the State Council in October 2012. The platform primarily involves the installation of sensors in pumps, tanks, valves, pipelines, vehicles, laboratory instruments, and various other POL equipment in the military's POL network to achieve precision control, monitoring, and automation in POL requests, allocation, storage, transportation, supply, and quality assurance. As a major national defense, POL-support, informatization project with a core focus on military-civilian fusion, the platform connects customers with suppliers inside and outside the People's Liberation Army and provides greater safety, efficiency, and visibility of POL resources.<sup>84</sup> The Military Petroleum Project is part of a much broader informatization effort of PLA logistics supply that was to integrate all quartermaster, materials, and POL supply networks, enabling greater efficiency and real-time visibility and controllability in military supply; the effort was referred to as the "Military Logistics Quartermaster, Materials, and POL System" (全军后勤军需物资油料系统).<sup>85</sup>

The PLA Navy implemented the Military Petroleum Project for all ship units in April 2013, allowing for networked management of POL supply and rapid information access on POL receipt, delivery, and storage.<sup>86</sup> All levels of the PLAN organization, including the PLAN Headquarters POL Support Department, fleet logistics departments (now known as the theater command navy support departments), and fleet units, use the system. The system allows resource sharing between services, which is further enabled now by the Joint Logistics Support Force and joint civilian support. By breaking down barriers and sharing greater information on stored inventories, allocation plans, and nearby POL support resources, the PLA Navy has reportedly achieved some form of POL provision within 48 hours at any time from military and local entities.<sup>87</sup> How much volume can be delivered within short notice is unknown.

Since the 2017 reforms and the creation of the Joint Logistics Support Force, the Military Petroleum Project system has likely facilitated greater coordination between theater command navies and the joint logistics support centers within the navies' jurisdictions. The focus on the development of naval support bases has shifted from "combined common and specialized [support]" (通专结合) toward "service arm specialized support" (军种专业化保障), giving the Joint Logistics Support Force more responsibility for general POL support.<sup>88</sup> Additionally, reports indicate personnel monitoring and coordinating requests in joint logistics support centers have come from different service backgrounds, benefiting the advancement of multiservice support, according to one naval staff officer who transferred to the

Joint Logistics Support Force.<sup>89</sup> For example, the Wuxi Joint Logistics Support Center headquarters, which has officers who transferred from the army, navy, air force, and rocket force, respectively, has instituted closer monitoring of headquarters duties to ensure better adaptation to joint operations.<sup>90</sup>

### Shore-Support Resiliency

The PLA Navy has long sought to build resiliency in the service's shore-based support forces under the assumption their facilities are vulnerable to enemy attack. The physical hardening of sites has been a long-term effort. These efforts have included the construction of protected POL depots at both existing facilities, such as the Guangzhou Naval Support Base, and the Eastern Theater Command Navy 5th Landing Ship Flotilla's newly constructed base east of Shanghai.<sup>91</sup> These facilities are operated by PLAN POL technical support groups (油料技术保障大队) that manage stocks of POL inside concrete-reinforced depots buried underground and pump them through dock pipelines into naval ships.<sup>92</sup> These hardening efforts during peacetime increase the cost for an adversary to put PLAN POL resources at risk.

Restoring base capabilities once they have been damaged is an important wartime training activity for support forces in military ports. This activity includes repairing dock structures and surfaces, clearing channels, dredging, disposing of ordnance on land and water, and deploying temporary causeway and dock systems to enable continued support to ships. Some units have established joint emergency repair entities with local construction firms; these units use various unmanned systems for unexploded ordnance disposal.<sup>93</sup> As the head of the Qingdao Comprehensive Support Base's shore service department would explain in 2021, "[R]ear support must also have frontline thinking," emphasizing real war means facilities can be hit and logistics support must be trained and ready to handle such contingencies. The head of the base's department has held drills in which facilities suffer strikes and personnel must restore power cables, fight fires, decontaminate docks, and handle casualties.<sup>94</sup>

Shore-support resiliency also includes an emphasis on training base support forces on contingencies when a military port is rendered unusable or needs to be augmented by field-support sites. For example, in 2010, the Qingdao Support Base conducted its first large-scale, long-distance exercise to establish a remote-support area. The exercise involved over 100 support vehicles and 500 personnel, including medical vehicles, missile-reloading equipment, POL trucks, field refueling equipment, and other gear. The exercise also involved setting up field POL depots and a command post to coordinate various lines of support. Dockless coastal-refueling equipment was employed to refuel ships to simulate

the scale of mobile support during wartime, involving almost all base mobile-support elements.<sup>95</sup>

Naval pipeline units train to set up steel pipelines from inland fuel sources to establish a “forward support base” (前进保障基地) on the coast. In exercises, bases are equipped with fuel bladders, hose-reel trucks, pump trucks, and small craft. Depending on requirements, different systems are used. Often, a hose is faked down ashore and then towed out to a vessel anchored offshore. These efforts have mostly focused on directly refueling smaller ships of the fleet, such as the *Houbei* fast attack craft, the refueling of which was first conducted in March 2011. In other cases, these field depots may deliver POL to AOTs that could then carry POL resources to other ships of the fleet.<sup>96</sup>

In 2012, the East Sea Fleet and South Sea Fleet held a series of exercises that focused on logistics support under combat conditions. The exercises represented a break from the past practice of having ships put to sea with their full loadout of supplies, forcing precision support for a variety of different ships under more difficult conditions. In the past, the exercise scenarios included orders to establish “mobile berthing and replenishment from the beach” (岸滩机动靠泊补给) after a friendly naval port had been destroyed by enemy strikes. But under the new orders, engineering, POL, shore services, and other support units of a fleet logistics department moved in coordination to set up a mobile warship-berthing platform from a beach to establish a dockless POL-replenishment site on the beach.<sup>97</sup>

## Conclusion

A transformation in logistics support has occurred in step with the PLA Navy’s overall transformation toward the strategy of near-seas defense and far-seas protection. These changes have occurred gradually over time as specific advancements in support methods have been developed and implemented and personnel have been trained on the methods. Critical to the PLA Navy’s effort to become a world-class navy capable of operating globally is its logistics support system that will keep warships supplied with fuel, water, food, spare parts, and various other goods.

This chapter has attempted to examine key evolutions in PLAN logistics, focusing on replenishment at sea and replenishment ashore. The chapter examined how perspectives shifted dramatically as the fleet pushed further and further into the far seas and was confronted with the reality of sustaining and supporting operations there. Still heavily reliant on naval support bases in coastal China, the PLA Navy has worked on improving its shore-based support capabilities. The supply of POL was examined in particular to illustrate efforts to improve a key fundamental of the navy’s operations, ensuring a flow of lifeblood to fleet units that are conducting

long-distance operations. Importantly, the PLA Navy, which views its bases as vulnerable during wartime, has sought to build resiliency in the service's fleet support, ensuring support continues even when support bases have been degraded.

Logistics support covers an immense system of systems. This chapter did not cover many aspects of logistics support for endurance, including the critical efforts by ordnance technical-support forces to rearm ships and submarines after they have depleted their magazines of various missiles. Equipment technical support, including the navy's long-term struggle to mix necessary imported systems with a growing array of indigenously produced equipment, is another key component that was not sufficiently explored here. Repair efforts from the crew or at shipyards depend on the severity of damage done to units. Medical support for regular operations and casualty treatment as well as the potential to reconstitute crews with reservists when shorthanded were also not examined here. These areas all merit in-depth studies.

Having caught up, the PLA Navy's logistics system can now support its peacetime operations, including escorts, exercises, and combat-readiness missions. Operating at greater frequency, over longer distances, and at greater scale, logistics task forces are sustained by both shore-based support forces at naval support bases and afloat support forces capable of replenishment at sea. This effort has sought to enhance efficiency, integration, and mutual support between bases and replenishment ships, leveraging increasing societal-support forces for specific logistics-support functions. Various upgrades in systems and practices have made the efficient restoration of ship combat readiness a closer reality. Today's PLA Navy is supporting carrier-strike groups and larger fleet task forces through the integrated-support capabilities of the comprehensive support bases in each of the theater command navies.

Today, the PLA Navy has made "winning high-end naval war" the service's core focus, requiring it to be capable of defeating the US Navy at sea.<sup>98</sup> This new strategic concept will require the PLA Navy to develop the ability to do what the service has never done before: conduct a large-scale fleet campaign and sustain it in high-intensity operations. This capability is worlds away from the type of support Xi Jinping required for his 2018 naval parade. Nonetheless, the PLA Navy is advancing on numerous lines of effort toward gaining a logistics edge in naval war, highlighted by the navy's phrase "building everything for warfighting logistics" (建设一切为了打仗的后勤).<sup>99</sup>

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## Endnotes

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## **Personnel, Lift, and Facilities: The PLA's Ability to Sustain Operations in the Air Domain During a Protracted Conflict**

Mr. Eli Tirk  
China Aerospace Studies Institute, Air University

### **Introduction**

The People's Liberation Army (PLA) Air Force (PLAAF) is an important component of any PLA employment of military capability across the conflict continuum. The service would be especially important in a large-scale, protracted conflict. The competing demand signals of the multiple mission sets the PLA Air Force would be called on to support in such a scenario would place great strain on the service's equipment and infrastructure and immense demand on PLAAF support personnel, pilots, and maintainers.

Since the 2015–16 reorganization in particular, the People's Liberation Army has been undergoing great changes unseen in a century, becoming increasingly more capable of complex combined-arms (CA) operations across domains and progressively more capable of conducting these operations in a joint context. While rapidly fielding high-end, modern systems, the PLA services' aviation branches have also been forced to make great strides in the ways the branches recruit and train operators and maintainers and erect ground-support infrastructure to support new platforms. In August 2024, Vice Chairman of the Central Military Commission (CMC) General Zhang Youxia lamented the supply of talent is still not fully aligned with the demands of warfare (人才供给与打仗需求还不够完全匹配), indicating ongoing concerns with the quality and disposition of personnel recruitment, training, and education.<sup>1</sup> This chapter seeks to assess whether the current trends in maintainer and pilot education are adequately preparing the PLA Air Force to succeed

in a protracted scenario or are suitable to being compressed to support the reconstitution of personnel and the preparation of PLAAF infrastructure to sustain operations under contested conditions. This chapter also seeks to assess whether the PLA Air Force has met the benchmarks necessary for supporting multiple, competing logistical efforts over the long term in a large-scale conflict.

## **Personnel**

### **Noncommissioned Officer Responsibilities**

The People's Liberation Army's ability to support aviation operations over a long period of time is heavily influenced by the military's ability to train effective maintainers who are authorized to make decisions and conduct repairs with a certain amount of autonomy. The division of labor among noncommissioned officers (NCOs) within the aviation branches of the PLA services, which is an important indicator of the autonomy of aviation maintainers, ultimately indicates how long training replacements could take under the current system.

Historically speaking, the People's Liberation Army has made various attempts at modernizing and reforming the ways it recruits, educates, and organizes maintainers with varying levels of success. Despite undergoing logistics and maintenance reforms from 1998 to 2008, the People's Liberation Army was still unable to support flight training adequately through 2010.<sup>2</sup> But more frequent, large-scale training exercises; more expansive service-level exercises; more out-of-garrison training; the explosion of PLAAF pilots' annual flight hours; and more frequent, large-scale service-level exercises such as Red Sword indicate some improvement within the maintenance culture of the PLA Air Force and the other PLA services' aviation components occurred to support these efforts.

Prior research on maintenance culture, NCO responsibilities, and NCO recruitment and education suggests the People's Liberation Army relies on very senior NCOs to act as mentors. The People's Liberation Army heavily relies on these NCOs, sometimes referred to as "hero maintainers," or considers them to be the only personnel capable of conducting more complex maintenance. But as a result, more junior and inexperienced maintainers are left idle.<sup>3</sup> This research also indicates knowledge sharing within units is limited, and in line with the emphasis on hero maintainers, an apparent focus on individual contributions and successes, rather than overall unit performance, may indicate a lack of knowledge sharing within and across units.<sup>4</sup> Furthermore, indications of a lack of pride in the PLA maintenance profession have been assessed to affect quality assurance negatively and compound the risks associated with a zero-defect mentality.<sup>5</sup> This culture appears to compound PLA biases toward limiting the decision

making of subordinates and not promoting risk-taking in training or maintenance, leading to a situation in which organizations do not promote independent thinking and judgment within maintenance units.<sup>6</sup> Clearly, an organization depending on smaller numbers of senior NCOs to perform maintenance, relying heavily on on-the-job training, and actively stifling independent thinking as well as having a new culture forced upon itself is not equipped to support large-scale operations over the long term. As the People's Liberation Army acknowledges its new equipment is not battle tested, the military's service culture and organizational bias leave the organization ill-equipped to develop solutions on the fly in response to novel maintenance issues, share these solutions across the force, or enable more junior enlisted or junior-to-intermediate NCOs to conduct more complex maintenance tasks or fill in for more senior NCOs in the event their units sustain casualties.<sup>7</sup>

Some of these issues likely persist, though some organizational shifts have occurred within the aviation maintenance corps across the PLA Navy (PLAN), PLA Air Force, and PLA Army. Media sources of the People's Liberation Army indicate a shift toward emphasizing the contributions of technical sergeants (一级上士) as mentors, developers of teaching materials, and leaders of maintenance teams. Additionally, even staff sergeants (二级上士) are highlighted as having compiled technical manuals for training personnel on their aircraft types. Coverage of an unidentified Eastern Theater Command Air Force fighter brigade(BDE)'s 2023 iteration of the PLA Air Force's annual Maintenance Pioneers (机务尖兵) competition highlights technical and staff sergeants who won their individual categories, stating the sergeants led their teams in performing maintenance tasks and developing manuals and training handbooks and routinely traveled to or interacted with research institutes, factories, and academic institutions to study equipment theory (日常工作中谢卿多次赴研究所、工厂院校等地深研装备理论).<sup>8</sup> In the case of army aviation maintainers, NCOs of all levels get to interact with experts from universities, research institutes, and industry and then move on to positions with more responsibility within the units.<sup>9</sup>

In addition, at the 2023 iteration of this competition at an unidentified Central Theater Command Air Force bomber regiment, junior NCO leaders won awards, but no further details are available.<sup>10</sup> This competition has been running since at least 2017. Prior coverage of these events has highlighted senior enlisted leaders, master sergeants, as well as junior officers; coverage of intermediate or junior NCOs was lacking.<sup>11</sup> Coverage of earlier iterations of this contest highlighted senior maintainer finalists of at least master sergeant third-class rank and their accomplishments.<sup>12</sup> This transition is likely emblematic of efforts to foster the establishment of a better culture among maintainers and efforts to highlight and recognize the accomplishments of maintainers who enable their units to conduct operations. The effort to foster and maintain a better culture among maintainers

is reflected by the ongoing use of phrases in propaganda pieces, such as “[i]n one hand the maintainer holds the property of the country, in the other the life of his comrade” (一手托着国家的财产一手托着战友的生命).<sup>13</sup>

Outside the context of this maintenance competition, PLAAF technical sergeant maintainers are highlighted as training new soldiers, junior NCOs, and direct-recruit NCOs and developing them into “backbones of the maintenance profession” (机务专业骨干) using training materials developed by the technical sergeant maintainers themselves.<sup>14</sup> Fixed-wing aviation maintainers in the PLA Navy who hold the rank of technical sergeant are highlighted as leading crews in emergency overnight maintenance efforts, emphasizing the importance of maintainers of that rank in getting work done to meet the demands of the unit—in this case, participating in a military parade.<sup>15</sup> Maintainers in PLA Army Aviation of the rank of technical sergeant lead maintenance crews, develop training plans, and work with manufacturers or depot-level factories to troubleshoot issues with no known solutions.<sup>16</sup>

In aggregate, these data points reflect a willingness to delegate authority and task ownership and to work to share institutional knowledge vertically within PLA aviation service components’ maintenance units more effectively. Conflicting with this progress, the People’s Liberation Army still appears to be committed to a zero-defect policy in maintenance. Commitment to a zero-defect culture is clearly tied to personnel being highlighted for protecting operators’ lives due to a meticulous eye to detail.<sup>17</sup> For example, the PLA Army 80th Group Army credits a technical sergeant for speaking up about unresolved mechanical issues when the rest of his unit had already cleared an airframe for operation. Thus, PLA Army Aviation is rife with the potential for cover-ups and corruption yet is undergoing efforts to overturn a culture that has been biased against quality inspectors.<sup>18</sup> Delegating authority and highlighting midcareer NCOs and their positive contributions to their units suggests the People’s Liberation Army thinks zero-defect culture may work. Without mishap data, verifying whether this culture is effective or engenders cover-ups is difficult. With overall pushes for the People’s Liberation Army to accept more risk in the provision of realistic training and the PLA joint force to accept the risk of equipment breakage when conducting training, further attention is needed to assess whether commitment to this zero-defect culture changes or adapts to perceived requirements for a certain level of risk acceptance.<sup>19</sup>

Despite these efforts, the PLA Air Force still appears to rely on senior maintainers for more complex critical maintenance tasks. For example, PLAN aviation maintainers have clearly improved, despite still relying on senior NCOs for some of the more complicated tasks in this process. Coverage of training

on emergency engine replacement at PLAN special-mission aircraft regiments shows senior NCOs doing hands-on work with the engines, not simply installing or removing them, which appears to be done by more junior NCOs.<sup>20</sup>

In addition to making progress on adapting their NCO maintainer corps structure and division of labor to support modern operations, PLA services' aviation components have made progress on regularizing the deployment of elements of fighter BDEs to other airfields without accompanying support elements.<sup>21</sup> Regularizing interaction with other services' aircraft and ground-support elements across formations and normalizing maintainers and ground-support personnel's acceptance of responsibility for equipment outside their chain of command would provide dividends for aviation units once they started to rely on ground support outside their chains of command or services in a protracted conflict, in which timely ground support would be key.

## Training Pipelines

### Maintainers and Ground Crew

Maintainer and NCO training developments indicate the PLA Air Force is slowly transitioning to a model that reduces the amount of on-the-job training required to develop maintainers. The centralization of the enlisted training process has greatly increased the standardization of training.<sup>22</sup> This consolidation of training has also occurred for technical specialties. Unit 95275, a training BDE unit subordinate to the Southern Theater Command Air Force, conducts initial training for new recruits, NCO training, and technical training for enlisted troops specializing in air materials and four station technical specialties.<sup>23</sup> Four station companies and air material support personnel are subordinate to airfield stations and provide important ground support and logistics support to aviation units.

In addition to reducing on-the-job training for traditional recruitment pipelines, PLAAF direct-recruit NCOs are being exposed more to the active-duty force during their training periods and receiving opportunities to conduct training with frontline maintenance units before arriving at assigned units.<sup>24</sup> Furthermore, NCO training programs at the PLA Air Force Engineering University have received full-sized mock-ups of current-generation aircraft trainees can use in hands-on repetitions in the classroom—an important component of accelerating the training pipeline.<sup>25</sup> These changes will enable the PLA Air Force to maintain a supply of more capable maintainers and leave the service better positioned to expand training pipelines to support personnel requirements in the face of a large-scale, protracted conflict without overly burdening operational units with new, untrained enlisted maintainers. Whereas the PLA Air Force may be making strides in recruiting and developing

more competent NCO maintainers, the service still faces challenges in retaining some of its more valuable NCOs. Outlets of the People's Liberation Army have discussed the challenge of keeping senior maintainers from taking jobs supporting commercial aviation, noting in coverage the number of times senior maintainers have turned down jobs in the commercial sector.<sup>26</sup> The severity of this retention issue is unknown, but the issue is common enough the PLA Air Force feels the need to highlight personnel who choose to stay in the People's Liberation Army in official media.

## Pilots

The PLA Air Force is still working to streamline and shorten its training timeline and to move the burden of transition training from combat units to flight-training units. The steps the PLA Air Force has taken reduce its ability to train pilots on legacy, third-generation aircraft in favor of expanding the service's flight-training BDE's ability to train pilots on newer aircraft. The steps will shorten the pilot-training timeline to three years by 2026.<sup>27</sup> The ongoing transition from a system intended to develop pilots for legacy Chengdu J-7 aircraft who would eventually transition to fourth- or fifth-generation aircraft toward a system intended to provide the active-duty force with pilots trained on fourth-generation aircraft has left the PLA Air Force's pilot-training pipeline more streamlined and less reliant on final-transition training at operational units. But imagining the current system as being capable of cutting or compressing swaths of the curriculum to deliver pilots ahead of schedule is difficult.

Curtailing portions of initial military training and focusing strictly on aviation training could reduce the initial three-year period pilots spend in school and select elements of transition training could be compressed. But given the need to adhere to training schedules, as dictated by the *Outline of Military Training and Evaluation*, the intermediate phase of pilot education may now be too regimented to accommodate the timeline compression needed to produce more pilots at scale. For example, in 1965, the US Air Force's Tactical Air Command (the predecessor to Air Combat Command) was forced to reduce transition training for new pilots to six weeks, down from 26 weeks.<sup>28</sup> Training could be compressed during the transition phase, but calculating whether the People's Liberation Army could achieve the same compression the US Air Force did during the early period of the Vietnam War is difficult.

Given the PLA Air Force's current training timeline and the last confirmed PLAAF pilot-to-aircraft ratio of 1.2 to 1 for fighter BDEs, the service likely still needs to surge capacity to deliver enough pilots for a protracted conflict as well as explore ways to reduce initial training burdens, finish the process of completely

removing operational units from the transition training phase of pilot training, and develop training schedules that could allow for compression to suit potential future wartime demands in a protracted conflict.<sup>29</sup>

## Airlift and Infrastructure

### Transport Unit and Civilian Capabilities

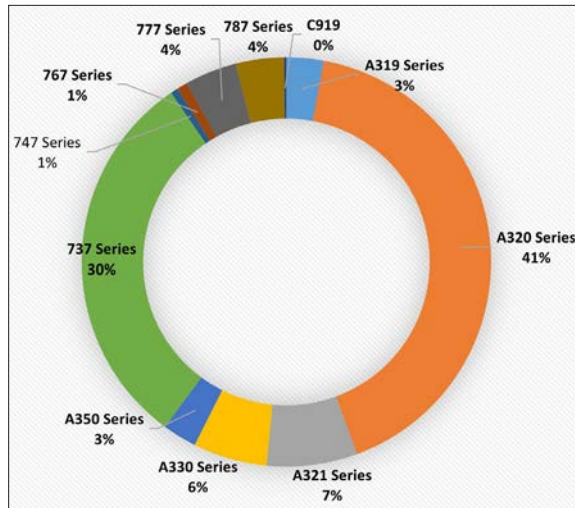
As of at least 2021, the PLA Air Force only maintained enough medium- and heavy-lift platforms to conduct an airborne landing of either one light mechanized or two light infantry brigade-sized elements at a time. The PLA Air Force needs to increase its transport fleet by at least 50 percent to be capable of transporting most of the airborne corps in one trip and supporting the flow of follow-on forces and supplies.<sup>30</sup> Since then, the People's Liberation Army has apparently added at least 13 heavy transports to the active-duty force, leaving much of the force expansion still to be completed.<sup>31</sup> Until the PLA Air Force reaches these force-expansion benchmarks, it will be strained to support airborne-landing responsibilities, the flow of follow-on forces and supplies to an airhead on Taiwan, and the timely flow of personnel and supplies across China through the air.

In addition to the overall limitations of lift platforms, the People's Liberation Army still only maintains a nascent aeromedical transportation capability, which would be vital to sustaining the evacuation of casualties from Taiwan back to China or the rapid movement of casualties from airfields in remote locations to areas with more robust medical-support capabilities. At present, the PLA Air Force only maintains a fleet that consists of an unknown number of Shaanxi Y-9 aeromedical transport variants that are capable of transporting about 30 casualties at a time.<sup>32</sup> Coverage of this capability has focused on limited employments in an emergency-response context and in PLAAF participation in overseas combined exercises with the Cambodian military.<sup>33</sup> Expanding these capabilities, which will likely be a future requirement of the PLA Air Force, is probably a lower priority than developing benchmark operational capabilities, which require more time and resources to develop. Before reform, the People's Liberation Army estimated casualties in a large-scale combat operation directed at Taiwan would be about 120,000. But transporting even half these casualties to rear areas of Fujian province would require the Y-9s to conduct 2,000 sorties.<sup>34</sup> Even if half of the Y-9 fleet (roughly 15 aircraft) consisted of the aeromedical transport variant, each aircraft would have to fly at least 133 sorties to transport the casualties to Fujian province. Obviously, both the number of casualties and the distance the aircraft would have to fly to transport the casualties could be greater in a protracted-war scenario.<sup>35</sup>

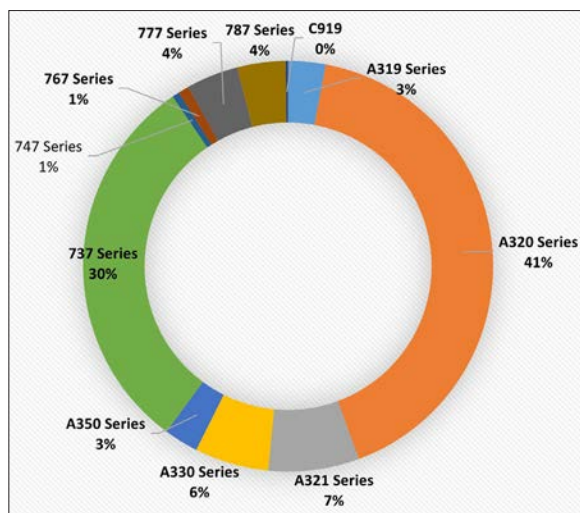
## Civilian Lift

The PLA Air Force's ability to support large-scale operations during a protracted conflict relies on the disposition and capabilities of the service's personnel and the disposition of the organization's support units and infrastructure. Logistically supporting an airborne-landing campaign and assisting in the flow of follow-on forces, logistics, and medical support to Taiwan would likely be a competing priority with supporting PLAAF operations within China. In propaganda, the PLA Air Force references Mao Zedong's *On Protracted War*, emphasizing the need for the mobilization of civilian capabilities across all domains and reflecting PLA estimates of the military's logistics requirements in a Taiwan scenario. Estimates the People's Liberation Army made in 2015 indicate it would require the capability to use civilian air transportation to move about six light BDEs, which the military would be pressed to do in a timely manner with the military transport fleet alone.<sup>36</sup>

The People's Liberation Army has long trained to mobilize civilian airliners to support the flow of personnel and equipment in the form of strategic air-support delivery fleets (战略投送支援机队) and their subordinate *dadui* (战略空运大队). As of 2014, the People's Liberation Army maintained at least 15 of these fleets from major commercial aviation companies. Whereas this capability has traditionally been used to support the evacuation of Chinese citizens overseas and the movement of PLA personnel domestically, this capability would provide important transregional mobility capabilities within China and potentially out to Taiwan in a wartime context.<sup>37</sup> According to a combination of Wikipedia and online commercial aviation tracking data, the People's Republic of China (PRC) commercial aviation industry has the capacity to transport 844,500 passengers simultaneously, depending on the layout of the aircraft. Additionally, the commercial cargo aviation sector can move 13,700 tons of materiel simultaneously if all aircraft are operational.<sup>38</sup> In terms of personnel transportation at its disposal, even if the People's Liberation Army were only able to mobilize state-owned carriers, it would still possess sufficient lift to meet the requirements of ground forces' transregional mobility and have sufficient reserves to support these operations or assist in other transregional mobility requirements.<sup>39</sup> This capability helps to provide depth to transport aviation capabilities that can be used in more secure airspace over the People's Republic of China, helping to alleviate potentially competing demand signals for timely air transportation. Please see figure 7-1 for a depiction of the number of passengers each aircraft family can carry and figure 7-2 for a depiction of the number of each type of aircraft the People's Liberation Army possesses.

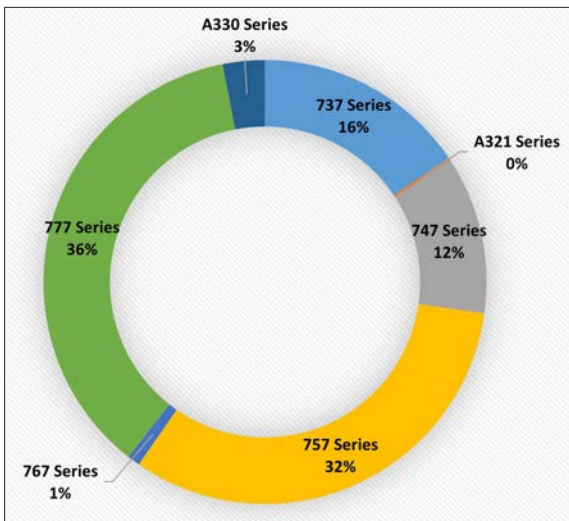


**Figure 7-1. Passengers by aircraft family**

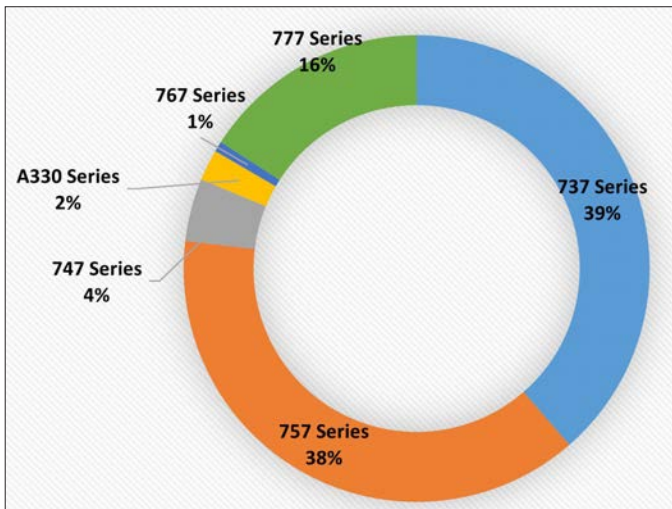


**Figure 7-2. Passenger aircraft by airframe**

Commercial passenger aircraft in China are usually narrow bodied and easily capable of flying between any two locations within the People's Republic of China. Chinese cargo aircraft are similar in nature. Notably, if only these narrow-bodied aircraft are available to the People's Liberation Army, it would be able to move around 606,400 passengers, which is more than sufficient to meet outlined PLA requirements for mobilized airlines. See figure 7-3 for a depiction of commercial air cargo capacity by aircraft type and figure 7-4 for the disposition of commercial cargo airframes China possesses by aircraft type.



**Figure 7-3. Commercial air cargo capacity**

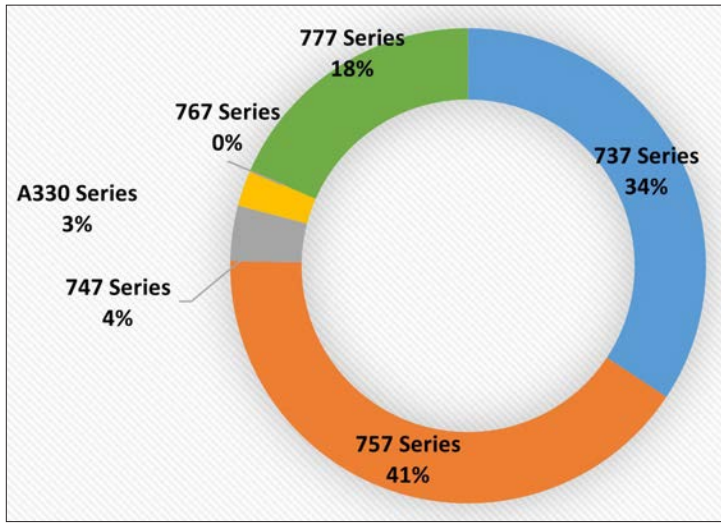


**Figure 7-4. Commercial cargo airframes**

Commercial cargo fleets in China tend to consist of midrange, narrow-bodied aircraft. Boeing 737 and 757 variants compose roughly two-thirds of the airframes and almost half the transportation capability by total payload capacity of commercial cargo aviation in China.

Excluding all privately owned airlines and privately owned airlines and their subsidiaries not sanctioned by the Department of Defense for working with the People’s Liberation Army, civil aviation in China is still able to meet all PLA personnel transport demands and capable of delivering ample amounts of lift.

Overall, airframes have been reduced slightly, down to 12,300 tons of lift capacity. Paring down passenger-carrying capacity using the same metrics, China would be capable of transporting 701,866 passengers, with the narrow-bodied fleet alone being capable of transporting 552,757 passengers. See figure 7-5 for a breakdown of the types of airframes operated by companies linked to the People's Liberation Army or a Chinese state-owned enterprise (SOE).



**Figure 7-5. Airframes operated by companies linked to the PLA or an SOE**

Western aircraft manufacturers have established substantive maintenance and overhaul facilities in China. Boeing Company indicated as of 2022, it had partnered with PRC state-owned companies, including the Aviation Industry Corporation of China; China Eastern Airlines; and Commercial Aircraft Corporation of China, Ltd., to build structural components and assemblies for Boeing Company aircraft in China, conduct heavy maintenance, and convert Boeing 737 airframes to support growing airfreight demand.<sup>40</sup> Partnering with SOEs to manufacture structural components, assemblies, interior components, and heavy maintenance for Boeing Company aircraft could make the operation of commercial aviation more sustainable and even provide options for converting unneeded Boeing 737 passenger airframes into cargo airframes. In addition, Airbus Industrie maintains a joint venture with Aviation Industry Corporation of China in Tianjin, where the former conducts final assembly for A330 and A320 airframes.<sup>41</sup> Furthermore, Airbus Industrie maintains numerous Chinese component producers, providing some PRC-based supply of components.<sup>42</sup> Whereas these partnerships might alleviate constraint sanctions placed on operators of Western commercial airframes during a prolonged conflict, a shift toward greater reliance on domestic commercial airframes would likely provide a more sustainable and controllable option. The data show a significant

production run of Commercial Aircraft Corporation of China airframes would be required to shift strategic air-support delivery fleets away from foreign-manufactured aircraft.

In terms of engine overhauls, international manufacturers like Safran, GE Aerospace, Pratt & Whitney, and CFM International (a partnership between Safran and General Electric) have partnered with PRC- and Hong Kong-based companies to conduct overhauls on CFM56, GE90, Leading Edge Aviation Propulsion, and PW1100G engines in the People's Republic of China.<sup>43</sup> Whereas these projects do not guarantee access to parts needed for engine overhauls, the projects do indicate a proficiency among PRC technicians for overhauling these engines that could eventually become capacity to sustain strategic air-support-delivery operations in a protracted conflict.

With a continued focus on the development of a logistics enterprise centered on “precise support (精确保障),” the PLA Air Force in particular will be called on to support the timely delivery of critical materiel needed to be delivered either as fast as possible or to locations with fewer connections to rail networks, enabling the efficient delivery of critical supplies at scale. Companies with prior experience working with the PLA Air Force and mobilizing its air fleets and ground support infrastructure and personnel to support PLA requirements more effectively will be more efficient compared to companies that do not already have experience mobilizing to support PLA needs in either a disaster response or training context. Critical operating hubs such as the Ezhou Huahu Airport, the largest investor in which and operator at which is SF Airlines, a longtime partner of the People's Liberation Army, will prove critical to these airports. In addition, Ezhou Huahu Airport was designed with the goal of SF Airlines being capable of supporting military requirements from the facility.<sup>44</sup> The airport, which is located so flights can reach most locations in China in around two hours, maintains ample connections to rail hubs and highway networks.<sup>45</sup> In terms of freight volume, the facility is noted as having processed over 500,000 tons of cargo in 2024, making the airport the fifth-busiest air-cargo hub in China.<sup>46</sup>

### **Military Infrastructure**

The PLA Air Force and PLA Naval Aviation's ability to conduct operations from PRC airfields in a protracted conflict would be greatly affected by the hardening and redundancy built into these facilities, the facilities' ability to support the operation of aircraft from the components of other aviation units, and airfields' ability to maintain their connections to the PLA logistics network. Authors in the People's Liberation Army suggest its aviation facilities are insufficiently

hardened. In 2017, PLA authors noted 80 percent of airfields, with an emphasis on special-mission aviation facilities, were not sufficiently hardened.<sup>47</sup>

Cataloguing and analyzing these facilities presents a partial assessment of progress the People’s Liberation Army has made in making its airfields more supportable. Using Google Earth imagery from various providers, airfields were assessed for the number of runways at each facility, the number of connections between the taxiway and the runway, additional apron space capable of supporting additional aircraft, the number of hardened aircraft shelters (HASs), the amount of fuel and munitions storage, the number of railhead connections, and proximity to surface-to-air missile battalion garrisons with prepared deployment sites. Of 122 military and dual-use airfields with some level of military activity present across all of China, 80 percent have additional apron space allowing for the operation of aircraft from other units, 55 percent have some level of hardening of their fuel storage, 18 percent have on-site underground facilities, 30 percent have varying numbers of HASs, and 51 percent are within 60 miles of a surface-to-air missile battalion garrison.

**Table 7-1. PLA airfield defensive capacity**

	All PLA	ETC	STC	WTC	NTC	CTC
<b>Additional Apron Space</b>	80.32%	90.63%	85.71%	78.95%	77.78%	57.15%
<b>Railhead Access</b>	45.90%	43.75% (14)	33.33% (7)	31.58% (6)	74.07% (20)	38.10% (8)
<b>Underground Facilities</b>	18.03%	18.75% (6)	14.29% (3)	5.46% (1)	18.52% (5)	28.57% (6)
<b>Fuel Storage Hardening</b>	55.73%	50% (16)	43.86% (9)	42.86% (9)	51.85% (14)	90.48% (19)
<b>Hardened Aircraft Shelters</b>	30.32%	43.75% (9.56/ airfield)	28.57% (6.81/ airfield)	28.57% (6.81/ airfield)	25.93% (6.89/ airfield)	19.05% (1.24/ airfield)
<b>Local SAM Garrison</b>	51.63%	53.13% (1.34/ airfield)	57.14% (1.24/ airfield)	57.14% (1.24/ airfield)	44.44% (1.04/ airfield)	57.13% (3.14/ airfield)
<b>Connections to the Runway</b>	6.84/ airfield	6.25/ airfield	6.24/ airfield	6.81/ airfield	7.81/ airfield	6.10/ airfield
<b>Large Maintenance Hangars</b>	2.02/ airfield	2.06/ airfield	2.38/ airfield	2.38/ airfield	1.81/ airfield	1.57/ airfield

Unsurprisingly, airfields in Eastern Theater Command appear to have been hardened to a slightly higher degree than airfields in other theater commands, with 43 percent of Eastern Theater Command airfields having HASs and,

on average, more HASs per airfield in the eastern theater than in the other theaters. In addition, though Eastern Theater Command airfields are slightly under the average for direct railhead access, this number has not changed since PLA assessments in the mid-2010s. A lack of widespread railhead access has been identified as a weakness of the logistics networks supporting aviation operations.<sup>48</sup> Interestingly, Eastern Theater Command fuel hardening, though expansive, is not necessarily on par with other theater command aviation facilities, especially those in Northern Theater Command.

A lack of direct railhead access at many airfields poses a potential risk to the PLA Air Force's ability to maintain efficient supply lines to bases supporting special-mission aircraft operations, tanker operations, and bomber operations. Of all home bases of conventional bomber units, only four out of 12 airfields maintain direct railhead access to their facilities, requiring minimal transshipment for munitions and, in most cases, an efficient secondary supply of petroleum, oils, and lubricants (POL). For airfields supporting operations for other high-demand, lower-density aircraft; special-mission aircraft; and tanker units, nine of 15 airfields maintain direct railhead access, providing broad redundancy in fuel supply to those facilities. All airfields that are home to strategic airlift assets do not maintain direct railhead access at their satellite facilities. Notably, Kaifeng Air Base, which is home to the Central Theater Command Air Force's 13th Transport Division's 37th Air Regiment and operates some YY-20A aerial tankers, does not maintain a railhead connection to the base's fuel-storage facilities. Additionally, in Kaifeng's recent renovation, hydrants were apparently not built into the base's aprons to support more efficient fueling of large transports and tanker aircraft, which will result in more time-consuming and inefficient tanker operations. Similarly, Qionglai Air Base, which is subordinate to the Western Theater Command Air Force 4th Transport Division and home to the 12th Air Regiment, also operates Y-20 variants and lacks railheads at base facilities, further limiting the unit's ability to use its home garrison as a logistics hub or potential aerial port of embarkation. This lack of redundancy in fuel supply and lack of direct access to railheads at transport airfields will necessitate the use of alternative PLA airfields or civilian infrastructure to provide efficient linkages between transportation nodes, forcing the PLA Air Force to train more regularly to establish such nodes at key civilian airports and integrate civilian logistics hubs into PLA transportation networks more effectively.

## Conclusion

The aviation components of the PLA services, especially those of the PLAAF aviation branch, have come a long way in preparing to sustain large-scale, modern combat operations but still have room to improve in adapting

the components' maintainer corps and infrastructure to be more suitable to the provision of adequate personnel, transport units, and facilities for sustaining combat operations over the long term. Efforts to develop a more capable NCO corps in the aviation career field appear more successful and farther along than some of the infrastructure improvement PLA aviation forces have undertaken. Junior and midcareer maintainers in PLA aviation appear to be contributing to their units' ability to meet demanding flight-training schedules, but some work on completing a culture shift still remains. Maintainers in the People's Liberation Army have more experience than ever in sustaining aircraft operations from different services' chains of command and have established a nascent jointness in this regard, but the military likely would be forced to scale this practice to support wartime demands. Due to ongoing expressions of high-level concerns with the quality of the people the People's Liberation Army recruits, problems likely still persist, and addressing some of the ongoing issues within the maintainer corps will likely be difficult.

The PLA Air Force's lift assets are still insufficient to meet PLA demands, but expanding this fleet is well within the capabilities of the aviation industry, and the service will meet minimum requirements on that front in a matter of years. In the meantime, the PLA Air Force will continue to rely on the mobilization of civilian passenger and cargo aircraft to make up for this deficiency and will likely still rely on civilian logistics infrastructure, even once the organization has produced enough military lift assets to sustain combat operations over a longer period of time.

Airfield infrastructure hardening and connectivity to transportation networks still do not appear to be up to PLA requirements. Solving this problem would likely be simpler than developing cross-domain, long-range kill chains, but progress still appears to be lacking in some regards—most notably, in connectivity to terrestrial logistics networks. Nevertheless, if political decisions made by US leadership prevent the American military from striking targets in China, many of the weaknesses the People's Liberation Army has identified in its infrastructure are not necessarily points of vulnerability.

With limited experience operating abroad and a scant overseas footprint capable of supporting aviation operations, the PLA Air Force has limited expeditionary capabilities. Some of the PLA Air Force's lessons learned from its experimentation with supporting operations from austere locations, frequent out-of-garrison operations, and exercises abroad could offer some slightly analogous experience to operating in an expeditionary capacity, but these environments are permissive in nature. Expanding PLA counterintervention mission requirements or the so-called battlespace could force the development and training of more expeditionary capabilities, but the PLA Air Force has yet to take such actions.

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## Endnotes

Disclaimer: Opinions, conclusions, and recommendations expressed or implied within are solely those of the author and do not necessarily represent the views of the Air University, the Department of the Air Force, the Department of Defense, or any other US government agency.

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**Part 3:**  
**Analyzing China and the PLA's**  
**Ability to Command and Control**  
**a Protracted War**



## Protracted War at the Strategic Level

Mr. Rick Gunnell  
China Landpower Studies Center, US Army War College

### Overview

Determining how the Chinese Communist Party (CCP) and Central Military Commission (CMC) will function in a protracted war is wholly dependent on what leads up to the conflict and how it transpires. In some ways, the People's Republic of China (PRC) is already participating in a nontraditional, protracted war (that is, protracted competition) throughout the Indo-Pacific region (and even the globe). This competition features soft influence and interference operations in the diplomatic, economic, information, cyber, and cognitive domains.<sup>1</sup> From this viewpoint, the CCP-CMC decision-making structure for command and control (C2) is obvious and often efficient: The Chinese Communist Party formulates broad strategies and policies (for example, United Front work or the Global Security Initiative), after which various civilian and military entities carry them out. At the military-strategic level, the Central Military Commission serves as the overall manager and director of these efforts. Select examples include educating, training, and comanaging (with the Ministry of National Defense) military attachés as well as directly overseeing People's Liberation Army (PLA) organizations that carry out soft-kill missions. Examples include the cyber, electronic, and psychological warfare capabilities of China's new PLA Information Support Force and PLA Cyberspace Force.<sup>2</sup>

Beyond protracted competition, the People's Liberation Army sometimes finds itself in a low-state, protracted conflict, as in the case of the border-reinforcement operations in the Aksai Chin region.<sup>3</sup> The C2 structure for this effort is also clear: The Chinese Communist Party provides political guidance (that is, a recommendation to deescalate) to the Central Military Commission, which directly manages those

involved—namely, the Western Theater Command and the PLA military district system. Both high-state incursions into Taiwan’s air defense identification zone and maritime overreach in the South China Sea also represent a form of protracted conflict for the People’s Liberation Army.<sup>4</sup>

For Taiwan and the South China Sea, China’s C2 decision-making structure largely mirrors the Aksai Chin situation, except the Eastern Theater Command is largely responsible for Taiwan, and the Southern Theater Command commands operations in the South China Sea. Given the difference in geography, the PLA Navy, PLA Air Force (PLAAF), and China Coast Guard have larger roles in these conflicts, creating a more joint-focused, protracted conflict.<sup>5</sup> All three situations share a common trait: a lack of sustained, high-intensity combat. Relative to Taiwan and the South China Sea, conflict is less about a complete annihilation of the enemy and more about increasing China’s scope of control and active defense.<sup>6</sup> Whereas the Chinese Communist Party avoids calling the Taiwan and South China Sea conflicts “barbarian management,” modern China’s actions resemble this strategy of ancient Chinese dynasties. Bruce A. Elleman and S. C. M. Paine stated the following about barbarian management.

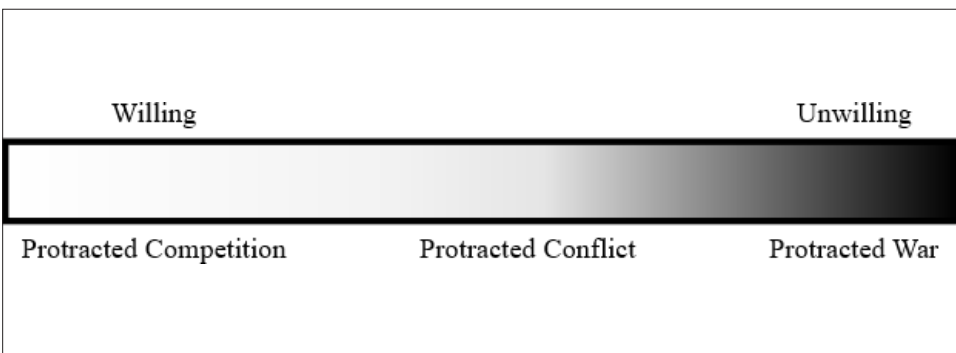
“Barbarian management” was a strategic concept. . . . It presupposed . . . China had the authority to rule over and regulate the trade and military affairs of the “barbarians,” meaning the inferiors living along China’s frontiers. . . . China employed a strategy of “barbarian management” to deal with its uncooperative neighbors. This strategy for empire entailed employing bilateral diplomacy and war to keep neighbors weak and divided so that they could not unite against China.<sup>7</sup>

China’s focus is on reinforcing (or extending) the People’s Republic of China’s boundaries to protect the homeland (that is, engaging in deterrence), not perpetrating wholesale invasions intended to capture large swaths of land, as in the case of the Armed Forces of the Russian Federation’s invasion of Ukraine.

But what if the protracted competition or conflict China is involved in changes? In any scenario, especially one involving Taiwan, the Chinese Communist Party vastly prefers peaceful reunification, stating, “The Communist Party of China and the Chinese government take the completion of the grand cause of China’s peaceful reunification as their historical mission and have made protracted efforts towards this end.”<sup>8</sup> The Chinese Communist Party’s goal (reinforced by the People’s Liberation Army) is to “win without fighting.”<sup>9</sup> The 2020 version of the PLA *Science of Military Strategy* (SMS) states, should deterrence fail, the decision to go to war should be made after deliberate planning, and PLA forces should “strive to achieve

the goal of the war quickly with a small cost.”<sup>10</sup> Yet “short, sharp” wars seldom manifest, and this trend would especially apply to a war that involved China and the United States.<sup>11</sup>

For this reason, the Chinese Communist Party is likely averse to a protracted war. In a review of 75 Chinese publications that were authored by military or civilian organizations, none talked about modern, protracted war.<sup>12</sup> Thus, the People’s Liberation Army’s involvement in a protracted war would be akin to a massive CCP and PLA failure, putting both organizations’ legitimacy at risk. The following graphic demonstrates CCP tolerance for protracted situations, ranging from white (willing) to black (unwilling).



**Figure 8-1. Tolerance of the Chinese Communist Party for protracted situations**

From this perspective, describing how the Chinese Communist Party and People’s Liberation Army will act in a protracted war is largely speculative. Thus, this chapter will first identify which strategic-level CMC organizations are involved in making decisions during protracted competition and protracted conflict. Then, this knowledge is used to anticipate how those organizations would evolve (or devolve) in a protracted war.<sup>13</sup>

## Section 1: Protracted Competition

Once the strategy is formulated, it must be adhered to over the long term.<sup>14</sup>

—Xi Jinping, 2023

Protracted competition is likely the Chinese Communist Party’s preferred method and one that largely resembles current conditions. Strategic-level C2 decision making centers around long-term planning and remedying urgent shortfalls.

As a quick primer, the following table summarizes the Central Military Commission's 15+1 organizational structure.<sup>15</sup>

**Table 8-1. The CMC 15+1 organizational structure**

Organization	Primary Function
General Office	chairman proxy; policy
Joint Staff Department	combat planning; joint training
Joint Operations Command Center	combat command; joint liaison
Political Work Department	political loyalty and education; morale
Logistic Support Department	logistics support and oversight
Equipment Development Department	equipment development
Training and Administration Department	training; troop management
National Defense Mobilization Department	mobilization
Discipline Inspection Commission	punishment; anticorruption
Politics and Law Commission	prosecution
Science and Technology Commission	domestic technological innovation
Office for Strategic Planning	strategic planning
Office for Reform and Organizational Structure	reform
Office for International Military Cooperation <sup>16</sup>	military-to-military relations
Audit Office	financial oversight
Agency for Offices Administration	infrastructure and resource management

Under protracted competition, the People's Liberation Army prioritizes long-term planning and force development (often called "building" or "construction" [建设]). This approach directly connects to the People's Liberation Army's three-step plan for strategic modernization, which is as follows.

1. 2027: Achieve the People's Liberation Army's centennial goal and "accelerate the integrated development of mechanization, informationization, and intelligentization."
2. 2035: Modernize military theory, organization, personnel, and equipment and attain national defense and PLA modernization.

### 3. 2049: Build the PLA into a world-class military.<sup>17</sup>

Among these dates, the last is the most important. The Chinese Communist Party recognizes modernization is a “systematic endeavor” that “must be adhered to over the long term.”<sup>18</sup> The People’s Liberation Army’s 2049 goal represents a commitment to long-term development, turning time into one of the most valuable resources in achieving those goals.<sup>19</sup> From this perspective, the CMC General Office, Political Work Department (PWD), Logistic Support Department, Equipment Development Department, Training and Administration Department, Discipline Inspection Commission, Politics and Law Commission, Science and Technology Commission, and Discipline and Inspection Commission may be the most critical because their functions support long-term development, daily needs, and a clean and honest People’s Liberation Army. For decades, China’s military has identified and attempted to rectify critical weaknesses centering around a lack of war-fighting capabilities, problems with combat leadership, and doubts about political reliability. Continued instances of corruption at the most senior levels of the People’s Liberation Army (including the 2023 purge of top leaders in the PLA Rocket Force) reinforce this conclusion.<sup>20</sup> Of note, the CMC Joint Staff Department’s role under a protracted competition framework (that is, peacetime) prioritizes developing military strategy, organizing combat capability assessments, and managing joint training and routine war-preparedness work.<sup>21</sup>

In the absence of fighting, many CMC organizations focus on missions that reinforce the PLA role as a “people’s army,” including the CMC Joint Operations Command Center’s lead role in disaster management and response.<sup>22</sup> For example, in May 2022, the PRC State Council’s Earthquake Relief Headquarters Office, Ministry of Emergency Management, and the Gansu Provincial Government jointly held “Emergency Mission-2022” (应急使命·2022), a “combat-realistic” earthquake and disaster relief exercise. At the start of the exercise, the Earthquake Relief Headquarters Office notified participants of a “level-one emergency response.” In response, the CMC Joint Operations Command Center and Western Theater Command’s Joint Operations Command Center immediately responded. Then, the Western Theater Command’s headquarters set up an emergency-rescue command post that likely included personnel from each joint operations command center (either virtually or physically). Other PLA organizations were called upon, including the Gansu Military District, the Joint Logistics Support Force’s Xining Joint Logistics Support Center, and units from the People’s Armed Police.<sup>23</sup> In addition to the experience gained, the significance of this event is each participant had a directly subordinate C2 line to the Central Military Commission: the CMC National Defense Mobilization Department manages the Gansu Military District, and the Central Military Commission directly controls the Western Theater Command, Joint Logistics Support Force,

and People's Armed Police.<sup>24</sup> Four months later, this system was put into action when a 6.8-magnitude earthquake occurred in Sichuan province. In accordance with a "preplanned emergency response mechanism," the CMC Joint Operations Command Center and Western Theater Command worked together to deploy units from both the People's Liberation Army and the People's Armed Police to carry out rescue efforts.<sup>25</sup>

## Section 2: Protracted Conflict

Politics shaped the pattern of the war because the belligerents all were inflexible in their political goals, and all were prepared to use force to attain these goals. At times when violent action was seen to have a political or propaganda benefit, the conflict thus grew more intense.<sup>26</sup>

—Edward C. O'Dowd, 2007

As protracted competition evolves into protracted conflict, CMC organizational roles begin to change fundamentally. Based on outside events like the 2020 Sino-Indian border conflict and Speaker of the US House of Representatives Nancy Pelosi's 2022 visit to Taiwan, the Chinese Communist Party has demonstrated a tolerance for low-intensity, protracted conflict that flares up to a high-intensity situation for a short period of time. As the conflicts resolve and subside into a stalemate (as they did in the Sino-Indian border conflict) or settle into a lower (but still aggressive) operational tempo (as they did in the case of Pelosi's visit to Taiwan), the People's Liberation Army learns valuable lessons and gains experience.

For the People's Liberation Army, this experience is critical because it likely gives military leaders confidence and data on how to adjust PLA forces. In 2022, the *PLA Daily* criticized "peacetime officers" training "peacetime soldiers" who do "peacetime things." These officers turn a blind eye to problems, resulting in rigid routine training.<sup>27</sup> Few situations are worse for a military that is trying to become a world-class force. Thus, a low-casualty style of protracted conflict serves the important purpose of helping the People's Liberation Army to develop from a peacetime mentality to a wartime mentality in ways that are not available under protracted competition.<sup>28</sup>

A critical aspect of this transformation is the CMC Joint Staff Department and Joint Operations Command Center are put in high-intensity, real-time situations where the organizations must make critical decisions. These CMC officials must practice coordinating with senior CCP leaders and disseminating commands throughout the PLA C2 structure. These actions help China's military practice the execution of doctrine. The most prominent example of such practice is the PLA response (that is, a strategic deterrence operation) to Speaker Pelosi's visit to Taiwan. This operation executed seven out of eight recommended actions for strategic deterrence in such a situation.

1. Create an atmosphere of war.
2. Show advanced weapons.
3. Hold military exercises.
4. Adjust military deployment.
5. Raise the level of combat readiness.
6. Implement information attacks.
7. Conduct restrictive military operations.<sup>29</sup>

Reinforcing the likelihood China's military does not want to enter a protracted war, the People's Liberation Army did not launch a military-warning strike, which refers to a "small-scale strike against a specific target with a small number of selected troops in response to the enemy's serious provocative behavior."<sup>30</sup> When tensions around a protracted conflict subside, the Chinese Communist Party and People's Liberation Army revert to their state of protracted competition, while simultaneously trying to manage and resolve the situation. For example, in the case of the Sino-Indian border issues, the People's Liberation Army ultimately pursued a peaceful (albeit slow) resolution, holding 21 rounds of Sino-Indian meetings at the corps-commander (senior-commander) level and reaching a solution in late October 2024.<sup>31</sup>

### Section 3: Protracted War

Beijing in the end failed to achieve its strategic objectives, because the PLA was incapable of backing up China's rhetoric with action. . . . [T]he war became as protracted as it did because China . . . proved unable to achieve its diplomatic objectives and unable militarily to impose its will on the Vietnamese.<sup>32</sup>

—Edward C. O'Dowd, 2007

The 2020 *Science of Military Strategy* is clear in its strategic thinking on active defense: “We will not attack unless we are attacked; if we are attacked, we will certainly counterattack.” Active defense is “conducive to the use of force to stop fighting, to ensure the peaceful development of the country, and . . . can also prevent us from falling into the quagmire of war.”<sup>33</sup> Further, it states:

Strategic directors should focus on the characteristics of the times of peace and development, and strictly control the escalation of war. Large-scale wars caused by continuous escalation will not only adversely affect domestic politics, economics, and social stability, but also cause tensions in the regional or world situation, and even arouse widespread attention and condemnation from the international community, and enter into an extremely passive situation in politics. The continuous escalation of the war may also trigger high-intensity military intervention and economic sanctions by external forces, which will affect the course of the war and the long-term development of the country. Therefore, the war should not be escalated as much as possible, and efforts should be made to solve problems with lower-intensity war operations to meet political needs.<sup>34</sup>

Simply put, protracted war is the Chinese Communist Party's least preferred option.

Yet, planning for all outcomes is sound military strategy. This point becomes even more important when two conditions are met: first, when the Chinese Communist Party and People's Liberation Army loosely interpret an attack to extend beyond a kinetic strike on the mainland, to anything the Chinese Communist Party finds threatening to its national objectives; and second, when the People's Liberation Army, in its justified (or otherwise) counterattack, cannot use force to stop fighting (that is, a protracted war begins).

For the first condition, if the Chinese Communist Party determined external circumstances dictated a response, the party would order the use of military force. The leadership of the People's Liberation Army would obey and seek to accomplish its assigned missions. China's military would likely be disciplined, win some battles, and fight with all its will. For the second condition, if initial PLA efforts could not secure a short, sharp war, then China's military capabilities would have been insufficient, and the People's Liberation Army would have failed its primary mission. In such a scenario, the People's Liberation Army would likely be an embarrassment to senior CCP leadership; thus, like many autocratic regimes over history, the Chinese Communist Party would feel forced to increase its political control over the military. Based on the current CMC structure and informed speculation, here's how this crackdown might function and look.

To increase political oversight, Xi Jinping could reintroduce a civilian vice chairman into the CMC senior leadership.<sup>35</sup> This person would be a senior party member who is fiercely loyal to Xi and would serve as his eyes and ears in all senior planning meetings. To reinforce party control further, the CMC Political Work Department could become the most important C2 element in the PLA structure. This department's primary responsibilities are to ensure absolute CCP leadership over the military and human resources management.<sup>36</sup> This leadership is critical for three reasons. First, a protracted war puts CCP legitimacy at stake and, further, risks the collapse of the nation. Second, given long-standing weaknesses in the People's Liberation Army, desertion and disillusion are real risks. Third, the fate of a war would rest on the military's ability to work with civilian counterparts. From the Chinese Communist Party's perspective, political work is the People's Liberation Army's primary tool for resolving or mitigating these risks.

The Chinese military's political work in a protracted war would be far-reaching, with efforts facing both inward and outward. Internal to the People's Liberation Army, the Political Work Department would try to ensure CCP command decisions were carried out (even if they were militarily unwise) by political personnel at all echelons. Those who refused could be sent to their respective disciplinary inspection commissions for investigation and then relevant military courts for trial and punishment. Whether during a protracted war, the People's Liberation Army and the Chinese Communist Party would have the bandwidth to carry out legal prosecution through the CMC Politics and Law Commission remains unknown. The commission's involvement would likely rest on the conflict's intensity. If the war was low intensity and protracted, then the Chinese Communist Party (fearing its own mortality and a loss of face) might use the Politics and Law Commission as a tool to prosecute leaders, fairly or unfairly, who failed to carry out their mission. These leaders could be held up as pariahs for all society to see and

as a warning to future commanders or citizens who did not support the Chinese Communist Party and the People's Liberation Army.

Those who obeyed and were injured or killed would be commemorated and portrayed as martyrs. In such situations, the PWD Veteran Cadre Bureau and the Ministry of Veterans Affairs' National Veterans Services Center (国家退役军人服务中心) might become higher-tempo organizations. The ministry's Support the Armed Forces and Preferential Treatment to Disabled Servicemen and Family Members of Revolutionary Martyrs Division (拥军优抚司) could also help to support the family members of those killed in action.<sup>37</sup>

Both the PWD Propaganda Bureau and PLA News Media Center (解放军新闻传播中心) would show news programs that overstate PLA victories and underreport losses. To maintain public support for the war, these media sources would also run nationalism and martyrization campaigns through the Radio and Television Department (广播电视部) and Online Department (网络部), among others. In addition, netizen dissenters would be heavily monitored and censored across all relevant CCP organizations, including the PWD Internet Public Opinion Bureau (网络舆论局).

Externally, the Political Work Department would increase its application of the "three warfares," with a particular focus on psychological warfare. In addition, the PWD Mass Work Bureau would likely develop strategies for stability operations and work hard to convince PLA-occupied populations to lay down their arms. As documented by Edward C. O'Dowd in *Chinese Military Strategy in the Third Indochina War: The Last Maoist War*, significant precedence exists for such action.<sup>38</sup>

In a protracted war, the CMC Logistic Support Department and National Defense Mobilization Department would also play larger roles than they do in peacetime. Among many other organizations, the Logistic Support Department is chiefly responsible for finance (including both outgoing and incoming), health and medicine, the construction of military facilities, materials and energy, transport and delivery, and procurement.<sup>39</sup> The Logistic Support Department (in its overall management role) would command the Joint Logistics Support Force to execute its assigned missions within its domestic area of operations; cross-regionally; and, likely, beyond China's borders.<sup>40</sup>

Currently, the People's Liberation Army is evolving, in accordance with its three-step modernization plan and all-domain operations strategy, from a static, land-based military to one that is dynamic across all domains.<sup>41</sup> In a protracted war, the Logistic Support Department would need to use all its power to manage the efficient transportation of people, equipment, and materials via highways, rail, seaways, and air.<sup>42</sup> To do so, the department would require an all-of-society

approach. In addition, organizations within the People's Liberation Army would need to coordinate with civilian bureaucracies and state-owned enterprises (SOEs). To create efficiencies in C2 decision making at the CCP and PLA level, national and provincial organizations might have to restrict (or altogether halt) civilian movement and use of resources. The Chinese Communist Party set a precedent for such restrictions when during the COVID-19 pandemic, the party banned travel to and from Wuhan and enforced strict quarantines.<sup>43</sup>

During a protracted war, the National Defense Mobilization Department would be another critical organization for C2 decision making that involved both military and civilian leaders because the department would direct the initial call to mobilize. If a massive loss of life occurred, the department would also be responsible for managing and assigning reserve, militia, and PLA military district personnel to both frontline units and domestic incidents.<sup>44</sup> The People's Liberation Army's ability to respond to domestic incidents is paramount to the Chinese Communist Party's ability to weather a protracted war. For this chapter, a domestic incident can be defined as anything that (from the Chinese Communist Party's perspective) requires a response. Such incidents could include damaged or destroyed military or civilian infrastructure, medical facilities being overwhelmed by military or civilian casualties, and big or small antiwar protests. The National Defense Mobilization Department would likely have a key role in this effort, buoyed by the plenitude of national security organizations within the party, the military (including the People's Armed Police), and the state.<sup>45</sup>

The CMC Joint Staff Department and Joint Operations Command Center would reign supreme over strategic military leadership in a protracted war. Some evidence suggests the Joint Operations Command Center is a partly or fully independent CMC organization, though this evidence remains incomplete. The CMC Joint Operations Command Center may also have personnel who serve in dual roles (most notably and naturally, in the Joint Staff Department), and the center's 24-7 on-call role (plus experience leading disaster relief efforts) suggests the CMC Joint Operations Command Center could be the Chinese military's most practiced C2 decision-making organization. Further, the only other joint operations command centers the People's Liberation Army possesses are in the theater command structure, creating a situation in which the centers are intimately familiar with each other and, in essence, always working together to resolve the crisis of the day and to plan for the crises of tomorrow.<sup>46</sup>

The Joint Staff Department is likely well prepared to work with both the services and the theater commands in war. In peacetime, the department works with the various services and forces to design training and identify the equipment needed for combat in any type of environment (for example, plateaus, forests,

jungles, cold environments, and joint land-sea-air environments).<sup>47</sup> The CMC Joint Staff Department simultaneously works with the theater commands to organize, execute, and assess training to identify successes and to develop plans for remedying weaknesses. Senior leaders are familiar with each other, but the department likely overly relies on the Central Military Commission and its commands, reducing the department's efficacy.

The Joint Staff Department's Operations Bureau (作战局), Intelligence Bureau (情报局), Battlefield Environment Support Bureau (战场环境保障局), Information and Communications Bureau (信息通信局), Network-Electronic Bureau (网络电子局), and Quartermaster Bureau (军事需求局) would have front-and-center roles in a protracted war. These organizations would probably perform well in a protracted war scenario because they are likely staffed with competent leaders and have deep experience designing and overseeing strategic activities. Reinforcing the power of the Chinese Communist Party in the People's Liberation Army, the Joint Staff Department also has a Political Work Bureau and a subordinate Organization and Discipline Division (组织纪检处).

A protracted war would permit no CMC organizations to be truly low tempo, but C2 decision-making power may diminish in those organizations that focus more on long-term modernization goals or that lack a focus on combat. For example, the Equipment Development Department and Science and Technology Commission are geared toward long-term planning.<sup>48</sup> Based on the low-cost, quick-production pieces of equipment (for example, unmanned aerial vehicles) seen in the Russia-Ukraine War, the Equipment Development Department and Science and Technology Commission would likely try to rebalance PLA resources to produce in such an efficient way. But Ukraine's successes in this domain are based on civilian ingenuity and bureaucratic flexibility, neither of which are strong points for the Chinese Communist Party. Instead, the People's Liberation Army would need to rely on its bloated and corrupt SOEs to pivot quickly.

Evidently, the CMC Audit Office actively researches audit work in wartime (enhanced and quickened by informationization) as well as during public emergencies.<sup>49</sup> Audit work in wartime could also help to identify cheap, quick solutions (for example, prefabricated steel structures) and combat skimming or price gouging during quick-decision times.<sup>50</sup> In a protracted war, buildings would still need to be maintained by the Agency for Offices Administration, and the People's Liberation Army might call upon the Office for Reform and Organizational Structure to help reorganize PLA force structure after unit loss. But these organizations are likely to have a significantly marginalized role in comparison with other CMC departments.

If the Chinese Communist Party is convinced it can both de-escalate and save face, the dual Central Military Commission–Ministry of National Defense Office for International Military Cooperation could be a useful tool with which to do so. But the extent to which this organization has any true power and decision-making capabilities is questionable. Defense Minister Dong Jun has yet to be named as a CMC member, and Sino-American military relations are now being prioritized through Southern Theater Commander General Wu Yanan and United States Indo-Pacific Commander Admiral Samuel Paparo.<sup>51</sup> Notably, China could use the Office for International Military Cooperation to request support from countries that would benefit from cooperation or, more importantly, countries that would suffer if the Chinese Communist Party fell (that is, Russia, North Korea, Pakistan, Iran, Myanmar, and Cambodia).

## Conclusions

We were young and red and we believed we could do anything. . . . The longer we served in the PLA, the more our patriotic passion cooled. When we witnessed firsthand the machinations and corruption of the gods of our youth—the CCP and PLA—our crisis of faith commenced.<sup>52</sup>

—Xu Meihong (female PLA soldier in the 1980s)

The Chinese Communist Party likely prefers protracted competition as the ideal path toward becoming a global power that truly rivals the United States and its peers. As demonstrated by recent events, the Chinese Communist Party has shown a tolerance for protracted conflicts that flare up in intensity for short periods of time and then subside. In these situations, violence is replaced by a heightened operational tempo that provides opportunities for the People’s Liberation Army to increase its war preparedness. But protracted war is likely not tenable for the Chinese Communist Party because such war would represent a failure of the party’s commitment to long-term development and doctrine that demands a quick victory and de-escalation.

Through this lens, China has oriented the Chinese Communist Party’s entire C2 decision-making system—and, thus, that of the People’s Liberation Army—away from protracted war and toward protracted competition. If a protracted war occurred, especially in the near term to midterm, the Chinese Communist Party and People’s Liberation Army would try to recover and readjust but likely fall short of doing so. The author does not mean to imply the People’s Liberation Army

is “comically inept,” but China’s military does continue to identify fundamental problems that restrict its combat power.<sup>53</sup> As a recent example, the Central Military Commission held a political work conference in August 2024, wherein the commission reiterated the People’s Liberation Army still needs to solve its “two inabilities” (that is, China’s military is unable to fight a modern war, and officers at all levels are unable to command a modern war) and the “five incapables” (that is, some commanders cannot [1] judge the situation; [2] understand the intention of higher authorities; [3] make operational decisions; [4] deploy troops; or [5] deal with unexpected situations).<sup>54</sup>

Protracted wars require an all-of-society support system, and the Chinese Communist Party lives in an all-of-society control framework. Even industries the Chinese Communist Party and the People’s Liberation Army rely on are largely geared toward advancing civilian quality of life and exports for economic growth. At present, the Chinese Communist Party does not have an on-off switch to convert systems designed for economic and social growth into prolonged, large-scale combat operations, especially given the added economic burden (that is, sanctions) that would be placed on China in the event of war.

At the strategic level, the People’s Liberation Army’s C2 decision-making organizations are designed for long-term growth. At present, service commanders need to develop the world-class force of the future with senior theater command leaders overseeing training execution and providing feedback. Should a protracted war break out before the People’s Liberation Army can accomplish its goals, its long-standing weaknesses in war-fighting capabilities, combat leadership, and political reliability will significantly hinder PLA prospects for success. Worse, the Chinese Communist Party will find itself in a precarious position in which CCP legitimacy and reign are in peril.

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## Endnotes

1. Countless examples discuss China's protracted competition, including: David Shullman, ed., *A World Safe for the Party: China's Authoritarian Influence and the Democratic Response* (International Republican Institute, 2021); Josh Baughman, *How China Wins the Cognitive Domain* (China Aerospace Studies Institute, 2023); and *Examining China's Coercive Economic Tactics, Before the US House of Representatives Comm. on Rules, 118th Cong. (2023)* (statement of Victor Cha, senior vice president for Asia and Korea chair, Center for Strategic and International Studies).
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5. The larger role of the PLA Navy and PLA Air Force in any Taiwan conflict would occur through their respective theater command navy and theater command air force components.
6. China characterizes its military strategy as one of active defense, a concept Beijing describes as strategically defensive but operationally offensive. See: Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China 2019* (Office of the Secretary of Defense, 2019). For comprehensive details on this concept, see M. Taylor Fravel, *Active Defense: China's Military Strategy since 1949* (Princeton University Press, 2019).
7. Bruce A. Elleman and S. C. M. Paine, *Modern China: Continuity and Change, 1644 to the Present*, 2nd ed. (Rowman & Littlefield, 2019), 9, 11.
8. "A Policy of One Country, Two Systems on Taiwan," Ministry of Foreign Affairs of the People's Republic of China, n.d., accessed on October 5, 2024, [https://www.mfa.gov.cn/eng/zy/wjls/3604\\_665547/202405/t20240531\\_11367561.html](https://www.mfa.gov.cn/eng/zy/wjls/3604_665547/202405/t20240531_11367561.html). Other possible scenarios include escalatory fighting on the Indian border, territorial disputes with Vietnam, rogue attacks by North Korea that force the People's Republic of China to respond, spillover from independence militias fighting against the China-supported Burmese junta, and even attacks perpetrated by violent extremist organizations from Afghanistan.
9. Xu Sanfei 许三飞 and Wu Siliang 吴思亮, "试析外军战略威慑理论与实践的发展趋势," China Military Network, January 30, 2024, [http://www.81.cn/yw\\_208727/16283925.html](http://www.81.cn/yw_208727/16283925.html).
10. Xiao Tianliang, ed., *战略学* [The science of military strategy], trans. China Aerospace Studies Institute (China Aerospace Studies Institute, 2022), 141, 184.
11. Brian Kerg, "There Will Be No 'Short, Sharp' War. A Fight between the US and China Would Likely Go On for Years," Atlantic Council, March 19, 2024, <https://www.atlanticcouncil.org/blogs/new-atlanticist/there-will-be-no-short-sharp-war-a-fight-between-the-us-and-china-would-likely-go-on-for-years/>.
12. Articles were downloaded based on the most relevant and frequently downloaded search results, indicating these 75 articles were widely viewed. Among the publications, 71 percent mentioned Mao Zedong's "On Protracted War" [论持久战], which was designed specifically for a more powerful invading force (that is, Japan). The remaining articles used the Chinese term for "protracted war" in a completely different context (that is, a long-term process or task, something long-lasting, or a long struggle), referring to social situations like corruption, the Sino-American trade war, strategic competition (that is, protracted competition), pollution, poverty, or efforts to counter COVID-19.
13. In the interest of full disclosure, this speculation makes assumptions and reaches conclusions based on incomplete (or missing) data.
14. Huang Panyue, ed., "Xi Stresses Grasping, Advancing Chinese Modernization," China Military Online, February 8, 2023, [http://eng.chinamil.com.cn/CHINA\\_209163/TopStories\\_209189/16200244.html](http://eng.chinamil.com.cn/CHINA_209163/TopStories_209189/16200244.html).

15. The Joint Operations Command Center is also directly subordinate to the Central Military Commission, but the People's Liberation Army does not widely acknowledge this chain of command. For further insight, see Rick Gunnell, "CMC as an Organization 3.0," in *The People's Liberation Army as Organization Volume 3.0*, ed. Frank Miller et al. (Jamestown Foundation, forthcoming).
16. The Office for International Military Cooperation is dual-ed under the Ministry of National Defense with the same name.
17. Office of the Secretary of Defense, *Military and Security Developments*, 39. For further analysis of these goals, see Andrew S. Erickson, "PRC Pursuit of Xi's 2027 'Centennial Military Building Goal' (建军一百年奋斗目标): Sources & Analysis," *Andrew S. Erickson* (blog), updated April 18, 2023, <https://www.andrewerickson.com/2021/12/prc-pursuit-of-2027-centennial-military-building-goal-sources-analysis/>.
18. Huang Panyue, "Xi Stresses."
19. Party loyalty may be the only resource the Chinese Communist Party (and, by extension, the People's Liberation Army) values more than time.
20. For additional background, see Dennis J. Blasko and Rick Gunnell, "Assessing the PLA's Strengths and Weaknesses for Achieving the PRC's Goals," in *The PLA in a Complex Security Environment: Preparing for High Winds and Choppy Waters*, ed. Benjamin Frohman and Jeremy Rausch (National Bureau of Asian Research, 2025), 127–48.
21. "CMC Departments," Ministry of National Defense of the People's Republic of China, n.d., accessed February 1, 2024, <http://eng.mod.gov.cn/xb/CMCDEPARTMENTS/index.html> (page discontinued); and Ren Xu 任旭, "国防部召开军委机关调整组建专题新闻发布会" [Ministry of National Defense held a special press conference on the adjustment and formation of military organs], China Military Network, January 11, 2016, [http://www.81.cn/xwfyf/2016-01/11/content\\_6852766.htm](http://www.81.cn/xwfyf/2016-01/11/content_6852766.htm).
22. Such actions carry obvious implications for competency in a protracted war; these implications will be addressed later.
23. "军地联合举行“应急使命·2022”抗震救灾演习," China Military Network, May 12, 2022, [http://www.81.cn/jfjbmap/content/2022-05/12/content\\_315383.htm?yikikata=df6f8c1a-29f69cf6a19e9950c7e0365280d7f8b4](http://www.81.cn/jfjbmap/content/2022-05/12/content_315383.htm?yikikata=df6f8c1a-29f69cf6a19e9950c7e0365280d7f8b4).
24. Joel Wuthnow and Phillip C. Saunders, "Introduction Appendix: Central Military Commission Reforms," in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, ed. Phillip C. Saunders et al. (National Defense University Press, 2019), 25–42.
25. Li Qingtong 李庆桐, ed., "2022年9月国防部例行记者会文字实录," Ministry of National Defense of the People's Republic of China, September 29, 2022, [http://www.mod.gov.cn/info/2022-09/29/content\\_4922218.htm](http://www.mod.gov.cn/info/2022-09/29/content_4922218.htm).
26. Edward C. O'Dowd, *Chinese Military Strategy in the Third Indochina War: The Last Maoist War* (Routledge, 2007), 90.
27. Chen Guohai 陈国海 et al., "旗语呼救，老的本领丢不得" [The flag calls for help, don't lose old capabilities], China Military Network, June 1, 2022, [http://www.81.cn/jfjbmap/content/2022-06/01/content\\_316839.htm](http://www.81.cn/jfjbmap/content/2022-06/01/content_316839.htm).
28. The utility of low-casualty, protracted conflict does not mean the People's Liberation Army wants to go to war; instead, this point merely reinforces a cognitive mindset the People's Liberation Army routinely emphasizes: "to train troops to prepare for war" (练兵备战). This phrase is a call to improve training quality and increase combat readiness (that is, the PLA path to becoming a world-class military). Western media often misinterpret this mindset as a sign China is threatening to wage war.
29. For details of the exercises and implications, see Bonnie Lin and Joel Wuthnow, "Pushing Back against China's New Normal in the Taiwan Strait," *War on the Rocks*, August 16, 2022, <https://warontherocks.com/2022/08/pushing-back-against-chinas-new-normal-in-the-taiwan-strait/>; and David Chen, "Learning from the First Phase of the Fourth Taiwan Strait Crisis," *China Brief* 22, no. 15 (August 12, 2022): 12–19.
30. Xiao Tianliang, *Science of military strategy*, 135–38.
31. "China Confirms Pact to Resolve Border Conflict with India," Reuters, October 22, 2024, <https://www.reuters.com/world/asia-pacific/china-implement-solutions-with-india-resolving-border-conflict-2024-10-22/>; and "China, India Hold 21st Round of Corps Commander Level Meeting," China Military Online, February 21, 2024, [http://eng.chinamil.com.cn/CHINA\\_209163/TopStories\\_209189/16288010.html](http://eng.chinamil.com.cn/CHINA_209163/TopStories_209189/16288010.html).
32. O'Dowd, *Chinese Military Strategy*, 89.
33. Xiao Tianliang, *Science of military strategy*, 31.
34. Xiao Tianliang, *Science of military strategy*, 257.

35. Since Xi Jinping assumed power in 2012, no civilian vice chairman has been appointed to the Central Military Commission. Traditionally, this role was reserved for the rising Chinese Communist Party general secretary as a way for him to become familiar with the People's Liberation Army (and vice versa).
36. "CMC Departments"; and Ren Xu, "Ministry of National Defense."
37. The Dual Support Division (双拥处) of the Political Work Department's Mass Work Bureau would also be useful in supporting the family members of those killed in action. In this context, "dual support" is a Chinese term for giving preferential treatment to the families of soldiers and martyrs.
38. O'Dowd, *Chinese Military Strategy*, 137. During the Third Indochina War, PLA mass work largely failed. The People's Liberation Army hoped the mass work would be a magic weapon; instead, the mass work fell on deaf ears and interfered with combat missions. This political work list is far from exhaustive; instead, it aims to demonstrate the People's Liberation Army's reach and importance.
39. Gunnell, "PLA as an Org."
40. In this case, "cross-regionally" means across provincial; autonomous regional; and directly controlled, municipal boundaries.
41. Joshua M. Arostegui, "All Doman Operations," unpublished manuscript, n.d.
42. The Logistic Support Department's directly subordinate Materials and Energy Bureau (军需能源局) and Transportation and Delivery Bureau (运输投送局) would be critical in this effort.
43. Anna Fifield and Lena H. Sun, "Travel Ban Goes into Effect in Chinese City of Wuhan as Authorities Try to Stop Coronavirus Spread," *The Washington Post*, January 22, 2020, [https://www.washingtonpost.com/world/asia\\_pacific/nine-dead-as-chinese-coronavirus-spreads-despite-efforts-to-contain-it/2020/01/22/1eaade72-3c6d-11ea-afe2-090eb37b60b1\\_story.html](https://www.washingtonpost.com/world/asia_pacific/nine-dead-as-chinese-coronavirus-spreads-despite-efforts-to-contain-it/2020/01/22/1eaade72-3c6d-11ea-afe2-090eb37b60b1_story.html).
44. For more information on the reserves, see: Joshua M. Arostegui, *China's Next Step in Modernizing the People's Liberation Army: A New Reserve Service System* (Strategic Studies Institute, US Army War College Press, December 2024), <https://ssi.armywarcollege.edu/SSI-Media/Recent-Publications/Article/3986350/chinas-next-step-in-modernizing-the-peoples-liberation-army-a-new-reserve-servi/>.
45. Sheena Chestnut Greitens, "National Security After China's 20th Party Congress: Trends in Discourse and Policy," *China Leadership Monitor* 77 (Fall 2023): 1–17.
46. See section 1 for a representative example of the real-life experience and familiarity between the Central Military Commission's and theater commands' respective joint operations command centers.
47. Of note, since 2015, the Joint Staff Department has had three chiefs. The first, Fang Fenghui, came from the military region system (notably, the Beijing Military Region) but was ultimately found guilty of corruption. The subsequent two came directly from serving as the PLA Army commander, reinforcing a close relationship between the Joint Staff Department and the PLA Army.
48. This long-term planning category also includes the Central Military Commission's Office for Strategic Planning because it focuses on building national defense via decades-long development of deep military-civilian fusion.
49. Note: The author prefers not to reveal this cited reference.
50. Note: The author prefers not to reveal this cited reference.
51. "Readout of Commander U.S. Indo-Pacific Command Call with PLA Southern Theater Commander," United States Indo-Pacific Command, September 9, 2024, <https://www.pacom.mil/Media/News/News-Article-View/Article/3900303/readout-of-commander-us-indo-pacific-command-call-with-pla-southern-theater-com/>.
52. O'Dowd, *Chinese Military Strategy*, 104.
53. J. Michael Dahm and Peter W. Singer, "What Reports Got Wrong about China's 'Sunken Nuclear Submarine,'" *Defense One*, October 2, 2024, <https://www.defenseone.com/ideas/2024/10/chinas-sunken-nuclear-sub-was-likely-nothing-sort/400001/>. See also: Blasko and Gunnell, "PLA's Strengths and Weaknesses." As a recent example, the Central Military Commission held a political work conference in August 2024, wherein the commission reiterated the People's Liberation Army still needs to solve its "two inabilities" and the "five incapables." "深入学习贯彻中央军委政治工作会议精神|带头加强革命性锻造," *PLA Daily*, August 28, 2024, [http://www.81.cn/l1\\_208543/16333918.html](http://www.81.cn/l1_208543/16333918.html).
54. Zhang Hongwei 张宏伟, "深入学习贯彻中央军委政治工作会议精神|带头加强革命性锻造" [In-depth study and implementation of the spirit of the Political Work Conference of the Central Military Commission | Take the lead in strengthening revolutionary forging], China Military Network, August 28, 2024, [http://www.81.cn/l1\\_208543/16333918.html](http://www.81.cn/l1_208543/16333918.html).



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## Challenges to PLA Theater Command and Control in a Protracted War

Mr. Roderick Lee  
Independent Analyst

### Introduction

The People's Liberation Army (PLA) has a theater-command system optimized for regional contingencies. Theaters organize, train, and plan to manage or fight specific directional crises and conflicts. But how the theater-command system adapts to other types of war is less clear. Notably, at first glance, the theater-command system seems to be poorly positioned to wage a protracted war.

This chapter seeks to identify whether the People's Liberation Army's theater-command system is capable of exercising command and control (C2) over a protracted war. Specifically, this chapter seeks to highlight potential friction points in the theater C2 system throughout the course of a deliberate, protracted war with a great power.

The purpose of evaluating the theater-command system in a deliberate, protracted war is to amplify where friction points might be. An unintentional, drawn-out conflict solely over Taiwan is more likely to highlight preexisting pressures such as higher echelons' confidence in the theater commands' ability to continue exercising C2 over operations. But friction points already exist within the theater-command system and are not unique to a protracted war.

This chapter identifies general C2 friction points, develops a notional plan for a protracted war, and identifies what parts of the plan might stress the friction points. The findings show expanding and shifting areas of responsibility (AORs) create significant friction among China's theater commands later in the conflict.

In addition, command elements across the board find themselves handling unfamiliar missions in unfamiliar areas. Resource allocation may also generate some pressure across theaters.

## **Command-and-Control Friction Points**

An organization's ability to exercise C2 over assigned missions depends on a nearly limitless number of factors. But many of these factors are either intractable or immeasurable to outside observers. Intractable factors include how well a theater-command staff can conduct C2 over assigned, joint operations or how much a higher headquarters empowers a theater command to exercise effective C2 over its assigned missions. How modern a theater command's C2 suite is, or how many personnel a theater command has available to conduct staff work, are tractable factors but are nearly impossible to measure as an outsider.

As such, this chapter focuses on tractable and measurable factors. Specifically, this chapter considers the following four tractable and observable factors.

1. **Span of control:** Is the number of tasks assigned to an organization excessive?
2. **Geography:** Is the area a similar size to the areas typically assigned to that command element?
3. **Mission:** Is the assigned mission aligned with what a command element typically does?
4. **Resourcing:** Does a theater command organically possess subordinate commands and operational forces to execute the assigned mission?

## **Methodology**

This chapter establishes a notional PLA plan for a protracted war against the United States and evaluates each of the four observable C2 factors across each phase of the plan. This analysis will reveal how much friction the PLA theater-command system may face throughout a protracted war and what those sources of friction might be.

This chapter does not claim the proposed plan is a likely scenario for a Sino-American conflict or China even has such a plan in development.

The plan presented in this chapter is simply a nominal protracted-war scenario that attempts to isolate the unique attributes of a protracted war and what effect those attributes might have on theater-level C2.

The format of the notional PLA plan is based on a highly abridged planning approach outlined in a 2015 PLA academic text titled *Theater Joint Operations Command*.<sup>1</sup> The 2015 text is a slightly updated version of the 2003 textbook *Outline of Joint Campaign Command in Theater Commands*.<sup>2</sup> The 2015 text describes how a plan document should contain the overall situation, higher headquarters' intentions, theater tasks and areas, the basic military approach, the composition of formations, phasing, coordination issues, command organization, and timing. For the purposes of this chapter, the proposed notional plan consists of the overall objective of each phase, the end state, assigned tasks for relevant theaters, theater boundaries, and subgroupings with assigned tasks. This plan structure provides sufficient information to evaluate the C2 factors across each phase.

The contents of the plan are derived from a body of PLA academic texts describing how the People's Liberation Army envisions the execution of wartime operations, along with a list of theater forces and capabilities.<sup>3</sup> The consulted academic texts include the following.

- *Campaign Theory Guide* (2001)
- *Lectures on the Science of Joint Campaigns* (2001)<sup>4</sup>
- *Science of Campaigns* (2006)
- *Science of Joint Operations* (2009)
- *Science of Military Strategy* (2020)<sup>5</sup>

Although the notional plan this chapter proposes is subjective, the plan provides a starting point others can easily adjust while retaining the framework for evaluating theater C2 efficacy across phases. The format of the plan conforms with how the United States broadly conducts planning and is likely close enough to PLA planning for the purposes of evaluating PLA C2 friction points.

## **Notional Protracted-War Plan**

The conditions leading to a protracted war between China and the United States start around Taiwan, which serves as both a catalyst and symbol of the broader US containment strategy. But the conflict is both about reunification with Taiwan

and about proactively ending US dominance in the Asia-Pacific region. Before the conflict begins, Beijing views the use of force as necessary to resolve the immediate unification issue and the larger political struggle against US containment.

China anticipates a protracted war because the country is no longer just countering US intervention. Rather, China is directly confronting the United States and its allies. Whereas the United States is initially politically unified and supported by its population and allies, China expects US resolve will weaken over time. Meanwhile, China's commitment remains firm, as political security and regime legitimacy are at stake. Both sides are driven by existential interests, ensuring the war becomes a protracted and complex struggle for dominance in the region.

Because China enters the protracted war with the United States with the intent to punish US allies in the region and permanently remove the United States' ability to maintain a military presence in the western Pacific, the theater commands enter the conflict with very limited rules of engagement. Contrary to many Sino-American conflict scenarios, the theater commands have a relatively free hand to engage US military forces. The theaters will receive authorization to conduct strikes against targets on US and allied territory at the appropriate stage.

The protracted war takes place over three broad phases that align with Mao Zedong's three phases in "On Protracted War": strategic defensive, strategic stalemate, and strategic counteroffensive.<sup>6</sup> The full notional plan is available in appendix A.

### **1.1 Defense Phase: Rapid Seizure Embarkation and Crossing Subphase**

The strategic-defensive phase aims to achieve the seizure of Taiwan while defeating US intervention. The objective of the first subphase is to position forces to initiate a successful landing in Taiwan, achieving comprehensive superiority over the island while paralyzing Taiwan's command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) systems and inflicting heavy damage on its air, naval, and air defense forces. The strategic-defensive phase involves ensuring dominance across the maritime, air, and missile domains while deterring or defeating potential US and allied interventions. The Eastern Theater Command is responsible for the main effort in Taiwan, with the Southern Theater Command playing a substantial role in supporting Eastern Theater Command (ETC) efforts, as well as preparing to counter US intervention.

## **1.2 Defense Phase: Seizure Landing Subphase**

The focus of this subphase is establishing a defensible on-island presence. The initial objectives include securing beachheads, airheads, and ports to facilitate the flow of follow-on forces, while consolidating the lodgment to create a defensible perimeter for further operations. The seizure landing phase aims to damage Taiwan's mobile forces and prepare for follow-on efforts to deter or defeat US and allied interventions. Ground operations center on key landing sites, while maritime and air forces ensure dominance surrounding Taiwan. Firepower strikes continue to degrade Taiwan's military capacity.

## **1.3 Defense Phase: On-Island Seizure Subphase**

This subphase focuses on forcing Taiwan to capitulate or on rendering its military combat ineffective. Major operations include seizing the northern metropolitan areas (namely Taipei, Zhubei, and Keelung) while continuing to degrade Taiwanese forces in the southern regions. The overarching objective is to establish comprehensive control over the island while deterring or neutralizing US and allied interventions.

### **Transition: Consolidate**

The transition focuses on achieving comprehensive control over key areas of Taiwan, enabling the People's Liberation Army to sustain long-term operations from Taiwan. The Eastern Theater Command will continue conducting offensive operations to seize the remaining Taiwanese holdouts and establish a foothold on the island, while the Southern Theater Command works to prevent US or allied intervention. This phase is the point at which operations pivot from a strategic defensive against US intervention to a strategic stalemate in the western Pacific.

## **2.1 Stalemate Phase: First Island Chain Subphase**

The stalemate phase aims to reshape the balance of power in the western Pacific by attriting US forces and degrading support from Japan and the Philippines. The objective of the first subphase is to neutralize the US air and maritime presence within the first island chain while ensuring Japan and the Philippines no longer sustain US wartime operations. The Eastern Theater Command will continue consolidating control of Taiwan while supporting operations against Japan. The Southern Theater Command will focus on the Philippines, and the Northern Theater Command will prioritize operations against Japan. The phase ends when both Japan and the Philippines are either unwilling to host or incapable of hosting US offensive operations.

## **2.2: Stalemate Phase: Second Island Chain Subphase**

The second stage of the stalemate phase focuses on degrading the US ability to project forces from the second island chain, particularly targeting Guam and Australia. The objective is twofold. The first objective is to render Guam incapable of generating meaningful combat power. The second objective is to ensure Australia is incapable of generating or unwilling to host US combat power. The Eastern Theater Command is tasked with countering Guam, while the Southern Theater Command leads operations against Australia. The Northern Theater Command provides support for the Guam operations and conducts limited strikes on Alaska. The phase ends when Australia and Guam are unable or unwilling to support US offensive operations.

## **2.3 Stalemate Phase: Indian Ocean and Consolidation Subphase**

This subphase focuses on restoring the flow of trade through the Indian Ocean while further suppressing US military capabilities based in Guam and Alaska. The Eastern Theater Command and Northern Theater Command focus on consolidating control in the western Pacific, while the Southern Theater Command takes the lead in securing maritime access in the Indian Ocean. The phase ends when escorted Chinese commerce can transit through the Indian Ocean with a tolerable level of risk and the US ability to generate combat power in the Indian Ocean and in the western Pacific is diminished.

## **3.1 Offensive Phase: Occupy Second Island Chain Subphase**

The goal of the strategic-counteroffensive phase is to secure long-term Chinese national security by neutralizing the US ability to sustain military power in the western Pacific. For the first subphase, China aims to push its forces out to the second island chain, establishing dominance around Guam and preparing for potential operations against Hawaii and Alaska. The end state involves establishing a forward PLA presence near Guam and ensuring the great circle route is open. The Eastern Theater Command focuses on projecting comprehensive battlefield dominance around Guam, while the Southern Theater Command ensures the Indian Ocean remains open. The Northern Theater Command prepares forces in the North Pacific to sustain operations and support strikes on Alaska.

## **3.2 Offensive Phase: Counter Alaska and Hawaii Subphase**

This subphase aims to degrade the ability of Alaska and Hawaii to project meaningful combat power into the western Pacific. The primary objective is to limit bomber sorties from Alaska and diminish Hawaii's ability to generate naval power. The Eastern Theater Command conducts maritime guerilla operations against Hawaii and maintains pressure on Guam. The Southern Theater Command

continues to ensure the Indian Ocean remains secure, while the Northern Theater Command focuses on strikes against Alaska. The phase's end state is a substantial reduction in US power projection from both Alaska and Hawaii.

### **3.3 Offensive Phase: War-Resolution Subphase**

This stage of the strategic-counteroffensive phase is marked by sustained operations like those of the previous subphase. All theaters continue to conduct limited mobile operations with a focus on positional defense until the United States concedes the western Pacific. The military end state is the United States can no longer generate combat power in the western Pacific or eastern Indian Ocean, which, politically, requires the United States to agree to the end of hostilities and concede to terms that prevent military access to the first or second island chains.

### **Most Likely Friction Points**

Phase one is the baseline on which this chapter judges how theater commands handle C2. In phase one, the complexity and volume of tasks are high, and air- and maritime-operations groups are often stretched to their control limits. Although delegating tasks to subordinate commands helps, the need for oversight remains significant. But because the theater command's structure, training, areas of responsibility, and assigned forces are optimized for phase one, the overall amount of friction is likely minimal.

As the war progresses, expanding and shifting AORs create significant friction among China's theater commands. Each theater command is increasingly tasked with unfamiliar missions. Although subordinate command elements may find themselves with familiar missions, those subordinate commands will find themselves operating in unfamiliar territories with limited logistical support. Resource allocation also remains a challenge (particularly for high-end projection forces like aircraft carriers, submarines, bombers, and missile units), especially as complexity increases.

The risk of attrition among force enablers and the magazine depth required for long-range munitions likely will drive the People's Liberation Army to husband these assets early in a conflict. The People's Liberation Army can likely manage the risk of magazine depletion by expanding production lines or simply waiting until current production lines sufficiently replenish their stockpiles. But replenishing forces during wartime is a less realistic option for force enablers. In particular, producing and fielding large naval combatants requires years of lead time. The difficulty of replenishing forces leaves the People's Liberation Army with a strong incentive not to commit forces until necessary.

By phase two, the system begins to feel strained, but it remains manageable. The Northern Theater Command and ETC AORs experience some awkward shifts that force each theater to cover mission sets they previously did not hold across expansive geographic regions. Lower-level command elements begin to stretch their coverage in unfamiliar ways. People's Liberation Army Air Force (PLAAF) and PLA Navy (PLAN) bases find themselves performing defensive air and maritime functions over expansive AORs far beyond the areas to which they are accustomed. Another source of friction includes reassigning long-range strike assets to the Northern Theater Command to enable strikes. Despite these factors, the tasks are less complex than the tasks in phase one, alleviating some strain.

Phase three sees the system start to break down. The geographic spans of the Eastern Theater Command and the Northern Theater Command become extreme, and subordinate units are chopped up and reassigned across unfamiliar areas. The Southern Theater Command's already massive AOR could absorb parts of the Eastern Theater Command's AOR. But that absorption would create the challenge of managing two large, active fronts. The Eastern Theater Command struggles with maritime C2, unlike the Northern Theater Command or the Southern Theater Command, leading to inefficiencies. In phase three, almost no forces are available for substantive strikes in Alaska or Hawaii. This situation leaves the People's Liberation Army with two options: engaging in maritime guerrilla warfare with long-range strikes or seizing islands to establish forward bases. The mission sets are now well beyond what the theater commands were designed or trained to handle, with the Eastern Theater Command and the Northern Theater Command facing the greatest challenges, though the Southern Theater Command is in a comparatively better position to adapt.

## Conclusion

Amphibious operations against well-prepared defenders, with an external intervention force assisting the defenders, are arguably the most complex of all military operations. The PLA theater-command system is currently planning to conduct C2 for those exceedingly complex operations. Once the immediate operation concludes, the theater commands will find themselves in a war for which they are not organized and which they are not prepared to fight. Fighting a war across the Pacific is not easy. The United States recognized that fact in the 1940s and recognizes that fact today. The United States also has not found an optimal C2 solution since the 1940s. The United States simply mitigated the challenge of a cross-Pacific war with an abundance of resources, which is not a solution the United States can reach for today. But the United States is at least attempting to orient its command structure to fight across the Pacific. Currently, China is not.

## Appendix A: Overall Plan for Protracted War

This appendix contains overarching details about a notional, deliberate protracted war waged by the People's Republic of China (PRC) against the United States. For the sake of simplicity, this overall plan does not include sections not pertinent to theater-level C2. The plan also does not contain orders for the Western Theater Command or the Central Theater Command, as they have such a limited role in maritime, air, and conventional missile operations. At best, these two theaters act as force providers for the other three theaters.

### 1.1 Defense Phase: Rapid Seizure Embarkation and Crossing Subphase

**Phase objective.** Position landing forces to be able to unfold successfully onto landing areas and commence the landing phase without interference.

#### End state

- comprehensive superiority around Taiwan
- paralysis of Taiwanese C4ISR systems
- heavy damage to Taiwanese air, naval, and air defense forces
- deterrence or defeat of US/ally and partner (A&P) intervention

#### Tasks

- Eastern Theater Command: maintain superiority around Taiwan and execute embarkation or crossing
- Southern Theater Command: prevent or counter US or other third-party intervention and support the ETC main effort
- Northern Theater Command: manage the periphery, support counterintervention, and support the ETC main effort

## Boundaries

- Eastern Theater Command: Same as peacetime. Taiwan, East China Sea (ECS), Japan, and western Pacific
- Southern Theater Command: Same as peacetime. South China Sea (SCS), western Pacific, and Indian Ocean
- Northern Theater Command: Same as peacetime. Yellow Sea, Korean Peninsula, Japan Sea, and North Atlantic

## Subgrouping and tasks

- Eastern Theater Command (main effort)
  - ground-operations group (four total/one direct/one support)
    - assembly of forces at seaports of embarkation (SPOEs) (72nd Group Army)
    - defense of forces transiting and arriving at SPOEs (71st Group Army)
    - special operations on Taiwan to paralyze enemy C4ISR systems (direct)
    - support of firepower strikes to paralyze enemy C4ISR systems (supporting)
  - maritime-operations group (seven total/five direct/one support)
    - maritime dominance in the vicinity of (IVO) northern Taiwan (direct)
    - maritime dominance IVO southern Taiwan (direct)
    - maritime dominance west of Taiwan (direct)
    - coastal defense of Shanghai (PLAN Shanghai Base)
    - coastal defense of Fujian (PLAN Fujian Base)

- transport assembly (direct)
- support of firepower strikes (supporting)
- air-operations group (seven total/four direct/one support)
  - air dominance in northern Taiwan (direct)
  - air dominance in southern Taiwan (PLAAF Zhangzhou Auxiliary Command Post)
  - air dominance west of Taiwan (direct)
  - air defense of Shanghai (PLAAF Shanghai Base)
  - air defense of Fujian (PLAAF Fuzhou Base)
  - air defense of the ECS (direct)
  - support of firepower strikes (supporting)
- conventional missile-operations group (three total/two direct/one support)
  - conduct firepower strikes against Taiwan (direct)
  - be prepared to conduct firepower strikes against Japan (direct)
  - support the maritime- and air-operations groups (support)
- Southern Theater Command
  - ground-operations group (two total/one direct)
    - support the ETC ground-operations effort (74th Group Army)
    - manage the periphery (direct)
  - maritime-operations group (six total/two support/one direct)

- Guangzhou coastal defense (PLAN Guangzhou Base)
- defense of the northern SCS (PLAN Yulin Base)
- defense of the southern SCS (PLAN Nansha Base)
- support of counterintervention (support)
- support of maritime dominance operations in Taiwan (support)
- management of the periphery (direct)
- air-operations group (five total/two support/one direct)
  - air defense of the Guangzhou zone (PLAAF Guangzhou Base)
  - air defense of the SCS (PLAAF Kunming Base)
  - support of counterintervention (support)
  - support of operations in Taiwan (support)
  - management of the periphery (direct)
- missile (three total/two support/one direct)
  - support of counterintervention (support)
  - support of operations in Taiwan (support)
  - management of the periphery (direct)
- Northern Theater Command
  - ground (one total/one direct)
    - manage periphery (direct)
  - maritime (three total/one support)
    - Qingdao coastal defense (PLAN Qingdao Base)

- Lushun coastal defense (PLAN Lushun Base)
- support of operations in Taiwan (support)
- management of the periphery (direct)
- air (five total/two support)
  - air defense of Liaodong Bandao (PLAAF Dalian Base)
  - air defense of Jinan (PLA Air Force Jinan Base)
  - support of counterintervention (support)
  - support of operations in Taiwan (support)
  - management of the periphery (direct)
- missile (three total/two support/one direct)
  - support Taiwan strikes (support)
  - support counterintervention (support)
  - manage periphery (direct)

**Narrative.** The strategic-defense phase aims to achieve the rapid reunification of Taiwan while defeating US intervention. The objective of this subphase is to position forces to initiate a successful landing in Taiwan, achieving comprehensive superiority over the island while paralyzing Taiwan's C4ISR systems and inflicting heavy damage on its air, naval, and air defense forces. This phase involves ensuring dominance across the maritime, air, and missile domains while deterring or defeating potential US and allied interventions. The Eastern Theater Command is responsible for the main effort in Taiwan, with the Southern Theater Command playing a substantial supporting role in countering US intervention.

## 1.2 Defense Phase: Rapid Seizure Landing Subphase

**Phase objective.** Establish an on-island presence with a sustainable posture to allow follow-on operations.

### End state

- establish functional seaport of debarkation and aerial port of debarkation on the island
- establish a defensible perimeter to allow follow-on forces and staging
- heavily damage Taiwanese mobile forces in the northern sector
- deter or defeat US and A&P intervention

### Subphasing

- initial seizure of beachheads and airheads
- consolidation of lodgment

### Tasks

- Eastern Theater Command: secure ports of debarkation that allow for sustained on-island operations
- Southern Theater Command: prevent or counter US or other third-party intervention and support the ETC main effort
- Northern Theater Command: manage the periphery, support counterintervention, and support the ETC main effort

### Boundaries

- Eastern Theater Command: same
- Southern Theater Command: same
- Northern Theater Command: same

### Subgrouping and tasks

- Eastern Theater Command (main effort)
  - ground-operations group (six total/two direct)
    - assembly of follow-on forces at SPOEs (73rd Group Army)
    - defense of forces transiting and arriving at SPOEs (71st Group Army)
    - special operations on the island (direct)
    - preparatory strikes supporting ground operations (direct)
    - seizure of landing sites and ports of debarkation (72nd Group Army)
    - airborne landing (airborne corps/72nd Group Army, upon linkup)
  - maritime-operations group (seven total/four direct/one support)
    - maritime dominance IVO northern Taiwan (direct)
    - maritime dominance IVO southern Taiwan (direct)
    - maritime dominance west of Taiwan (direct)
    - coastal defense of Shanghai (PLAN Shanghai Base)
    - coastal defense of Fujian (PLAN Fuzhou Base)
    - transport for sea crossings and unloading (direct)
    - support of firepower strikes (support)

- air-operations group (eight total/four direct/one support)
  - air dominance of northern Taiwan (direct)
  - air dominance of southern Taiwan (PLAAF Zhangzhou Auxiliary Command Post)
  - air dominance west of Taiwan (direct)
  - air defense of Shanghai (PLAAF Shanghai Base)
  - air defense of Fujian (PLAAF Fuzhou Base)
  - air defense of ECS (direct)
  - support of firepower strike (support)
  - transport airborne (direct)
- conventional missile-operations group (three total/one support)
  - conduct firepower strike against Taiwan (direct)
  - be prepared to conduct firepower strike against Japan (direct)
  - support the maritime- and air-operations groups (support)
- Southern Theater Command
  - ground-operations group (two total/one direct)
    - support the ETC ground-operations effort (74th Group Army)
    - manage the periphery (direct)
  - maritime-operations group (six total/two support/one direct)
    - Guangzhou coastal defense (PLAN Guangzhou Base)

- defense of the northern SCS (PLAN Yulin Base)
- defense of the southern SCS (PLAN Nansha Base)
- support of counterintervention (support)
- support of maritime dominance operations in Taiwan (support)
- management of the periphery (direct)
- air-operations group (five total/two support/one direct)
  - air defense of the Guangzhou zone (PLAAF Guangzhou Base)
  - air defense of the SCS (PLAAF Kunming Base)
  - support of counterintervention (support)
  - support of operations in Taiwan (support)
  - management of the periphery (direct)
- missile (three total/two support/one direct)
  - support counterintervention (support)
  - support operations in Taiwan (support)
  - manage the periphery (direct)
- Northern Theater Command
  - ground (one total/one direct)
    - manage the periphery (direct)
  - maritime (three total/one support)
    - Qingdao coastal defense (PLAN Qingdao Base)

- Lushun coastal defense (PLAN Lushun Base)
- support of operations in Taiwan (support)
- management of the periphery (direct)
- air (five total/two support)
  - air defense of Liaodong Bandao (PLAAF Dalian Base)
  - air defense of Jinan (PLAAF Jinan Base)
  - support of counterintervention (support)
  - support of operations in Taiwan (support)
  - management of the periphery (direct)
- missile (three total/two support/one direct)
  - support Taiwan strikes (support)
  - support counterintervention (support)
  - manage the periphery (direct)

**Narrative.** The focus of this subphase is establishing an on-island presence. The initial objectives include securing beachheads, airheads, and ports to facilitate the flow of follow-on forces, while consolidating the lodgment to create a defensible perimeter for further operations. This phase aims to damage Taiwan's mobile forces and prepare for follow-on efforts to deter or defeat US and allied interventions. Ground operations center on key landing sites, while maritime and air forces ensure dominance surrounding Taiwan. Firepower strikes continue to degrade Taiwan's military capacity.

## **1.3 Defense Phase: On-Island Rapid Seizure Subphase**

Phase objective: The Taiwanese government capitulates or the Taiwanese military becomes ineffective in combat.

### **End state**

- gain comprehensive control over the greater northern metropolitan area (Zhubei to Keelung)
- heavily damage the remaining Taiwanese forces south of occupied areas
- deter or defeat US and A&P intervention

### **Subphasing**

- offensive into Taipei
- seizure of Zhubei and Keelung

### **Tasks**

- Eastern Theater Command: seize northern Taiwan and attrit Taiwan forces
- Southern Theater Command: prevent or counter US or other third-party intervention and support the ETC main effort
- Northern Theater Command: manage the periphery, support counterintervention, and support the ETC main effort

### **Boundaries**

- Eastern Theater Command: same
- Southern Theater Command: same
- Northern Theater Command: same

## Subgrouping and tasks

- Eastern Theater Command (main effort)
  - ground-operations group (five total/one direct)
    - Taipei offensive (73rd Group Army)
    - Zhubei offensive (72nd Group Army)
    - Keelung seizure (PLAN Marine Corps)
    - continue the flow of forces onto the island (71st Group Army)
    - special operations on the island (direct)
  - maritime-operations group (seven total/four direct/one support)
    - maritime dominance IVO northern Taiwan (direct)
    - maritime dominance IVO southern Taiwan (direct)
    - maritime dominance west of Taiwan (direct)
    - coastal defense of Shanghai (PLAN Shanghai Base)
    - coastal defense of Fujian (PLAN Fuzhou Base)
    - Keelung seizure transport group (direct)
    - support of firepower strike (support)
  - air-operations group (eight total/four direct/one support)
    - air dominance in northern Taiwan (direct)
    - air dominance in southern Taiwan (PLAAF Zhangzhou Auxiliary Command Post)
    - air dominance west of Taiwan (direct)

- air defense of Shanghai (PLAAF Shanghai Base)
- air defense of Fujian (PLAAF Fuzhou Base)
- air defense of the ECS (direct)
- support of firepower strike (support)
- airlift into Taiwan (direct)
- conventional missile-operations group (three total/one support)
  - conduct firepower strike against Taiwan (direct)
  - be prepared to conduct firepower strike against Japan (direct)
  - support maritime- and air-operations groups (support)
- Southern Theater Command
  - ground-operations group (two total/one direct)
    - support the ETC ground-operations effort (74th Group Army)
    - manage the periphery (direct)
  - maritime-operations group (six total/two support/one direct)
    - Guangzhou coastal defense (PLANGuangzhou Base)
    - defense of the northern SCS (PLAN Yulin Base)
    - defense of the southern SCS (PLAN Nansha Base)
    - support of counterintervention (support)
    - support of maritime dominance operations in Taiwan (support)
    - management of the periphery (direct)

- air-operations group (five total/two support/one direct)
  - air defense of the Guangzhou zone (PLAAF Guangzhou Base)
  - air defense of the SCS (PLA Air Force Kunming Base)
  - support of counterintervention (support)
  - support of operations in Taiwan (support)
  - management of the periphery (direct)
- missile (three total/two support/one direct)
  - support counterintervention (support)
  - support operations in Taiwan (support)
  - manage the periphery (direct)
- Northern Theater Command
  - ground (one total/one direct)
    - manage the periphery (direct)
  - maritime (three total/one support)
    - Qingdao coastal defense (PLAN Qingdao Base)
    - Lushun coastal defense (PLA N Lushun Base)
    - support of operations in Taiwan (support)
    - management of the periphery (direct)
  - air (five total/two support)
    - air defense of Liaodong Bandao (PLAAF Dalian Base)

- air defense of Jinan (PLAAF Jinan Base)
- support of counterintervention (support)
- support of operations in Taiwan (support)
- management of the periphery (direct)
- missile (three total/two support/one direct)
  - support strikes against Taiwan (support)
  - support counterintervention (support)
  - manage the periphery (direct)

**Narrative.** This subphase focuses on forcing the capitulation of Taiwan or rendering its military combat ineffective. Major operations include seizing the northern metropolitan areas (namely Taipei, Zhubei, and Keelung) while continuing to degrade Taiwanese forces in the southern regions. The overarching objective is to establish comprehensive control over the island while deterring or neutralizing US and allied interventions.

### **Transition: Consolidate**

**Phase objective.** Establish comprehensive control over Taiwan.

#### **End state**

- Establish comprehensive control over most of Taiwan's key centers.
- Establish PLA footprints to sustain operations from Taiwanese facilities (such as air bases, naval bases, missile sites, and radar sites).

#### **Tasks**

- Eastern Theater Command: conduct offensive operations on Taiwan to seize the remaining Taiwanese holdouts and establish posture in Taiwan
- Southern Theater Command: prevent or counter US or other third-party intervention and prepare for phase two

- Northern Theater Command: manage the periphery, support counterintervention, and prepare for phase two

### Boundaries

- Eastern Theater Command: transition to encompass Guam and the Philippine Sea and hand over the northern ECS and Japan
- Southern Theater Command: hand over Guam and the Philippine Sea
- Northern Theater Command: take on the northern ECS and Japan

### Subgrouping and tasks

**Narrative.** This transition phase focuses on achieving comprehensive control over key areas of Taiwan, enabling the People's Liberation Army to sustain long-term operations from Taiwan. The Eastern Theater Command will continue conducting offensive operations to seize the remaining Taiwanese holdouts and establish a foothold on the island, while the Southern Theater Command works to prevent US or allied intervention. This phase is the point at which operations pivot from a strategic defensive against US intervention to a strategic stalemate in the western Pacific.

## 2.1 Stalemate Phase: First Island Chain Subphase

The stalemate period is designed to reshape the balance of power in the western Pacific in favor of China through the attrition of US forces and the degradation of A&P support.

**Phase objective.** Attrit and knock out US A&Ps enabling encirclement within the first island chain. The phase ends when Japan and the Philippines are unwilling or unable to sustain meaningful support of US wartime operations.

### End state

- Japan is no longer willing to host or is incapable of hosting offensive US operations.
- The Philippines is no longer willing to host or is incapable of hosting offensive US operations.

- The United States is unable to generate substantive air or maritime threats from within the first island chain.

### Subphasing

- 2.1.1 counter Japan
- 2.1.2 counter the Philippines

### Tasks

- Eastern Theater Command: support in countering Japan and continue the consolidation of Taiwan
- Southern Theater Command: counter the Philippines (leading effort for subphase 2.1.2, US intervention)
- Northern Theater Command: counter Japan (leading effort for subphase 2.1.1)
- Notes
  - The Northern Theater Command is shifted primarily to the Japanese mission due to likely attrition and staff work associated with the Eastern Theater Command in the rapid seizure section.

### Boundaries

- Eastern Theater Command: same
- Southern Theater Command: same
- Northern Theater Command: same (Japan Sea and north)

### Subgrouping and tasks

- Eastern Theater Command
  - ground (three total/one support)
    - Taiwan stability operations in the north (73rd Group Army)

- Taiwan offensive and stability operations in the south (72nd Group Army)
- support in countering Japan in the southwestern islands (support)
- maritime (four total/one direct/one support)
  - countering of the southwestern islands (direct)
  - support of the Philippine Sea counterintervention (support)
  - coastal defense of Shanghai and the ECS (PLAN Shanghai Base)
  - coastal defense of Fujian and Taiwan (PLAN Fuzhou Base)
- air (five total/three support)
  - air defense of Shanghai and the ECS (PLAAF Shanghai Base)
  - air defense of Fujian and Taiwan (PLAAF Fuzhou Base)
  - support of the Philippine Sea counterintervention (support)
  - support of the maritime-operations group in countering the southwestern islands (support)
  - support of Northern Theater Command-led strikes on Japan (support)
- missile (two total/one support)
  - Philippine Sea counterintervention (direct)
  - support of counterstrikes against Japan (support)

- Southern Theater Command
  - ground (one total/one direct)
    - Philippines Spratly Islands seizure (direct)
  - maritime (five total/one support)
    - conduct Guangzhou coastal defense (PLAN Guangzhou Base)
    - conduct SCS defense (PLAN Yulin Base)
    - support counterstrikes against the Philippines (PLAN Nansha Base)
    - support Philippine Sea counterintervention (support)
    - conduct Strait of Malacca and Indian Ocean sea line of communication (SLOC) defense (Carrier Task Group [CVTG] 2)
  - air (four total/one direct/one support)
    - air defense of the Guangzhou zone (PLAAF Guangzhou Base)
    - air defense of the SCS (PLA Air Force Kunming Base)
    - counterstrikes against the Philippines (direct)
    - support of Philippine Sea counterintervention (support)
  - missile (two total/two support)
    - support the ETC Philippine Sea counterintervention (support)
    - support counterstrikes against the Philippines (support)

- Northern Theater Command
  - ground (two total/one direct)
    - Be prepared to support Korea contingencies (78th/79th Group Army)
    - coastal defense (direct)
  - maritime (four total)
    - Qingdao coastal defense (PLAN Qingdao Base)
    - Lushun coastal defense (PLAN Lushun Base)
    - maritime superiority over Japan's east coast (Yokosuka and Kure) (1st subbase)
    - maritime superiority over Japan's west coast (Sasebo and Maizuru) (1st CVTG)
  - air (four total/one direct/one support)
    - BPT Korea (PLAAF Dalian Base)
    - support of strikes on Japan (support)
    - northern Yellow Sea air defense (PLAAF Jinan Base)
    - southern Yellow Sea and ECS air defense (direct)
  - missile
    - Japan strikes (direct)

**Narrative.** The stalemate phase aims to reshape the balance of power in the western Pacific by attriting US forces and degrading support from Japan and the Philippines. The objective of the first subphase is to neutralize the US air and maritime presence within the first island chain and ensure Japan and the Philippines no longer sustain US wartime operations. The Eastern Theater Command will continue consolidating control of Taiwan while supporting operations against Japan.

The Southern Theater Command will focus on countering the Philippines, and the Northern Theater Command will prioritize operations against Japan. The phase ends when both Japan and the Philippines are either unwilling to host or incapable of hosting US offensive operations.

## **2.2 Stalemate Phase: Second Island Chain Subphase**

**Phase objective.** Degrade the United States' ability to project forces using its own territory or the territories of other A&Ps on the second island chain. The phase ends when Guam and Australia are unable to generate meaningful combat power.

### **End state**

- Australia is no longer willing to host or is incapable of hosting offensive US operations.
- Guam is not able to generate air or naval power.

### **Subphases**

- 2.2.1 counter Australia (continuation of momentum from the countering Philippines subphase)
- 2.2.2 counter Guam

### **Tasks**

- Eastern Theater Command: counter Guam (primary for 2.2.1)
- Southern Theater Command: counter Australia (primary for 2.2.2)
- Northern Theater Command: support in countering Guam with limited support to counter Alaska

### **Boundaries**

- Eastern Theater Command: same
- Southern Theater Command: same
- Northern Theater Command: same

## Subgrouping and tasks

- Eastern Theater Command
  - ground (two total)
    - Taiwan stability operations in the north (73rd Group Army)
    - Taiwan offensive and stability operations in the south (72nd Group Army)
  - maritime (three total/one support)
    - support in countering Guam (support)
    - conduct maritime defense inside the first island chain (PLAN Fuzhou Base)
    - conduct maritime defense in the Philippine Sea (PLAN Shanghai Base)
  - air (three total/one support)
    - air defense inside the first island chain (PLAAF Fuzhou Base)
    - air screening and combat air patrol over the Philippine Sea (PLAAF Shanghai Base)
    - support in countering Guam (support)
  - missile (one total)
    - counterstrikes against Guam (direct)
- Southern Theater Command
  - ground
    - Philippines Spratly Islands seizure (74th Group Army)

- maritime (three total/one support)
  - defense of the SCS (PLAN Yulin Base)
  - defense of the Strait of Malacca and Indian Ocean SLOC (CVTG 2)
  - support for counterstrikes against Australia (support)
- air (three total/one support)
  - defense of the Strait of Malacca and Indian Ocean SLOC (PLAAF Kunming Base)
  - air defense of the SCS (PLAAF Nanning Base)
  - support for counterstrikes against Australia
- missile (one total/one direct)
  - counterstrikes against Australia (direct)
- Northern Theater Command
  - ground
    - BPT Korea (78th/79th Group Army)
    - coastal defense (direct)
  - maritime (four total/one direct/one support)
    - Yellow Sea and ECS defense (PLAN Qingdao Base)
    - Japan Sea and east of Japan defense (CVTG 1)
    - North Pacific screening (direct)
    - support for Alaska strikes (support)

- air (four total/one direct/one support)
  - Yellow Sea defense (PLAAF Dalian Base)
  - Japan Sea and east of Japan defense (direct)
  - southern Yellow Sea and ECS air defense (PLAAF Jinan Base)
  - support for Alaska strikes (support)
- missile (one total/one direct)
  - limited strikes against Alaska on Elmendorf Air Force Base and Eielson Air Force Base (direct)

**Narrative.** The second subphase of the stalemate phase focuses on degrading the United States' ability to project forces from the second island chain, particularly targeting Guam and Australia. The objective is to render both Guam and Australia incapable of generating meaningful combat power for the United States, either through attrition or political pressure. The Eastern Theater Command is tasked with countering Guam, while the Southern Theater Command leads operations against Australia. The Northern Theater Command provides support for the Guam operations and conducts limited strikes on Alaska. The phase ends when Australia and Guam are unable or unwilling to support US offensive operations.

## **2.3 Stalemate Phase: Indian Ocean and Consolidation Subphase**

**Phase objective.** Restore the flow of trade through the Indian Ocean to China.

**End state**

- The United States is unable to interfere with the flow of goods through the Indian Ocean.
- The United States' generation of combat power out of Guam and Alaska is further suppressed.

### Tasks

- Eastern Theater Command: western Pacific consolidation
- Southern Theater Command: Indian Ocean
- Northern Theater Command: western Pacific consolidation

### Boundaries

- Eastern Theater Command: same
- Southern Theater Command: same
- Northern Theater Command: same

### Subgrouping and tasks

- Eastern Theater Command
  - ground
    - Taiwan stability operations in the north (73rd Group Army)
    - Taiwan offensive and stability operations in the south (72nd Group Army)
  - maritime (three total/two direct/one support)
    - support in countering Guam (support)
    - maritime defense inside the first island chain (PLA Navy Fuzhou Base)
    - maritime defense in the Philippine Sea (PLAN Shanghai Base)
  - air (three total/one support)
    - air defense inside the first island chain (PLAAF Fuzhou Base)
    - air screening and civil air patrol over the Philippine Sea (PLAAF Shanghai Base)

- support in countering Guam (support)
- missile (one total/one direct)
  - counterstrikes against Guam (direct)
- Southern Theater Command
  - ground (one total)
    - defend the Spratly Islands (74th Group Army)
  - maritime (three total)
    - maritime dominance over the Indian Ocean (CVTG 2)
    - defense of the SCS (PLAN Yulin Base)
    - defense of the Strait of Malacca and Indian Ocean SLOC (PLAN Nansha Base)
  - air (three total/one support)
    - defense of the Strait of Malacca and Indian Ocean SLOC (PLAAF Kunming Base)
    - air defense of the SCS (PLAAF Nanning Base)
    - support of Indian Ocean strikes (support)
  - missile (one total)
    - support of Indian Ocean strikes (support)

- Northern Theater Command
  - ground (two total/one direct)
    - BPT Korea (78th/79th Group Army)
    - coastal defense (direct)
  - maritime (four total/one direct/one support)
    - Yellow Sea and ECS defense (PLAN Qingdao Base)
    - Japan Sea and east of Japan defense (CVTG 1)
    - North Pacific screening (direct)
    - Alaska strike support (support)
  - air (four total/one direct/one support)
    - Yellow Sea defense (PLAAF Dalian Base)
    - Japan Sea and east of Japan defense (direct)
    - southern Yellow Sea and ECS air defense (PLAAF Jinan Base)
    - Alaska strike support (support)
  - missile (one total/one direct)
    - limited strikes against Alaska on Elmendorf Air Force Base and Eielson Air Force Base (direct)

**Narrative.** This subphase focuses on restoring the flow of trade through the Indian Ocean while further suppressing US military capabilities based in Guam and Alaska. The Eastern Theater Command and the Northern Theater Command focus on consolidating control in the western Pacific, while the Southern Theater Command takes the lead in securing maritime dominance in the Indian Ocean. The phase ends when China can freely navigate the Indian Ocean and the United States' ability to generate combat power in the Indian Ocean and the western Pacific is diminished.

### 3.1 Offensive Phase: Occupy Second Island Chain Subphase

The offensive period achieves comprehensive national security by neutralizing the United States' ability to sustain combat power in the western Pacific in the long term.

**Phase objective.** Push PLA forces out to the second island chain and sustain those forces to achieve a political sense of China's occupation of the second island chain. Clear the way to counter either Hawaii's or Alaska's efforts.

#### End state

- forward at-sea (or on-land) presence IVO Guam
- reverse great circle route is open

#### Tasks

- Eastern Theater Command: push forces out around Guam
- Southern Theater Command: keep the Indian Ocean open
- Northern Theater Command: position and sustain forces in the North Pacific

#### Boundaries

- Eastern Theater Command: western and central Pacific through Hawaii
- Southern Theater Command: South Pacific and Indian Ocean
- Northern Theater Command: North Pacific and Japan Sea

#### Subgrouping and tasks

- Eastern Theater Command
  - ground (two total)
    - Taiwan stability operations in the north (73rd Group Army)

- Taiwan offensive and stability operations in the south (72nd Group Army)
- maritime (three total/one direct)
  - establish maritime dominance around Guam (direct)
  - conduct maritime defense inside the first island chain (PLAN Fuzhou Base)
  - conduct maritime defense in the Philippine Sea (PLAN Shanghai Base)
- air (three total/one support)
  - air defense inside the first island chain (PLAAF Fuzhou Base)
  - air screening and civil air patrols over the Philippine Sea (PLAAF Shanghai Base)
  - support in establishing dominance IVO Guam (support)
- missile (one total)
  - support in establishing dominance IVO Guam (support)
- Southern Theater Command
  - ground (one total)
    - defend the Spratly Islands (74th Group Army)
  - maritime (three total)
    - maritime dominance over the Indian Ocean (CVTG 1)
    - defense of the SCS (PLAN Yulin Base)
    - defense of the Strait of Malacca and Indian Ocean SLOC (PLAN Nansha Base)
  - air (three total/one support)

- defense of the Strait of Malacca and Indian Ocean SLOC (PLAAF Kunming Base)
- air defense of the SCS (PLAAF Nanning Base)
- support in establishing Indian Ocean dominance (support)
- missile (one total/one support)
  - support in establishing Indian Ocean dominance (support)
- Northern Theater Command
  - ground (two total/one direct)
    - BPT Korea (78th/79th Group Army)
    - coastal defense (direct)
  - maritime (four total/one direct/one support)
    - Yellow Sea and ECS defense (PLAN Qingdao Base)
    - Japan Sea and east of Japan defense (CVTG 1)
    - North Pacific screening (direct)
    - Alaska strike support (support)
  - air (four total/one direct/one support)
    - Yellow Sea defense (PLAAF Dalian Base)
    - Japan Sea and east of Japan defense (direct)
    - southern Yellow Sea and ECS air defense (PLAAF Jinan Base)
    - Alaska strike support (support)

- missile (one total/one direct)
  - limited strikes against Alaska on Elmendorf Air Force Base and Eielson Air Force Base (direct)

**Narrative.** The goal of the strategic-counteroffensive phase is to secure long-term Chinese national security by neutralizing the United States' ability to sustain military power in the western Pacific. For the first subphase, China aims to push its forces out to the second island chain, establishing dominance around Guam and preparing for potential operations against Hawaii and Alaska. The end state involves establishing a forward PLA presence near Guam and ensuring the great circle route is open. The Eastern Theater Command focuses on projecting comprehensive battlefield dominance around Guam, while the Southern Theater Command ensures the Indian Ocean remains open. The Northern Theater Command prepares forces in the North Pacific to sustain operations and support strikes against Alaska.

### **3.2 Offensive Phase: Counter Alaska and Hawaii Subphase**

**Phase objective.** Prevent Alaska and Hawaii from being able to generate meaningful combat power in the central Pacific.

#### **End state**

- Limit Alaska's ability to generate bomber sorties.
- Limit Hawaii's ability to generate naval power.

#### **Tasks**

- Eastern Theater Command: conduct Hawaii maritime pulses
- Southern Theater Command: hold the Indian Ocean and the south
- Northern Theater Command: counter Alaska strikes

## Boundaries

- Eastern Theater Command: same
- Southern Theater Command: same
- Northern Theater Command: same

## Subgrouping and tasks

- Eastern Theater Command
  - ground (two total)
    - Taiwan stability operations in the north (73rd Group Army)
    - Taiwan offensive and stability operations in the south (72nd Group Army)
  - maritime (four total/two direct)
    - guerilla maritime warfare against Hawaii (direct)
    - pressure on Guam (direct)
    - maritime defense inside the first island chain (PLAN Fuzhou Base)
    - maritime defense in the Philippine Sea (PLAN Shanghai Base)
  - air (three total/one support)
    - air defense inside the first island chain (PLA Air Force Fuzhou Base)
    - air screening and civil air patrol over the Philippine Sea (PLAAF Shanghai Base)
    - support for pressure on Guam (support)

- missile (one total/one support)
- support Hawaii pulses (support)
- Southern Theater Command
  - ground (one total)
    - defend the Spratly Islands (74th Group Army)
  - maritime (three total)
    - maritime dominance over the Indian Ocean (CVTG 1)
    - defense of the SCS (PLAN Yulin Base)
    - defense of the Strait of Malacca and Indian Ocean SLOC (PLAN Nansha Base)
  - air (three total/one support)
    - defense of the Strait of Malacca and Indian Ocean SLOC (PLAAF Kunming Base)
    - air defense of the SCS (PLAAF Nanning Base)
    - support for Indian Ocean dominance (support)
  - missile (one total/one support)
    - support Indian Ocean dominance (support)
- Northern Theater Command
  - ground (two total/one direct)
    - BPT Korea (78th/79th Group Army)
    - coastal defense (direct)

- maritime (four total/two direct)
  - Yellow Sea and ECS defense (PLAN Qingdao Base)
  - Japan Sea and east of Japan defense (CVTG 1)
  - North Pacific screening (direct)
  - Alaska strikes (direct)
- air (four total/one direct/one support)
  - Yellow Sea defense (PLAAF Dalian Base)
  - Japan Sea and east of Japan defense (direct)
  - southern Yellow Sea and ECS air defense (PLAAF Jinan Base)
  - support for Alaska strikes (support)
- missile (one total/one support)
  - support limited strikes against Alaska on Elmendorf Air Force Base and Eielson Air Force Base (support)

**Narrative.** This subphase aims to degrade Alaska and Hawaii's ability to project meaningful combat power into the western Pacific. The primary objective is to limit bomber sorties from Alaska and diminish naval power generation from Hawaii. The Eastern Theater Command will conduct maritime guerilla operations against Hawaii and maintain pressure on Guam. The Southern Theater Command continues to ensure the Indian Ocean remains secure, while the Northern Theater Command focuses on strikes against Alaska. The phase's end state is a substantial reduction in US power projection from both Alaska and Hawaii.

### 3.3 Offensive Phase: War Resolution Subphase

**Phase objective.** Conduct limited mobile operations with a focus on positional warfare until the United States concedes the western Pacific.

#### End state

- The United States is no longer able to generate combat power in the western Pacific or the Indian Ocean.
- The United States capitulates.

#### Tasks

- Eastern Theater Command: sustain Hawaii maritime pulses, as needed
- Southern Theater Command: hold the Indian Ocean and the south
- Northern Theater Command: sustain counterstrikes against Alaska, as needed

#### Boundaries

- Eastern Theater Command: same
- Southern Theater Command: same
- Northern Theater Command: same

#### Subgrouping and tasks

- Same as above

**Narrative.** This stage of the strategic-counteroffensive phase is marked by sustained operations like those of the previous subphase. All theaters continue to conduct limited mobile operations with a focus on positional defense until the United States concedes the western Pacific. The military end state is the United States is no longer able to generate combat power in the western Pacific or in the eastern Indian Ocean, which (politically) requires the United States to agree to the end of hostilities and concede to terms that prevent military access to the first or second island chains.

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## PLA High Command in a Protracted War: Four Scenarios

Dr. Joel Wuthnow  
National Defense University

### Introduction

Growing attention has been given to the prospects for a protracted war involving the People's Republic of China (PRC) and the United States.<sup>1</sup> Such a conflict could originate in a war over Taiwan and expand beyond the Taiwan Strait and even the Asian theater. Much of the discussion has focused on US and PRC capacity to mobilize the two countries' societies, economies, and defense industrial bases to sustain a long war.<sup>2</sup> But success would depend both on material factors and other issues, including institutional arrangements.<sup>3</sup> Effective command arrangements could enable one side to seize and maintain the initiative, despite material disadvantages.

How would the People's Liberation Army (PLA) prosecute a long war, and what impact might its decision-making practices have on the outcomes? Can US planners assume the People's Liberation Army would suffer from an overconcentration of power at the top or a lethargic command system would struggle to adapt as problems accumulate?

Sources from the People's Republic of China do not provide clear answers. Authoritative writings suggest the methods by which such a war would be commanded might depend on the circumstances. Mao Zedong's 1938 text, *On Protracted War*, which is still studied in PLA circles, states, "In favorable circumstances, we should employ the principle of concentration of forces, and in unfavorable circumstances that of their dispersion. As for the relationship of command in campaigns, we should apply the principle of centralized command

in the former and that of decentralized command in the latter. These are the basic principles of field operations for the War of Resistance Against Japan.”<sup>4</sup>

Mao, in other words, realized in certain scenarios, decentralized command would be preferable and supported such arrangements in the guerilla campaigns of the 1930s.

More recent sources are also inconclusive. A 2016 text on joint command outlined four models of theater-level command, with national authorities playing different roles in each. In the “strengthening model,” for instance, theaters would be augmented by commanders dispatched from the center to lead operations directly. In other models, theaters would have more autonomy to plan and conduct operations.<sup>5</sup> The 2020 *Science of Military Strategy* notes command arrangements are determined by “the actual conditions such as the nature, scale, and impact of strategic actions.” Often, theaters lead regional operations, but “in special circumstances, command can be taken over by the supreme headquarters.”<sup>6</sup>

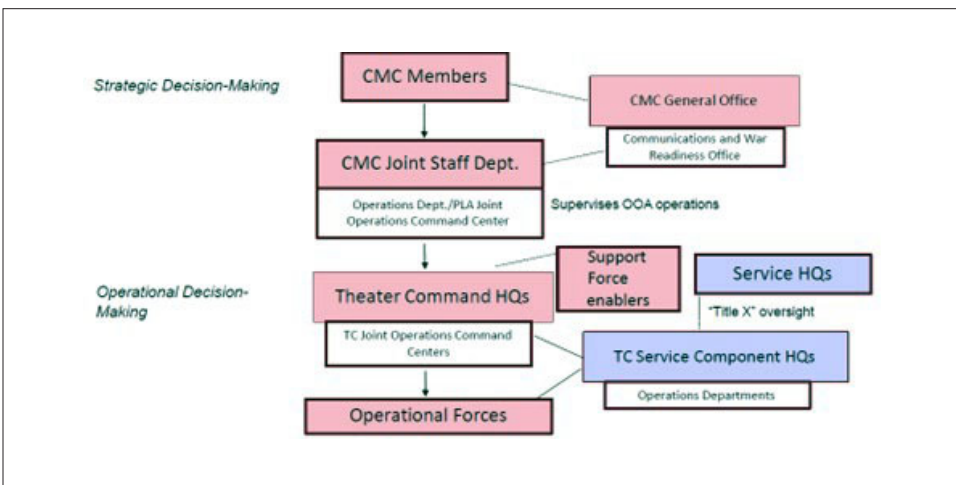
Since the People’s Liberation Army has not identified a single model for command—and because its leaders may experiment with different arrangements over the course of a long war—considering multiple scenarios is a valuable exercise. Methodologically, an alternative futures analysis is useful for identifying key variables and exploring different possibilities.<sup>7</sup> This chapter considers four scenarios for the composition of PLA command arrangements down to the theater level based on variation along two dimensions (scale of the conflict and degree of micromanagement) and discusses the implications of each for China’s battlefield effectiveness.

The remainder of this analysis is divided into four sections. The first three sections clarify the assumptions, describe the key variables, and outline the scenarios. The final section summarizes the main findings and discusses implications for deterrence. To maximize deterrence, Chinese Communist Party (CCP) leaders need to worry a protracted war would involve high risks of escalation and lack confidence in the People’s Liberation Army such that micromanagement from the center would be considered necessary. These conditions would promote a recognition the People’s Liberation Army would be forced into scenarios involving high degrees of time or resource inefficiency that would ultimately reduce the chances for eventual victory. China’s opponents should also take steps to reduce any PRC confidence technical upgrades, such as integrating artificial intelligence into decision-making processes, would work as a “magic weapon” by permitting efficient central control over operations.

## Assumptions

This chapter rests on three main assumptions. The first is Beijing is involved in a war that will last more than a few months and in which the goal is to attrit enemy capabilities, not to achieve victory in a single campaign.<sup>8</sup> For the purpose of discussion, the trigger for the war in the scenarios below is a cross-strait conflict, though the framework can also be applied to other regional conflicts. “War” does not necessarily imply a high level of intensity; as discussed below, the scope and scale of the war are key factors influencing the command arrangements that are likely to be adopted. The analysis is agnostic on other details, such as the circumstances under which the war began, likelihood of victory for either side, role of third parties, resources available to sustain the war, et cetera.

Second is the current PLA command structure remains intact. The Central Military Commission (CMC) remains the supreme command led by the party general secretary.<sup>9</sup> The analysis does not assume the current CMC general secretary, Xi Jinping, is in power when the war begins. A successor may desire a different degree of personal involvement in military decision making or possess a reduced ability to exert authority. Below this level, the 2015–16 reforms created a two-tiered, joint structure: The CMC Joint Staff Department and Joint Operations Command Center serve as national headquarters, and five theater commands are the highest joint commands at the regional level (see figure 10-1).<sup>10</sup> Service headquarters, which are outside the operational chain of command, oversee some national assets and overseas operations.<sup>11</sup> In addition, four support forces may, at the Central Military Commission’s discretion, support theater operations.<sup>12</sup> But within this structure, the distribution of authority across echelons is ambiguous; this factor is a second variable informing the analysis below.



**Figure 10-1: Current command structure**

Third is the center and theaters have a reliable communication system in place. A goal of the analysis is to examine the various choices available to the CCP leadership; given different parameters, which arrangement would they select? In practice, China's adversaries might attempt to target command, control, and communications networks to disrupt PLA operations (anticipating this possibility, the People's Liberation Army has developed redundant systems to increase the chances communications will continue during wartime).<sup>13</sup> If successful, these operations would restrict the ability of senior leaders to consider certain options, especially those that favor micromanagement from the Central Military Commission. Therefore, assuming such options are at least on the table, even if they are not the preferred option in each scenario, is important.

## **Key Variables**

The PLA command arrangements for a long war would be influenced by a range of external and internal factors, including doctrinal prescriptions, arrangements tested in previous exercises, the top leader's preferences for personal involvement, the demands of the conflict (for example, level of intensity and geographic scope), and technical considerations. This section aggregates these factors into two variables—scale of the conflict and degree of micromanagement—and explains how they might influence how CCP leaders opt to command the war.

### **Scale of the Conflict**

A protracted war is defined by its length, not by the degree of danger the war poses to China's interests or the specific requirements placed on the People's Liberation Army. The demands of the war would vary: Smaller, localized conflicts, which are intrinsically easier to manage, would place fewer burdens on central and theater commanders than conflicts that have escalated vertically or horizontally. The scope of the conflict can be construed as an external variable since the scope operates outside the command system but is not necessarily exogenous to decisions made by the PRC leadership: They might opt to escalate or limit the pace and scope of a war, which would in turn shape the demands the war would create for leadership's ability to command it.

Events inside and outside the main theater would influence the scale of the conflict. In the Taiwan Strait, a full-scale invasion would place heavy demands on resources and manpower, an effect that would only increase if the People's Liberation Army found itself in a protracted on-island struggle.<sup>14</sup> Another high-intensity option is a joint blockade campaign, which would feature ongoing kinetic attacks on land and sea targets in addition to attempts to seal Taiwan's airspace and access to information. This campaign could take place before

or after an invasion or be carried out independently.<sup>15</sup> But the People's Liberation Army and paramilitary forces could execute a less intense quarantine of the island or implement other options, such as a blockade of or landing on a smaller offshore island.<sup>16</sup>

Outside the main theater, a conflict with Taiwan could expand into a direct clash with US forces. The People's Liberation Army might preemptively strike US targets across the Pacific Ocean to ensure maritime and air superiority for an island landing or retaliate after US forces have entered the conflict. Attacks on American troops based in third countries could further expand the conflict by drawing in states such as the Philippines, Japan, or Australia. An escalating conflict could also involve strikes in the space and cyber domain and even the use of nuclear assets. In terms of horizontal escalation, Beijing might be faced with US attempts to interdict Chinese imports through the Strait of Malacca or in maritime choke points farther afield.<sup>17</sup> A war initially focused on Taiwan could also evolve into a longer, global struggle in which both sides use military forces to attack bases or other targets outside the Indo-Pacific theater.<sup>18</sup>

In addition, the conflict might encompass other regional and domestic rivals. Sources from within the People's Liberation Army have consistently warned about a chain reaction of crises occurring in other border and coastal regions that would occur as others seized the opportunity created by Beijing's distraction to pursue their own territorial ambitions.<sup>19</sup> Chain reactions might also include an internal dimension, insofar as PRC leaders worry aggrieved parties, such as Uyghurs in Xinjiang, possibly supported by the United States, could press secessionist aims. As the 2020 *Science of Military Strategy* suggests, even the scale of a chain reaction is variable:

The linkage of security issues around us is increasing. Problems in one strategic direction may trigger chain reactions in other strategic directions. The judgment of the risk of chain reactions includes: in which strategic direction the chain reaction may occur, whether chain reactions will occur in multiple directions at the same time, the threat ranking of chain reactions in multiple directions at the same time, the nature and scale of chain reactions, and the favorable conditions and unfavorable factors for us to deal with chain reactions.<sup>20</sup>

Some US specialists have also warned facing dire circumstances, Beijing might also be tempted to create chain reactions that would challenge the United States, such as by pressuring North Korea to increase hostilities.<sup>21</sup>

## Degree of Delegation/Micromanagement

The key internal variable is the extent to which senior leaders agree to devolve authority over the war to lower levels. On one end of the spectrum is a decentralized model in which theater commanders have wide latitude to develop and execute plans, which could include the ability to conduct strikes when opportunities appear or to adapt forces to changes quickly on the battlefield. This approach would bear some resemblance to the US system that prioritizes authority over Joint operations in the geographic combatant commands—a system that has even been critiqued as overcentralizing authority at this level.<sup>22</sup> This model would also approximate the Soviets' design to be able to plan and conduct multiple independent theater wars without a heavy role for central leaders.<sup>23</sup>

Doctrinal writings of the People's Liberation Army often favor this approach. One scholar at the PLA Academy of Military Sciences, for instance, writes, “[T]he system with the lower center of command has a greater joint depth than the system with a higher center of command.” The author critiques national-level general staffs as inhibiting theater operations because “the focus of joint command is above, which is not conducive to deepening jointness.”<sup>24</sup> Similarly, an officer at the PLA National Defense University's College of Joint Operations argues an overconcentration of power at high levels “is not conducive to the advantages of independent coordination of command institutions.” Higher headquarters, in this analysis, are necessary for “resolving contradictions” and improving “systems integration” but “should not exceed the limit of their authority, causing coordination disorder and command disorder.”<sup>25</sup>

At the other end of the spectrum is a model in which the center plays a strong role in operational decisions. Micromanagement could be a result of the preferences of the top CCP leader, who may overvalue his own expertise or turn to his closest CMC advisors for input on day-to-day decision making rather than delegating authority to theater commanders. A micromanagement approach might also be selected to avoid unintentional escalation—decisions on targeting would be subjected to a tightly controlled staff process.<sup>26</sup> Some analysts contend Leninist decision-making systems are inherently geared toward concentrating power at the top and these tendencies have only been strengthened in the Xi era.<sup>27</sup> Such conditions would militate against the notion the People's Liberation Army would adopt a mission command-oriented model.

These two variables are interrelated. Expansion of the conflict would promote, and might necessitate, intricate central control. Breaking a distant blockade, for example, might have to be centrally directed at the CMC Joint Staff Department level because no theater command with geographic responsibilities is located past

the first island chain.<sup>28</sup> The center might also be required to direct operations involving the use of strategic weapons such as long-range, anti-ship ballistic missiles, which are outside theater control. Nevertheless, the relationship is imperfect: One can imagine flare-ups in the region or domestically that could be handled by the theaters without an operational imperative for high-level intervention. In these cases, the involvement of the Central Military Commission or the top leader would be a choice, not a necessity.

## Scenarios

Intersecting the two main variables (scale of conflict and degree of delegation or micromanagement) onto a matrix produces four scenarios, as outlined in figure 10-2. This section explores the situations in which CCP leaders might prefer one arrangement over the other and speculates about the implications for battlefield performance.

Scale of Conflict	High	<p><b>Theaters at Odds</b> Overburdened theaters vie for limited resources but have broad latitude over operations.</p>	<p><b>Overwhelmed Center</b> An overtaxed CMC/JOCC tries to micromanage conflict stretching across multiple theaters/regions.</p>
	Low	<p><b>Theater in Charge</b> Theater commander in main theater exercises flexible authority, adequately resourced from CMC/JOCC.</p>	<p><b>Focused Center</b> CMC/JOCC holds a tight grip on operations in main theater, delegates authority elsewhere.</p>
		Low	High
		Degree of Micromanagement	

**Figure 10-2: Four alternative scenarios**

### Theaters at Odds

In the first scenario, the conflict expands across the Indo-Pacific as other states use the opportunity of a Sino-American conflict to pursue their own aims. In the southwest, a hypernationalist Indian government presses claims in Aksai Chin by establishing new outposts north of the Line of Actual Control, wagering the Chinese Communist Party will be hesitant to escalate while engaged in another theater. In the southeast, Vietnam and the Philippines conclude the destruction of parts of the PLA Navy (PLAN) surface force gives the two countries a brief window of opportunity to exact retribution against the China Coast Guard. In the north, the Korean Peninsula is destabilized when Kim Jong-Un launches artillery bombardments against islands held by South Korea, hoping Washington will balk as its forces are needed elsewhere.

With the conflict spreading, the Central Military Commission accepts the limits of its ability to direct daily operations and empowers the theaters to execute plans with limited oversight. This approach is designed to encourage initiative and insulate the central leadership from blame when operations go awry. But theater commanders understand their decisions will be scrutinized, and the worst commanders are eventually replaced. The role of the CMC Joint Operations Command Center is limited to adjudicating requests for national assets and scarce resources. Theaters tend to exercise some initiative, especially when the options are considered relatively safe (that is, unlikely to result in mishaps or major escalations). Units maneuver and conduct strikes with relative efficiency because the center does not need to weigh in on operational decisions.

Nevertheless, as the war continues, tensions among the theaters gradually escalate. With actual and anticipated attrition on the rise, the commanders of Eastern, Western, Southern, and Northern Theater Command lobby the Central Military Commission for reinforcements; the commanders also argue against the outward transfer of their personnel's capabilities, emphasizing and, sometimes, exaggerating the risks of failing to maintain readiness in an attempt to secure resources.<sup>29</sup> Faced with variable and distorted threat perceptions along the periphery, the center hesitates to make bold reallocations of resources in favor of the eastern theater at the expense of the others. Moreover, neither the theaters nor the center is willing to escalate the conflict to seek decisive advantage, and the war plods along predictable paths, providing opportunities for China's opponents to exercise initiative.

### **Overwhelmed Center**

A second scenario is one in which central authorities involve themselves in the day-to-day management of operations in multiple theaters. A high-intensity blockade continues for several months across the Taiwan Strait, but periodic escalations also take place in contested regions across the Sino-Indian border and on the Spratly Islands. The United States has begun a counterblockade targeting critical PRC imports in the Indian Ocean, leading a coalition that includes Australia, Japan, and the United Kingdom. As economic tolls mount, central authorities are also wary domestic elements, supported by the United States, will use a crisis to undermine CCP authority, especially in remote regions.

Rather than delegating authority to theater commanders, the CCP general secretary elects to convene a war council that will meet regularly and provide guidance to the theaters and, in some cases, directly to operational forces. Requests for the repositioning of units, permission to conduct strikes, or the redistribution of resources across theater boundaries must be submitted to staff

officers in the CMC Joint Operations Command Center, who will consider them at several levels, form a consensus, and pass requests and recommendations to the Central Military Commission, where the chairman will become the final arbiter. Theaters do not have *carte blanche* authority to adopt new courses of action without the express permission of higher headquarters. Frustrated by delays but cautious not to overstep their authority, the theaters are deferential to guidance from the center.

With power concentrated at the center, the Central Military Commission makes decisions based on a rational process and is not swayed by theater preferences. Central-level staff, likening themselves to the Prussian General Staff of the nineteenth century, are influential, and manpower and materiel are allocated efficiently based on a prioritization of threats. Nevertheless, the war council decision-making model creates bottlenecks as the number of requests exceeds the center's ability to adjudicate them quickly. Benefiting from a more decentralized model, PLA opponents adapt more quickly, helping to balance the scales, even if the People's Liberation Army has advantages in manpower and equipment. The war becomes a contest of flexibility versus mass.

### Focused Center

In this scenario, the conflict continues in the main theater as China blockades Taiwan. But the intensity of the conflict is low as the People's Liberation Army refrains from kinetic strikes, instead trying to seal the island from the receipt of critical imports. The United States assembles a coalition to resupply the island partially, which China tolerates, and the war does not escalate vertically. Moreover, Beijing's combination of diplomatic reassurance and threats means other PRC rivals are unwilling to join the conflict or press their own grievances. Theater commanders outside the main theater are expected to maintain readiness and deter adventurism, but none are involved in kinetic operations. The United States has failed to achieve a consensus with allies on imposing a counterblockade in the Indian Ocean.

With a single major problem to handle, the Central Military Commission functions as a war council focused on the main theater. The chairman is invested in the outcome of the war, which forms a major part of his legacy, but does not wish the conflict to grow beyond China's ability to handle; escalation control is of the essence. The commander of Eastern Theater Command (ETC) develops proposals but must request permission from the center before acting. In addition, the center has a tendency to issue orders directly to ships and aircraft, like the Pentagon's direction to ships during the Cuban missile crisis, because of the fear the theater commander will misunderstand guidance or make mistakes that lead to unintentional escalation. With the situation in other peripheral areas stable,

the Central Military Commission is willing to delegate authority to the theater commanders in those areas.

A high degree of centralization means the commander of Eastern Theater Command hesitates to exploit opportunities and defers to the center for even minor decisions. Even within the CMC bureaucracy, staff officers avoid being the one to make decisions that might end badly, and minute issues are punted up to the chairman. Whereas the conflict remains at an acceptable level of risk, China's opponents use the delays and caution on the PRC side to buy time to strengthen Taiwan's defenses, which will make a subsequent invasion attempt more difficult for the People's Liberation Army. Since the influence of the theaters and other power centers in the People's Liberation Army, such as service chiefs, is minimal, resources are effectively channeled to the main theater but are employed cautiously once they get there.

### **Theater in Charge**

As in the previous scenario, the conflict remains confined to a single theater with low prospects of vertical or horizontal escalation. The change is the center prefers to delegate more authority over day-to-day affairs to the commander of Eastern Theater Command. This preference accords with doctrinal prescriptions that recognize greater authority at lower levels is conducive to jointness and adaptability. Confidence in the skills of the theater commander is also a consideration: This individual has already proven his merits in previous cross-strait crises and has therefore earned the chairman's trust.

But the center keeps close track of the situation on the ground. The CMC Joint Operations Command Center maintains situational awareness of the status of forces in the eastern theater and approves requests for additional capabilities, such as the transfer of personnel from other theaters, as the tolls of a long war accumulate. Since the center is monitoring the situation and does not wish to escalate a conflict with a nuclear power, the commander of Eastern Theater Command is reluctant to exploit targets of opportunity or to respond quickly to unanticipated enemy activities. As in the first scenario, the commander dutifully carries out the Central Military Commission's intent. But the difference is the limited scale of the conflict means the commander does not need to compete with bureaucratic rivals; as a result, the commander has the resources needed to continue the conflict on favorable terms.

## Implications for Deterrence

Unsurprisingly, commanding forces is increasingly difficult for the People's Liberation Army as the scale of the conflict grows. Military commanders and staff at all levels, who have never experienced the strains of a real war, struggle to find efficient solutions, and top leaders must worry about both military risks and broader threats to regime security. Nevertheless, the nature of the problem is different in the "theaters at odds" and "overwhelmed center" scenarios. In the former, resource inefficiencies accumulate as the arbitration of disputes between theaters falters and the theater commanders use their strong leverage to resist CMC efforts to relocate capabilities under the respective commands. In the latter, time inefficiencies become apparent as the Central Military Commission insists on micromanaging activities at the operational level through a cumbersome staff process.

By contrast, a protracted war is more effectively managed if escalation is limited. Resource inefficiency was not a major consideration in the "focused center" or "theater in charge" scenarios because of fewer competing demands in other theaters and globally. But in the "focused center" scenario, frequent CMC interference in operations created bottlenecks. Micromanagement might be seen as a necessary step to control the scope of the conflict, thus creating a linkage between the two key variables. The best case for the People's Liberation Army would be a "theater in charge," which accords with doctrinal prescriptions, because the eastern theater would be empowered to make the most key decisions. If the Central Military Commission agreed not to meddle, battlefield performance would improve.

The implications for deterrence are twofold. First, deterrence would be strengthened if CCP leaders were convinced the conflict was likely to expand beyond a single theater. Activities such as tests of high-precision, long-range munitions that signal a credible US ability to intervene would improve deterrence, though these activities would have to be calibrated to avoid brazen moves, such as a large-scale troop presence on Taiwan, that could work in the opposite direction. A focus on adaptive and decentralized command would also highlight a potential advantage for US forces. Coordination with allies and partners that suggested the potential for a larger coalition would also be helpful; these actions could include steps that promote interoperability or suggest a joint ability to institute a counterblockade. Such signals would not need to be entirely persuasive; Beijing would only need to suspect conflict escalation was possible, challenging China's ability to respond.

Second, reduced confidence among top CCP leaders in the People's Liberation Army could also enhance deterrence. Historically, the center and other power

centers in the People's Liberation Army have not trusted each other much.<sup>30</sup> These frictions have likely expanded due to recent corruption scandals involving the PLA Rocket Force and the CMC Equipment Development Department.<sup>31</sup> Xi also appears to believe many PLA officers are incompetent.<sup>32</sup> Such factors work in favor of a preference for CMC control and personal involvement from the chairman. The degree of micromanagement, as an internal variable, is harder for China's opponents to influence. But the opponents should consider options such as selectively revealing PLA weaknesses, potentially exacerbating the tensions. A benefit of such operations would be to convince CCP leaders their only viable choice in a conflict would be to micromanage activities, thereby potentially introducing inefficiency into PLA processes.

Although this analysis assumes the current command structure will remain intact, a wild card would be changes in technology that improve the speed and accuracy of decision making. Deterrent activities designed to promote perceptions of an expansive conflict or the need for micromanagement would be less effective if senior officials believed artificial intelligence–assisted processes would reduce bottlenecks, thus allowing the center to exert control while reducing time and resource inefficiencies.<sup>33</sup> Therefore, examining steps that would underscore the limitations of these technologies, including their vulnerability to counters such as electronic warfare or cyber manipulation, would be useful. Officials of the Chinese Communist Party should remain concerned from a command perspective, a long war would become a quagmire.

## Endnotes

Disclaimer: This chapter represents only the views of the author and not those of National Defense University, the Department of Defense, or the US government.

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6. Xiao Tianliang, ed., 战略学 [Science of military strategy] (PLA National Defense University Press, 2020), 88. One “special circumstance” discussed later in the text would be “strategic counterairstrikes,” which may include attacks on US bases in the western Pacific. These counterairstrikes are “organized and implemented by the strategic command organization.” Xiao Tianliang, *Science of military strategy*, 227. Notably, the 2006 *Science of Campaigns* is also inconclusive. In a discussion on command arrangements, for instance, the text states operational units based in the theaters are “under the command of the theater command organization [but] sometimes can also be directly commanded by the supreme headquarters.” Zhang Peigao, ed., 战役学 [Science of campaigns] (PLA National Defense University Press, 2006), 127.
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9. Joel Wuthnow, “A Brave New World for Chinese Joint Operations,” *Journal of Strategic Studies* 40, no. 1-2 (February 2017): 169–95.
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13. Department of Defense, *Military and Security Developments Involving the People’s Republic of China 2023* (Department of Defense, October 2023), 94.
14. Chieh Chung, “PLA Logistic and Mobilization Capacity in a Taiwan Invasion,” in *Crossing the Strait*, 253–76.
15. Lonny D. Henley, *Beyond the First Battle: Overcoming a Protracted Blockade of Taiwan*, China Maritime Report no. 26 (China Maritime Studies Institute, March 2023).

16. Bonny Lin et al., “How China Could Quarantine Taiwan,” Center for Strategic and International Studies, June 5, 2024, <https://features.csis.org/chinapower/china-quarantine-taiwan/>.
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22. Dana Priest, “A Four-Star Foreign Policy?,” *The Washington Post*, September 27, 2000, <https://www.washingtonpost.com/archive/politics/2000/09/28/a-four-star-foreign-policy/f9779938-7a88-449f-9f55-84ab020abbd7/>; and Mackenzie Eaglen, “Putting Combatant Commanders on a Demand Signal Diet,” *War on the Rocks*, November 9, 2020, <https://warontherocks.com/2020/11/putting-combatant-commanders-on-a-demand-signal-diet/>.
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**Part 4:**  
**Determining How Russia and  
North Korea Could Support  
the PRC in a Protracted War**



## Russia's Potential Role in a Protracted War with China

Dr. David R. Stone  
Strategy and Policy Department, US Naval War College

Two key variables determine the nature and extent of Russia's role in a potential protracted war in the western Pacific: timing and lines of communication. As of this writing, Russia's invasion of Ukraine shows no signs of ending. So long as the Russia-Ukraine War lasts, Russia's capability to intervene in a hypothetical protracted war either kinetically or economically is sharply limited. The Russian military and economy are both under a great deal of strain and operating at or close to capacity from the unexpected burdens imposed by Ukraine's dogged resistance to Russian aggression. Even should the Russia-Ukraine War end, Russia will be burdened for years to come by the need to rebuild its depleted stocks of trained soldiers, equipment, and ammunition. Over the longer term, assuming an end to the Russia-Ukraine War that leaves Russia intact and with essentially the same political system, the country will slowly recover its ability to provide meaningful assistance to China. Even under this condition, Russia's capability to intervene will be limited by available transportation links to China under wartime conditions.

The Russian economy is operating at or beyond the limits of sustainability. Russian defensive spending has increased markedly since the advent of full-scale war with Ukraine, creating a huge demand for labor in the defense industry. According to the Russian government's own figures, defense spending has grown to 6.3 percent of the gross domestic product and 32 percent of all government expenditure.<sup>1</sup> At the same time, a combination of wartime casualties, increases in the size of the Russian military, and the mass emigration of military-aged males from Russia has taken perhaps one million men out of the labor force. The result has been full employment but at the cost of severe labor shortages, inflationary pressures, high interest rates, strained infrastructure, and a decline in production of civilian

goods relative to military. To check inflation, in September 2024, the Russian Central Bank boosted interest rates to 19 percent, hurting consumer spending and living standards.<sup>2</sup> Whether Russia can sustain this overheated economy is open to question; the country certainly has nothing to spare to support a Chinese war. Whereas Vladimir Putin is clearly willing to sacrifice his citizens' well-being in pursuit of his goals in Ukraine, whether he would be willing to make similar sacrifices in support of Chinese interests once the Russia-Ukraine War was over is unclear.

Russian long-term, strategic interests may also put limits on Russian assistance to China.<sup>3</sup> Whereas China and Russia certainly see mutual benefit in supporting one another in challenging the Western world order and Putin and Xi Jinping seem to enjoy some genuine mutual warmth, Russian and Chinese interests are not identical. Much of Russian territory in the Far East, including the key city of Vladivostok, was seized by imperial Russia from China during its century of humiliation, and the Soviet Union and China fought a brief, undeclared border war in the late 1960s. The Soviet government even cautiously approached the United States to gauge US reactions to a Soviet preemptive strike against the Chinese nuclear program. China has desperate needs for natural resources and arable land; the Russian Far East is essentially depopulated, especially by comparison to China's massive population. In short, though Russia would certainly not want to see its Chinese partner lose a war, an overwhelming Chinese triumph could create long-term problems for Russia. At the anecdotal level, some evidence suggests Russian defense thinkers remain suspicious of China's long-term intentions. For example, a 2018 article stressing the Japanese and American threat to the Russian Far East notes in passing the Trans-Siberian Railroad, Russia's main link to the Far East, runs perilously close to a border east of the city of Chita; this threatening border is with the People's Republic of China (PRC).<sup>4</sup> In addition, multiple Russian scientists working on cutting-edge technology (notably, hypersonic missiles) have been arrested and accused by Russian security services of espionage on China's behalf.<sup>5</sup>

The rest of this chapter, bearing in mind these short-term and long-term constraints, explores the support Russia could offer to China in a protracted war in the Pacific. Some of this support would be diplomatic and informational. Any conflict in the Pacific—particularly, a protracted one—would inevitably bring massive disruption to the world economy with grave consequences for social stability. Russia's demonstrated ability to manipulate global public opinion would likely be employed to blame the United States and its partners for economic suffering. The precise nature and ramifications of global opinion are extremely difficult to predict. As a result, this chapter focuses on those that are more amenable to concrete analysis: Russia's ability to participate directly in kinetic operations

or indirectly as a potential threat as well as the country's capability to serve as an industrial and resource base for China.

## Direct Russian Involvement in Kinetic Operations

Although direct Russian involvement in a potential Pacific war cannot be ruled out, in the author's view, the likelihood of such intervention is low. At present, many of the Russian army's military assets are stretched to the breaking point by the war with Ukraine. Desperate Russian efforts to acquire computer chips, artillery shells, and drones from foreign suppliers are well known. Less publicized but still evident are the ways in which military assets from across Russia have been fed into the Russia-Ukraine War, as Russia grows increasingly desperate for trained manpower and armored vehicles. Only nine months into the war, an analysis of satellite imagery showed Russia's depots of armored vehicles in the Far East have already been stripped of much of their equipment.<sup>6</sup> In August 2023, Finnish Foreign Minister Elina Valtonen commented Russian positions on the Finnish border were "pretty empty" as troops had been transferred to fight in Ukraine.<sup>7</sup> More recently, Russian social media postings have suggested the crew of Russia's lone aircraft carrier, the *Admiral Kuznetsov*, have been reorganized to fight as infantry in Ukraine. Russia's widely reported import of North Korean soldiers in late 2024 also suggests a desperate quest for military manpower. Russia's manpower problem, though made acute by heavy Russian losses in Ukraine, was created in part by well-intentioned 2008 reforms under then-Defense Minister Anatoly Serdyukov to sacrifice mass in favor of mobility and flexibility. As a result, Russia reduced its ground forces a decade before choosing to initiate a war enormous in its human and geographic scale.

Some segments of the Russian military have sustained particularly high losses. Russia's elite airborne forces were devastated in the war's early fighting. Russian tactical aviation has also suffered steady attrition. Despite Ukraine lacking surface or submarine combatants, the country has inflicted a substantial toll on Russia's Black Sea Fleet, forcing it to withdraw substantial elements from its primary base in Sevastopol on the Crimean Peninsula east to Novorossiysk in Russia proper. Russia's naval infantry has also been pressed into service as regular ground combatants, suffering the same fate as the country's conventional fighting forces. But the systems that have been ground down in Ukraine are not necessarily those that would be most relevant to an air and naval war in the Pacific. Although Russia has faced catastrophic losses in infantry, armor, and artillery, the thousands of older T-62, T-64, and T-72 tanks destroyed and the expenditure of millions of artillery shells are of secondary importance in a war over Taiwan or the Diaoyu Islands.

Presuming a war in the Pacific would be primarily in the naval and air domains, Russia's losses of those assets have not been nearly as serious as its losses in ground forces. Under the reasonable assumption war in the western Pacific would put a premium on air and naval assets and long-distance fires, Russia's losses in ground forces, and even some of its naval losses, would not in themselves limit the country's ability to intervene. Although Russia's Black Sea Fleet has been hit hard, losing perhaps a third of its platforms, Russian naval assets outside the Black Sea have remained unscathed. In any event, Russian geography makes the Russian Pacific Fleet drawing substantial naval resources from the Black Sea highly unlikely. The Russian Navy operates four major fleets and one minor one more or less independently (the Pacific, Black Sea, Baltic, and Northern Fleets and the Caspian Flotilla). Though possible, transfers between theaters are difficult and slow. Even before Türkiye closed the Turkish Straits to warships, the distances involved made shifting resources difficult. The ships Russia has lost in the Black Sea, in other words, would not have been serious possibilities for a show of force in the Pacific.

The real problem for Russian naval intervention in a Pacific war lies elsewhere. In Russian strategy, the Pacific Fleet has an important role in the defense of Russia's Far East and regional power projection, but the fleet's key role is to serve as an element of Russia's nuclear deterrent. Russia's intercontinental ballistic missile submarines (SSBNs) are clustered in its Northern (Arctic) and Pacific Fleets. The Pacific Fleet's SSBNs include four *Borei*-class SSBNs. The fleet also includes a half-dozen cruise-missile-carrying subs of the *Oscar II* class and newer *Yasen* class (nuclear-powered guided-missile submarines) and about a dozen *Akula*- and *Kilo*-class hunter-killer subs. The Pacific Fleet's surface fleet is substantial, including four modern *Steregushchiy*-class corvettes and four late-1980s *Udaloy*-class destroyers, in addition to a guided-missile cruiser of the *Slava* class (the same as the sunken flagship *Moskva* of the Black Sea Fleet). Given the importance of the Pacific Fleet's nuclear deterrent and the role of the fleet's other platforms in protecting this deterrent, risking these platforms through direct involvement in a shooting war seems unlikely for Moscow when potential Russian gains in the theater would be limited and core Russian interests were not at stake.

In addition, Russia does not have many high-end systems to risk. Although Russia has some highly advanced systems, the nature of the Russian defense industry is those high-end systems are extremely slow and expensive to produce. Russian shipbuilding in particular suffers from long production times, as a result of which production runs of specific ship classes are often in the low single digits, reducing economies of scale. In addition, the Russian Navy had relied on Ukraine for gas turbine engines, a source that was shut off by Russia's seizure of Crimea and the Donetsk Basin in 2014, which has further hampered Russian shipbuilding.<sup>8</sup> To illustrate the problem, Russia's latest nuclear-powered guided-missile submarine, the *Yasen* class, began production in 1993. As of late

2023, only four had been completed and were in service in the Russian Navy.<sup>9</sup> The *Borei* SSBN began production in 1996, and only seven are in service.<sup>10</sup> Russia's advanced T-14 Armata tank, which first appeared in 2015, shows no signs of having moved to serial production after nearly a decade.<sup>11</sup> Strategic aviation has some similar problems. Although many of Russia's aviation losses in Ukraine have been concentrated in ground-support platforms (the Sukhoi Su-25 Grach [Frogfoot] and the Kamov Ka-52 "Alligator"), the Russian Air Force has also lost dozens of Sukhoi Su-34 fighter-bombers. More significantly, the Russians have apparently lost two Beriev A-50 early-warning-and-control aircraft—the so-called Russian AWACS—out of perhaps six operational aircraft in Russia's entire inventory.<sup>12</sup> For Russia to risk the loss of more of these precious platforms in someone's else war seems unlikely.

In part because of its perilously low number of platforms, the Russian military seems acutely sensitive to losses. Though Putin has made recent moves to rattle the Russian nuclear saber, official Russian nuclear doctrine establishes a high threshold for nuclear use: As reiterated in June 2020, the standard is either the use of nuclear weapons or other weapons of mass destruction against Russia or its allies or "aggression with conventional weapons that puts the very existence of the state under threat."<sup>13</sup> On the other hand, in February 2024, the *Financial Times* reported on documents from Russian military exercises in the Far East that suggest a much lower threshold for nuclear use based on very low tolerance for losses. Dating from 2008 to 2014, these documents suggest serious Russian wariness over a potential Chinese threat and propose as a threshold for nuclear use "the destruction of 20 per cent of Russia's strategic ballistic missile submarines, 30 per cent of its nuclear-powered attack submarines, three or more cruisers." The point is the combination of Russia's long-term anxieties over China and the former's acute concerns over losing even a small number of high-end platforms suggest the former's direct participation in a Pacific war is highly unlikely.<sup>14</sup>

## Russian Military Assets as a Distraction

But even without direct involvement in armed conflict, Russian military assets could create substantial headaches for the United States and its allies and partners. Forward deployment of Russian air and naval assets could distract time and attention from overburdened systems and personnel. Should conflict in the western Pacific become protracted, the strain on people, logistics, and lines of communication will grow substantially with time. Relatively small efforts by Russia could exacerbate these problems.

Russia could, for example, use air and sea assets to "flood the zone," making US intelligence, surveillance, and reconnaissance more complex. The United States and its partners would have little choice but to honor the

threat of Russia potentially opting to join active hostilities. While as suggested above, naval assets would be more difficult to transfer to the region, Russian air assets would be more flexible. From April 1, 2023, to March 31, 2024, under normal, peacetime conditions, Japan scrambled fighter jets 174 times to intercept Russian military flights over the Japan Sea. For Russia to shift air platforms in the region and increase the country's sorties to divert air defense assets based in Japan and complicate the work of defending Taiwan would not be difficult and would come at a relatively low cost.<sup>15</sup>

A protracted war would also entail the continuing transit of forces and supplies via sea lines of communications from the United States to the theater. The Russian Navy could make this continuing transit problematic by using a capability the service already demonstrated in 2021: deploying an intelligence ship and, subsequently, a full task force of surface ships supported by a tanker and a submarine into the Pacific west of Hawaii.<sup>16</sup> Such a Russian task force could, in effect, act as a fleet-in-being to constrain US actions by the threat of hostile action; add an additional responsibility to overburdened US systems; and, perhaps, serve as a source of vital intelligence and targeting information to the People's Republic of China, even as an ostensibly neutral presence. To be clear: This Central Pacific deployment is a demonstrated capability.

This capability raises multiple questions of international law. A neutral vessel is obliged to "abstain from furnishing belligerents with war-related goods or services." Nevertheless, treating a Russian naval vessel off San Diego, Hawaii, or Guam as a hostile ship would be a momentous decision, and direct evidence of a violation of neutrality (for instance, distinguishing routine communications back to Russia from intelligence information intended for China) could be quite difficult. On the other hand, countries at war can prohibit neutral vessels from "the immediate area of naval operations." But in this case, the region of concern for the United States would consist of sea lines of communications extending across the breadth of the entire Pacific Ocean. The United States could presumably declare an exclusion zone, a concept less well established legally. The enforcement of a vast exclusion zone across the Pacific against Russian warships, as with the determination a ship behaved in ways incompatible with neutral status, would carry momentous political implications.<sup>17</sup>

## **Russian Supply of Munitions**

Far more likely than direct Russian military involvement in a protracted war would be Russian provision of economic assistance. The Russia-Ukraine War has made abundantly clear how costly modern war can be in terms of systems and, especially, ammunition. Russian expenditures of 122mm and 152mm artillery shells

may amount to three to four million units per year.<sup>18</sup> Ukraine estimated Russia had fired 7,400 cruise and ballistic missiles by the end of 2023.<sup>19</sup> This extensive consumption has required Russia to invest heavily in its military-industrial capacity. Presumably, Russia could use this new capacity to provide munitions to China in the event of a protracted war.

At present, to be sure, Russian artillery is being consumed as fast as it is being manufactured. The Russian defense industry has undoubtedly managed to boost production—even under the conditions of sanctions, no less—but even this accelerated production has limits. Russia appears to be operating militarily at the outer edge of the country's production capability. Take, for example, the air-launched Kh-101 cruise missile. According to open sources, the missile has a range of 3,500 kilometers. Combined with air launch, this range gives the missile the capability to strike US and partner assets throughout the western Pacific, easily ranging Guam. This missile would therefore be extremely useful to China in bolstering long-range fires. The problem, though, is Russia is consuming these missiles as fast as it is producing them. Analysis of serial numbers shows Russian-manufactured Kh-101s are fired within weeks of their production.<sup>20</sup>

After the Russia-Ukraine War ended, Russia would presumably enjoy some slack capacity that could be provided to China, though the Russian military would also certainly wish to replenish its own stocks of materiel. But the issue would be the production profile Russia has built to fight in Ukraine does not align well with the needs of protracted war in the Pacific. Russia has managed to put thousands of tanks and armored fighting vehicles into the war, primarily by pulling old Soviet tanks out of storage and refurbishing damaged tanks rather than producing new systems.<sup>21</sup> Russia has managed to produce large quantities of relatively unsophisticated systems such as artillery shells and cheap, short-range drones but has had less success in boosting the sorts of high-end capabilities (for instance, precision-strike munitions or advanced aircraft) that would likely prove most relevant to a fight in the Pacific.<sup>22</sup>

Russian production and Chinese needs would overlap—for example, in the areas of cruise and ballistic missiles or air defense systems—but even in these cases, constraints would limit the potential applicability. To generalize, Russian advanced military systems remain more dependent on imported Western components than more low-tech systems, such as cheap drones or artillery shells. Western sanctions have forced Russia to shift away from high-tech components for its systems to less sophisticated and less specialized dual-use technologies, constraining the more advanced and complex systems required for a high-end air and sea fight. The technologies Russia is still importing often come from or through China.<sup>23</sup> Under the conditions of protracted war in the Pacific, imported components for the Russian defense industry would be even harder to find. China would certainly be far less likely to ship key components to Russia instead of using them for the

former's own purposes. In short, Russia could provide some limited—but likely, not decisive—assistance to China in meeting the materiel needs of a protracted war.

## Russian Economic Assistance to China

Finally, Russia might provide some assistance to China in managing the economic repercussions of a protracted war. China depends highly on imported food, raw materials, and hydrocarbons, which mostly arrive by sea. Much about the economic nature of a potential war in the western Pacific remains unclear. A recent Hoover Institution on War, Revolution and Peace study argued the United States should not attempt to cut off the Chinese economy in the event of war over Taiwan, though Chinese economic vulnerabilities would certainly suggest economic warfare as a potential strategy in the event of a protracted war for high stakes.<sup>24</sup> A blockade of China would be a potential tool of the United States and its allies and partners. Imposing a blockade would certainly be complex: Key US allies in the region depend on imports—particularly, energy—traveling along the same sea lines of communications China employs.<sup>25</sup> The sheer volume of trade moving through Southeast Asian waters and the western Pacific would make the enforcement of a blockade complex. A close blockade of Chinese ports would be vulnerable to Chinese land-based systems; a distant blockade would allow more leakage—cargoes might be sold en route, for instance, turning a tanker of oil intended for Japan to one intended for China while in transit. But even if a blockade were limited or porous, imagining shippers eager to send their ships and cargoes through an active war zone is difficult, so trade would likely be hurt even in the absence of a concerted blockade. The question is whether Russia might provide some relief for China if seaborne trade with China were interrupted over a long period of time.

Russia could provide essential goods to China via two different types of routes: sea and land. Both can provide some marginal benefit to China, but both have limitations. Land transit by pipeline or rail is relatively immune from external interference, though this method is potentially vulnerable to long-distance precision strikes. On the other hand, the rail links and pipelines connecting Russia to China are already operating close to capacity, and increasing this capacity in the short to medium term would be slow and expensive. Sea transit is much greater in volume but highly vulnerable to external disruption.

In economic terms, the clear choke point for the Chinese economy is energy—specifically, oil and gas. China's population, like the population of any developed nation, has a nearly insatiable appetite for energy. Although China has been investing heavily in renewable energy, this investment has only flattened the growth of the country's demand for fossil fuels rather than reducing its absolute level.

Fossil fuels—coal, followed by oil and natural gas—still account for roughly 85 percent of Chinese consumption. Energy is to some degree fungible because electricity can be generated from multiple sources, and electrical vehicles can replace internal combustion vehicles over the longer term. Nonetheless, at present, China remains dependent on fossil fuels.

Looking at energy consumption in round figures, China's daily consumption of oil is 16 million barrels per day (bpd), of which 11 million bpd is imported. The overwhelming majority of this oil arrives by sea from the Middle East via the Strait of Malacca, but a substantial amount arrives by pipeline as well, mostly from Russia and Central Asia, though some comes from Myanmar. In addition, the People's Republic of China has accumulated a substantial strategic petroleum reserve. Though China does not release figures on the scale of the reserve, outside observers have estimated its extent at perhaps 50 days' supply, possibly more.<sup>26</sup> Wartime economic disruptions might reduce the Chinese civilian sectors' oil consumption to some degree, and China could impose rationing and prioritize military needs over that of the civilian economy. On the other hand, war and war production are energy intensive. Therefore, one can expect China might have two months' supply of petroleum on hand if all imports of crude oil were to cease. China also relies heavily on imported natural gas. China's total consumption of natural gas, roughly 37 billion cubic feet per day (cfd) as of 2023, has increasingly relied on imports, totaling 16 billion cfd in that same year.<sup>27</sup>

China is likewise vulnerable to disruptions to its food supply. China's enormous population, combined with the loss of arable land to commercial development and environmental damage, by 2020 had reduced the country's food self-sufficiency ratio to 65.8 percent.<sup>28</sup> The overwhelming majority of China's imported food arrives by sea; Brazil and the United States are China's biggest suppliers.<sup>29</sup> Since Russia is less well placed to make up deficits of Chinese food imports, this chapter does not address that question.

If Chinese seaborne imports were cut off either by a blockade or by shippers' reluctance to move through a war zone, could Russia take up the slack? The key constraint on Russian seaborne trade is Russian traffic could not escape a blockade. Russian exports to China could in theory avoid the Strait of Malacca and other Southeast Asian choke points by shipping from the Russian Far East or, in the summer, coming through Russia's Northeast Passage over the top of Eurasia and through the Bering Strait. Both these options would still require either proceeding through the Korea Strait between Japan and South Korea or skirting east around Japan. Either path is vulnerable to interdiction and blockade.

Russian land traffic avoids the problem of blockade but faces hard constraints on capacity in the short to medium term. Though precise figures vary over time, Russian oil accounts for roughly two million bpd of China's 11 million bpd in imports. Much of these imports arrive by sea, but some arrives by pipeline.

Should seaborne imports of oil to China be cut off by a blockade, Russia's pipeline capacity is far less than China's total demand. Pipelines from Russian Eastern Siberian oil fields run to the Pacific Ocean; one branch ends at Koz'mino, not far from Vladivostok. The capacity of this pipeline is 900,000 bpd or, at best, one-tenth of Chinese consumption. At present, the bulk of this pipeline's output goes to Japan and South Korea. The output could, in theory, reach China by sea but would have to leave Russian territorial waters, and the blockade problem still applies. A second spur of 600,000 bpd capacity runs to China directly, and though the capacity of this pipeline might be increased with sufficient time and investment, the output would still cover only a small fraction of Chinese needs.<sup>30</sup>

Natural gas presents a similar picture. Of China's 16 billion cfd in imports, six billion arrives by pipeline and 10 billion by sea as liquefied natural gas (LNG). China's largest supplier of LNG is the United States' treaty ally Australia; Russia is in third place, accounting for roughly one billion cfd of LNG or 10 percent of China's overall imports of LNG. Though Russia might in theory shift its exports of LNG to Chinese markets to make up for a shortfall from other sources, the seaborne nature of most LNG transport means it would be likewise susceptible to blockade.<sup>31</sup> To make matters more difficult, Western sanctions have limited Russian access to liquefaction technology and hampered the acquisition of LNG tankers with icebreaking capability necessary for exporting LNG from Russia's Arctic gas fields.<sup>32</sup>

Natural gas pipelines, though not subject to blockade, are limited by hard capacity constraints. As of 2023, the Power of Siberia pipeline moved 2.2 billion cubic feet per day to China, approximately one-third of total piped gas into China or one-seventh of total Chinese imports.<sup>33</sup> At full capacity, in 2025, the pipeline is projected to provide 3.7 billion cubic feet per day, a little under a quarter of total Chinese gas imports and equivalent to only about one-third of seaborne Chinese gas imports. Russia and China are engaged in long-term planning for a Power of Siberia 2 pipeline that would run from Russia's Arctic gas fields around the Yamal Peninsula to China, but construction has not begun. The limits on Russian finances as a result of the Russia-Ukraine War and Western sanctions make prospects of immediate progress dim.<sup>34</sup>

Rail from central Russia to China could supplement the pipeline transit of hydrocarbons. Oil can and does travel by rail. Liquefied natural gas (LNG) can also travel by rail, though safety and environmental concerns have prevented such transport in the United States, a factor unlikely to limit Chinese policy under circumstances of protracted war. Moving oil and LNG by rail is significantly less efficient than moving them by ship or pipeline, and the same rail networks would also be required for moving food and other raw materials. Existing Sino-

Russian rail links are, in addition, already running close to capacity, so a surge to replace Chinese seaborne trade would be likewise problematic.<sup>35</sup> Russia might invest in increased rail capacity to accommodate increasing demand irrespective of a Pacific conflict, but as with pipelines, Russia is largely cut off from external financing, and the country's internal financial resources are being consumed by war. The Russian domestic rail network has also been strained by Western sanctions and the burden of supporting the Russia-Ukraine War, so Russia's internal rails are likely to require reinvestment, which would compete with any expansion of external links to China.

In the event of a blockade of China, Russian ports in the Far East might provide a narrow "windpipe" for seaborne trade to China, albeit one with severe legal and logistical constraints. In World War I, Imperial Germany deliberately refrained from crossing into the Netherlands when it invaded Belgium and France. The German Empire's strategic logic was clear. As Chief of the General Staff Helmuth von Moltke wrote in 1911, "[I]t will be very important to have in Holland a country whose neutrality allows us to have imports and supplies. She must be the windpipe that enables us to breathe."<sup>36</sup> Scandinavia served a similar role. As British restrictions on goods grew steadily over the course of the war, at least in the early stages of World War I, neutral vessels carried cargo into the neutral Netherlands for transshipment into the German Empire. One could imagine a similar role for Russia as an ostensible neutral: Raw materials moving into the Russian Far East by sea in neutral vessels could then pass into China. Under international law, neutral goods going to a neutral port but intended for transshipment to a belligerent are subject to seizure. But seizing goods traveling in a Russian ship in Russian waters to a Russian port and proving they are destined for China would be difficult and diplomatically problematic.

The Russian Far East possesses multiple ports that are primarily clustered around Vladivostok and nearby Nakhodka. In 2023, these ports collectively had trade turnover of 238.1 million tons.<sup>37</sup> But the constraint for purposes of transit into China under conditions of a protracted war is not port capacity but the ability to move goods from Russia's eastern ports into China. Robust rail links run from Vladivostok to the rest of Russia, but due to long-standing border tensions between Russia and China, only a single, local railroad runs from Ussuriysk, just north of Vladivostok, into China. A remnant of the Chinese Eastern Railway through Manchuria that helped to precipitate the Russo-Japanese War, the railroad carries a substantial amount of iron ore. The railroad would only be able to handle limited extra cargo because of the railroad's capacity and configuration. Although goods might flow into Vladivostok, moving them into China at scale would be extremely difficult.

## Conclusion

In sum, the Russia-Ukraine War puts severe limitations on the assistance Russia might provide to China in the event of protracted war in the Pacific. Once the Russia-Ukraine War ends, Russia will have substantially more spare capacity, but even in this scenario, substantial constraints still exist. Current cooperation has concealed but not eliminated long-term Russian concerns about Chinese power. The developing profile of the Russian defense industry does not especially suit Chinese needs. Constraints on infrastructure—in particular, the vulnerability of seaborne trade with China and the capacity limitations on rail and pipeline transit—likewise put a cap on Russia's ability to solve Chinese economic problems. Nevertheless, US and allied planners should remain aware of the Russian ability to assist Chinese war efforts at the margins.

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# — 12 —

## Assessing North Korea's Role in a Protracted Sino-American War

Mr. Markus Garlauskas

In the event of a protracted war between a US-led coalition and the People's Republic of China (PRC), North Korea would almost certainly be an important factor in operational and strategic considerations for both sides. North Korea's involvement would also likely be a major factor in protracting and escalating such a conflict if it were to occur.

Since late 2023, North Korea has already played a significant and escalating role in prolonging Russia's war against Ukraine by providing munitions that have been used in large numbers against Ukrainian targets by Russian forces, providing equipment, and even committing troops directly to the fight.<sup>1</sup> The risk of North Korea's involvement in a protracted Sino-American war is dramatically higher than in the Russia case. The very different geography, operational environment, and political configuration of the western Indo-Pacific region both makes North Korea's ability to be involved in a Sino-American war in a way that would escalate and protract such a war far greater as well as vastly increases the potential incentives for extensive North Korean involvement. As a result, North Korea is likely to play a far larger and more dangerous role in such a war than that which the country has played in Russia's war against Ukraine, even early in the war's development.

This chapter explores this topic in the following three parts.

- establishing the existing evidentiary basis for assessing North Korea's role in a protracted Sino-American war

- examining the motivations of Beijing and Pyongyang that could lead to protracted war scenarios involving both the People’s Republic of China and North Korea
- summarizing key operational and strategic implications of such scenarios

## Evidentiary Basis

In comparison to the extensive number and depth of publications on a range of other topics related to a hypothetical Sino-American war, the published research on the potential for North Korean involvement in such a war is modest overall. This lack of published research does not mean such involvement is unlikely or not worth examining—instead, this gap in our understanding of the potential causes, risks, operational considerations, and strategic factors relevant to understanding and preparing for such a war is important and has been repeatedly identified.<sup>2</sup>

Some sources can provide context on the possible drivers of North Korean involvement in a Sino-American war. Foundationally, some PRC and North Korean documents provide useful but limited background on the countries’ thinking on potential North Korean involvement in a Sino-American war. The 1961 Treaty of Friendship, Co-operation and Mutual Assistance between the People’s Republic of China and Democratic People’s Republic of Korea, last renewed in 2021 and still in force, is similar in character to the mutual defense treaties that underpin the United States’ alliances. The treaty states if one is attacked, the other “shall immediately render military and other assistance by all means at its disposal.”<sup>3</sup> Meanwhile, Chinese military and government writings address the possibility of a war spreading regionally, referring to the concept of “‘chain reaction’ warfare” that could apply to a Sino-American conflict spreading to the Korean Peninsula.<sup>4</sup> Meanwhile, North Korea has increasingly aligned its anti-US rhetoric with that of China and Russia in recent years.<sup>5</sup> North Korea’s direct involvement in Russia’s war against Ukraine—a war it casts as a proxy war between the United States and Russia—suggests North Korea’s involvement in a Sino-American war could be driven by a desire to stymie and hurt the United States even more than a commitment to the relationship between Beijing and Pyongyang.<sup>6</sup>

But when narrowing the topic from general dynamics and motivations to the potential role of North Korea in a protracted Sino-American war, the available literature constricts from merely limited to quite scant. The author has found no extant, primary-source writings from PRC or North Korean sources exploring

such possibilities per se and has not yet found any other author publishing on this topic, though some have touched upon it—making this chapter the first of its kind.

Even if more such writings did exist, they alone would be of limited utility in developing deeper analysis on such possibilities or preparing for them, given the hypothetical nature of such a conflict and the various biases that may cloud related judgments. But several approaches can be used for the assessment of these underexplored scenarios: first, drawing upon historical cases; second, leveraging a growing body of tabletop exercises (TTXs) and war games that include such possibilities; and third, using structured analytic techniques to identify and explore key considerations for such scenarios—including assumption checks, guided workshops with expert participation, and the diagramming of potential scenario pathways.

### Historical Cases

The military history of the Korean Peninsula provides multiple examples of bloody and protracted warfare—most notably, the Imjin War, beginning with the Siege of Busanjin. But the 1950–53 Korean War may be the most immediately useful example. The first war fought under the “nuclear shadow,” the Korean War is perhaps the quintessential example of a modern conflict that transitioned from a war of sweeping maneuver that held out the possibility of a decisive outcome into a protracted war—in this case, due to PRC intervention. As the Wilson Center’s Chen Jian wrote in 2020, “Beijing and Washington both made critical misjudgments during the Korean War, misjudgments that turned the conflict into a prolonged Chinese-American confrontation.”<sup>7</sup>

As the Korea Society’s Director of Policy Jonathan Corrado has explored with a historical case study in two articles, a range of cognitive, organizational, and historical biases have caused US and allied observers to underestimate, gloss over, or assume away the potential for the United States to face the People’s Republic of China and North Korea simultaneously in a war.<sup>8</sup> Corrado’s work in this area was initially founded in the context of the underestimation of the risk of PRC involvement in a renewed Korean war. Corrado’s analysis notes many of the same biases that caused the lack of US strategic preparation and UN Command operational preparation for PRC intervention in 1950 are still prominent today, with the potential to have equally devastating results in the event of a renewed war on the Korean Peninsula.

Since the publication of his first article on this subject in 2023, Corrado has also expanded his work to consider the converse scenario and how similar biases are leading to an underexamination of the risk of North Korean involvement in a future Sino-American war. Corrado’s work, which has been pathbreaking,

has helped to spark a broader exploration by other researchers, the author included, into the effects of these biases and how they can be overcome. Corrado's work has also helped to set the stage for a broader conversation about the potential role of Korea in a Sino-American conflict over Taiwan.<sup>9</sup>

### Tabletop Exercises and War Games

In the author's experience and study, most (unclassified) TTXs and war games that explore potential, future Sino-American war have been constructed with parameters that do not allow for the exploration of three key, relevant, interrelated possibilities: a protracted, multiyear war; escalation to nuclear strikes; and the Korean Peninsula either serving as the flashpoint of the Sino-American war or getting directly involved as the conflict escalates. But this predilection is changing. For example, the author participated in a nonattributional, unclassified, multinational (Australia, Japan, South Korea, and the United States) TTX that included both simultaneity and nuclear strikes. Whereas the TTX ended before the conflict became protracted, the flow of events pointed in that direction. The author also led two unclassified Guardian Tiger TTXs that explicitly explored both the possibility of simultaneous conflicts with the People's Republic of China and North Korea as well as limited nuclear attacks by either.<sup>10</sup> In both Guardian Tiger I and II, the scenario ended under circumstances in which a protracted war with the People's Republic of China and North Korea was very likely to result. The insights derived from these three TTXs alone provide very useful considerations for such scenarios, and more are likely to add to this body of knowledge.

### Structured Analytic Techniques

The author's work, including *The United States and Its Allies Must Be Ready to Deter a Two-Front War and Nuclear Attacks in East Asia*, originally published by the Defense Threat Reduction Agency under a different title, has also employed structured workshops, key assumption checks, and logic mapping to examine such hypothetical scenarios.<sup>11</sup> The workshops conducted for this project were particularly helpful for examining a wide range of expert views on the potential motivations of Beijing and Pyongyang related to such scenarios and the potential for horizontal (for example, geographic and cross-domain) and vertical (for example, nuclear) escalation, which would also have major implications for a protracted conflict, even if such developments were outside the scope of the study. More recently, Atlantic Council fellow and US Marine Corps officer Brian Kerg also used "useful fiction" techniques to argue for greater consideration of protracted war as the likely course of a Sino-American war, with part of his argument being the potential for North Korean involvement to extend the war.<sup>12</sup>

## Relevant PRC and North Korean Motivations

Based on the structured analyses the author and others have conducted and the various, relevant war games and TTXs the author has organized or participated in, the author proposes the following hypotheses about the motivations of Pyongyang and Beijing's behavior in a potential protracted Sino-American war. Given Pyongyang's motivations to intervene could be affected by Beijing's efforts to encourage or restrain North Korean involvement, the following discussion encompasses the motivations of both.

If a major Sino-American military conflict were to emerge from a confrontation not involving Korea—such as a confrontation over Taiwan or in the South China Sea—North Korea would potentially not be directly involved initially. First, whether Beijing expects the treaty to obligate Pyongyang to come to its aid, even if Beijing wanted such involvement, is unclear. Further, several experienced US analysts of Chinese strategy contend the People's Republic of China would instead seek to restrain North Korea to be better able to control the already-complex escalation dynamics and operational environment. In particular, in one nonattributional workshop the author led, a longtime scholar of Beijing's decision making emphasized, echoing others, the Chinese Communist Party (CCP) would seek to avoid drawing South Korea into the war. This scholar emphasized South Korea's involvement would lead to a “nightmare scenario” for Beijing in which the People's Republic of China would be simultaneously facing US and allied forces based in Japan and the Korean Peninsula.<sup>13</sup> South Korea's considerable naval, air, and missile capabilities could project power into the Yellow Sea, and bases in South Korea are within much closer striking distance of Beijing than those in Japan.<sup>14</sup> Meanwhile, given the stakes and the potential for a major war to escalate to the point of ending North Korea's Kim family regime, Pyongyang has good reason to be cautious.

But as such a Sino-American conflict developed, the drivers of North Korea's involvement to support the People's Republic of China or even to escalate independently from that country would likely grow. These motivations fall into five main categories: escalation dynamics, opportunism, preemption or prevention, operational and end-state shaping, and expanded relations with other powers.

### Escalation Dynamics

As discussed later and in some of the author's previous work, such a conflict may organically spread to the Korean Peninsula through the natural dynamics of horizontal escalation, meaning North Korea would consciously have to attempt to stay out of such a war. Even if Pyongyang sought to stay out, this choice would

incentivize North Korea to make military preparations and move to deter such a possibility in a way that could drive an escalatory cycle as South Korea saw such preparations and made its own.

### **Opportunism**

Opportunism is also a key, potential factor driving North Korean involvement, given North Korea's long-standing desire to achieve dominance over South Korea has been constantly stymied by US support for South Korea. Whereas North Korea is very unlikely to seek to invade South Korea in an attempt to unify by force in the near term, given the operational, political, and strategic challenges the North would face, Pyongyang is likely to exploit the distraction and redirection of US military resources to improve the North's position vis-à-vis South Korea. As US casualties mounted, US regional base operations were disrupted by PRC attacks, and extensive US and allied munitions were expended, the US–South Korean alliance would potentially be at its weakest point militarily relative to North Korea. In addition, a Sino-American war would also provide Pyongyang with the greatest prospects for PRC and, perhaps, Russian material and political support for North Korean aggression.

### **Preemption or Prevention**

Preemptive or preventive aggression by North Korea against US or allied bases or forces in anticipation such military assets would be used against North Korea sooner or later is also a real possibility. North Korea has so little trust in the United States and South Korea, even if Seoul and Washington were to attempt to reassure Pyongyang North Korea would not be targeted by the buildup of regional forces, the Kim regime would likely envision the potential for Seoul and Washington to coordinate a “war of opportunity” or the opening of a second front via North Korea within a larger strategic, operational approach during or after the defeat of the People's Republic of China. In this case, preemptive or preventive attacks by North Korea could be designed both to defeat potential US and allied threats and to help to ensure the People's Republic of China was not defeated, thereby helping to keep the US and South Korean threat of regime change at bay.

### **Operational and End-State Shaping**

This potential also directly relates to the likely desire of North Korea to shape the flow and end state of a Sino-American conflict—particularly, to be involved to the point the country has a seat at the table in the political settlement that follows and to help to protract the war in general. Seeing the People's Republic of China quickly and decisively defeated by a US-led coalition would not be in North Korea's strategic interest. This outcome could compromise

North Korea's security dramatically, given the People's Republic of China has been the key patron of the Kim regime and a counterbalance to the United States. Russia is not economically, politically, or militarily strong enough to replace China's role in this regard. Somewhat counterintuitively, a quick and decisive PRC victory would also not be in Pyongyang's interest. China already has tremendous leverage over North Korea, but because China also currently benefits from North Korea's positioning in the context of a Sino-American confrontation, this probably limits Beijing's willingness to use that leverage so as to minimize the risk of damaging its relationship with Pyongyang or of undermining North Korea's political stability. If Beijing won a war decisively and quickly, Pyongyang's usefulness to the People's Republic of China would be diminished, and therefore Beijing's willingness to use its leverage over Pyongyang would likely increase. Pyongyang's ability to position itself between rival powers has been one of the key elements of North Korea's strategic success and ability to maintain an independent foreign policy in challenging circumstances, meaning the country would have strong incentives to encourage the prolongation of a Sino-American war.

### **Expanded Relations with Other Powers**

Lastly, North Korea's relations with and material support from China and Russia could be a key factor in whether North Korea chooses to be involved in a Sino-American war. If Beijing or Moscow were to encourage North Korean aggression and provide intelligence, logistical, and technical support—or perhaps, more direct aid, like extending Chinese or Russian advanced air defense systems to cover North Korea—Pyongyang would have strong political and military incentives to comply and escalate against US or allied targets.

Meanwhile, China has its own potential motivations to encourage or enable North Korean involvement in a Sino-American war through various means, ranging from engaging in diplomatic outreach to offering indirect or direct support to North Korea's military forces. If Beijing judged the benefits outweighed the risks, a possibility that would be admittedly situationally dependent and uncertain, horizontally escalating the conflict by bringing in North Korea could be a means either to stave off defeat or to break a stalemate. If the prospect of defeat were looming, Beijing would have clear reasons to change its risk calculus in favor of North Korean involvement to shift the military balance. Aside from the additional combat power and munitions stocks North Korea could bring to the fight, the United States being forced to defeat North Korea or even to strengthen deterrence against North Korea while waging war against the People's Republic of China would greatly tax US force allocation; command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR); and logistics. If Beijing were unable to achieve its goals on its intended timeline and the

People's Republic of China chose not to accept defeat or stalemate, the country would have stronger incentives to escalate horizontally—both geographically and across domains—rather than vertically into the high-risk nuclear space. Most forms of horizontal escalation hold the risk of triggering a broader and stronger response regionally and globally, but pulling in North Korea would have the benefit of bringing more combat power and threatening both South Korea and Japan in a way that could distract them from supporting US operations against China. Meanwhile, if the United States were on the losing side of the conflict or seeking to overcome a stalemate, Beijing could reasonably assess Washington will seek to use its bases and logistics stocks in South Korea or draw in South Korean forces as a means of strengthening the United States' position and creating new dilemmas for Beijing. This assessment would incentivize the People's Republic of China to leverage North Korea to preempt or counter such an outcome. As noted previously, North Korea could also escalate for its own reasons. Once North Korea had joined the fight, whatever Beijing's misgivings had been prior to that point, Beijing would most likely provide support to North Korea, helping to pose a greater challenge to US forces.

Lastly, one must not rule out the potential for a protracted Sino-American war to start as the result of PRC intervention in a renewed Korean war or as a preventive measure to ensure such a renewed Korean war would not be catastrophic for Beijing's interests. Beijing, which has very strong incentives to prevent the fall of the Kim regime, has signaled a willingness to use military force to assert PRC interests on the peninsula. As a result, the US declaratory policy for responding to a North Korean nuclear attack would potentially be a major factor motivating PRC military involvement in the Korean Peninsula and the surrounding waters, driving the risk of and course of scenarios for a protracted war. Since 2018, the US policy, which formally became a bilateral policy with South Korea in April 2023, has been if North Korea launches any nuclear attack, regardless of size, such an act would result in the "end of that regime."<sup>15</sup> Given this policy, Beijing could feel forced to commit forces in support of North Korea—prior to the point the North Korean regime feels so desperate and threatened as to risk a nuclear strike or perhaps even before North Korea goes to war—as a means of avoiding the triggering of this declaratory policy. Similarly, the People's Republic of China could feel forced to intervene immediately after a North Korean nuclear attack to preempt the US–South Korean alliance's efforts to follow through on this declaratory policy.

## Scenarios for and Implications of a Sino-American Protracted War Involving North Korea

Many plausible scenarios for North Korean involvement in a protracted Sino-American war could emerge as a consequence of these varying and complex motivations. These scenarios can be grouped into two categories: nuclear and nonnuclear.

Considering the motivations discussed previously, one compelling, stressful, plausible scenario for a protracted Sino-American war includes a large commitment of PRC forces on and around the Korean Peninsula alongside North Korean forces, with the PRC forces, at minimum, committed at a scope and scale designed to ensure North Korea does not ever get to the point of risking a desperate nuclear attack. As noted previously, such a situation could occur either as a result of PRC intervention in an ongoing conflict initiated by North Korea or in the context of a geographically expanding Sino-American conflict that began elsewhere. These events would vastly increase the scope and scale of the operational challenge of a Korean Peninsula fight, likely exhausting the ability of both sides to overrun the other. In addition, the potential for Seoul to escalate to strikes on the PRC capital area with South Korea's numerous missile forces if Seoul itself is threatened and the credible North Korean threat of nuclear retaliation for advances toward Pyongyang or destruction of North Korean strategic command and control (C2), would likely result in a protracted stalemate in which neither side dared risking getting too close to a decisive military victory on the peninsula. This scenario could very well result in a bloodier, more destructive, and more complex version of the 1951–53 stalemate in the Korean War, even if nuclear weapons were not employed.

Another type of scenario could see protraction result from nuclear employment by North Korea. Aside from the disruptive and destructive effects of a nuclear attack, which would likely protract a Sino-American war, a North Korean nuclear strike could change the very character and aims of the war. Even a very limited nuclear attack by North Korea could lead the US–South Korean alliance to undertake a lengthy and costly campaign to ensure the destruction of the North Korean regime in accordance with the aforementioned declaratory policy—a campaign that would then either draw in or run up against PRC ground forces. The results of TTXs, including Guardian Tiger II and a recent Track 1.5, multilateral TTX conducted under the Chatham House Rule, suggest how such a scenario could unfold.

In both exercises, US participants quickly pivoted from hesitance to commit additional forces in South Korea to a full-scale offensive aimed at ending the regime once Pyongyang employed a very limited nuclear attack with a low-yield capability. Standoff strikes, even sustained at high intensity and including US nuclear weapons,

could not necessarily ensure the quick destruction of the North Korean regime given the extensive number of underground facilities and other survivability measures of the regime's leadership. As a result, the United States might respond with a lengthy ground invasion of North Korea, leading to the conflict expanding and potentially becoming protracted. In *Guardian Tiger II*, for example, a North Korean nuclear attack on a South Korean air base in response to F-35s conducting strikes against the North Korean leadership led the United States to miss an opportunity to complete the defeat of a PRC invasion of Taiwan because the majority of US combat power had to be shifted to the Korean Peninsula and surrounding waters to complete the defeat of the Kim regime. As a result, the Sino-American war expanded and likely became protracted.

## **Strategic and Operational Implications**

In general, Pyongyang's ability to strike US or allied logistical and infrastructure targets in the region with both conventional weapons and warheads armed with weapons of mass destruction for a range of motivations and under a range of potential scenarios makes North Korea a key consideration in a hypothetical, protracted Sino-American war. North Korea would potentially be a major contributor to the military challenge a US-led coalition could face in a war with the People's Republic of China and to the potential for this war to become protracted due to the added scope and scale of fighting North Korea simultaneously.

If North Korea were to join the conflict after a delay, perhaps at about the time the People's Republic of China and the United States had expended the majority of their advanced-strike munitions and air and missile defense assets, North Korea could swing the outcome or even prevent a clear and decisive one. At this point in a hypothetical campaign, uncommitted North Korean missile forces could have a tremendous impact on the course of the war—that is, the missile forces could prevent US forces from reconstituting and disrupt force and logistics flow into the region to key bases within range of North Korean missiles. The missile forces would represent a much greater threat to and have much greater relative value to China's war effort at this point in the hypothetical campaign. This significance could, however, potentially be counterbalanced by South Korea's own capabilities joining the fight.

The potential for this North Korean involvement also to lead to the war's primary zone of conflict shifting to the peninsula would also threaten to prolong the war. Renewed war on the Korean Peninsula would likely include large land forces—hundreds of thousands on each side—locked in combat in mountainous terrain. North Korea's large ground forces may not be modern or well trained,

but the country's ability to continue to feed military manpower into a protracted ground war, much like North Korea has done in support of Russia, is very real, especially if Pyongyang had PRC logistical and technological support.

With all these factors and scenarios in mind, the potential for direct North Korean involvement in a Sino-American war should be a major consideration in assessments and planning for such a war. The United States and its allies should be particularly mindful of North Korea in assessing and preparing for a major Sino-American war given Pyongyang would have motivations in such a scenario that could drive North Korea to behave in ways that would lead to the war becoming a protracted, land-centric war with massive force requirements, regardless of where and how it began.

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## **China's View of Potential Support from Russia in Protracted War**

Dr. Brian G. Carlson  
China Landpower Studies Center, US Army War College

In an armed conflict pitting China against a US-led coalition, including in scenarios leading to a protracted war, the support China might receive from partners could play an important role in influencing the outcome. China has formed a large network of partnerships, including many that are labeled either a “strategic partnership” or a “comprehensive strategic partnership,” with countries around the world. If war were to break out, China would be likely to seek support from as many of these partners as possible, ranging from diplomatic and rhetorical support to various forms of material assistance. Of particular interest to US policymakers and defense planners is the support China might expect to receive from Russia, which is China’s most important strategic partner.

As discussed in this chapter, Russia’s close relationship with and growing dependence on China could lead it to seek ways of assisting China or otherwise complicating matters for a US-led coalition in the event of war. China and Russia are increasingly acting in concert, alongside North Korea and Iran, as part of an informal axis that aims to revise the existing international order.<sup>1</sup> In several conceivable scenarios, including a war over Taiwan, the outbreak of hostilities on the Korean Peninsula, or the simultaneous eruption of armed conflict in both locations, Russia could exert influence in various ways. This chapter attempts to analyze China’s view of the role Russia might play in such scenarios. By necessity, this exercise is somewhat speculative because Chinese officials and scholars have said little about this topic publicly.

## The Sino-Russian Strategic Partnership

China and Russia have formed a close relationship they call a “comprehensive strategic partnership of coordination for the new era.”<sup>2</sup> On February 4, 2022, less than three weeks before Russia’s full-scale invasion of Ukraine, Chinese President Xi Jinping and Russian President Vladimir Putin issued a joint declaration in which they stated their countries’ friendship had “no limits” and “no ‘forbidden’ areas of cooperation.”<sup>3</sup> China has stopped short of providing Russia with weapons for the Russia-Ukraine War, but it has offered rhetorical support, a crucial economic lifeline, and a variety of dual-use items that have helped to rebuild Russia’s defense industry and to sustain its war effort. This pattern of close cooperation raises the question of whether China would expect Russia to reciprocate in the event of war in the Indo-Pacific, and if so, what forms of assistance China might welcome.<sup>4</sup>

China and Russia have refrained from establishing a formal military alliance and are therefore not bound by a mutual defense clause to come to each other’s assistance in the event of war. The Treaty of Good-Neighborliness and Friendly Cooperation between the People’s Republic of China and the Russian Federation, which the two countries signed in 2001 and renewed in 2021, includes a mutual nonaggression pact, as well as pledges to respect the other country’s sovereignty and territorial integrity and to refrain from joining alliances directed against the other country. In Article 9, China and Russia pledge to consult with each other if either country perceives its security to be under threat: “When a situation arises in which one of the contracting parties deems that peace is being threatened and undermined or its security interests are involved or when it is confronted with the threat of aggression, the contracting parties shall immediately hold contacts and consultations in order to eliminate such threats.”<sup>5</sup>

### Limited Public Comment by China

Chinese officials have made few public statements about what kind of support they might expect from Russia in the event of war. This reticence most likely reflects the issue’s sensitivity and a desire to maintain the secrecy of whatever high-level discussions on this topic they might have held with their Russian counterparts. China and Russia may also have reached no clear understanding on the issue of wartime support, and that Chinese officials themselves may remain unsure of what types of Russian support they might expect or desire. One recent instance in which a prominent Chinese official commented on this topic occurred in July 2024, when a journalist at the Russian newspaper *Izvestiya*, in a written interview, asked Chinese Ambassador to Russia Zhang Hanhui what kind of support China would expect from Russia in the event of an escalation in the

Taiwan Strait. Zhang answered this question from *Izvestiya*, which is a pro-Kremlin daily newspaper, in comparatively general terms. The relevant exchange went as follows:

Anastasia Kostina, journalist for *Izvestiya*: Following Lai Ching-te's assumption of the post of head of the administration of Taiwan, tensions have grown between Beijing and Taipei. It's well-known that the Russian Federation recognizes the one-China principle. Does the Chinese side count on Moscow's support in case of the escalation of a conflict, and on what precisely?

Chinese Ambassador to Russia Zhang Hanhui: The Taiwan issue is an internal affair of China. Only one China exists in the world. The government of the PRC is considered the only legal government representing all of China. Taiwan is an integral part of the territory of China. This is a consensus accepted everywhere in international society and a generally accepted norm of international relations. Changes in the state of affairs inside of Taiwan don't influence the fact that only one China exists in the world and Taiwan remains part of it, and also won't change the adherence of international society to the one-China principle.

As a comprehensive strategic partner for a new era, Russia has always provided resolute support to China on issues concerning sovereignty, security, territorial integrity, development, and other core interests of the country. Russia promises to follow the one-China principle, recognizes Taiwan as an integral part of the PRC, opposes any form of "independent Taiwan," firmly supports China's measures for the defense of its sovereignty and territorial integrity, and also for the reunification of the country, which deserves high praise from China.

We firmly believe that the just cause of China's defense of sovereignty and territorial integrity, its opposition to separatism, and its achievement of the reunification of the country will also receive universal understanding and support from international society, including Russia, going forward.<sup>6</sup>

Chinese media coverage of Zhang's interview noted, that while stressing the importance of Russia's support for China's position on Taiwan, the ambassador steered clear of discussing any material support Russia might provide.<sup>7</sup>

Chinese media interpreted Zhang's comments in various ways. According to one article published by Sohu.com, Zhang's main emphasis was on China's satisfaction with Russia's long-standing support for the one-China principle and its confidence this support would continue. "But as for whether or not it needs Russia to provide greater support, at present we still don't see too much of the Chinese side's thinking," the article stated. Although the resolution of the Taiwan issue would rely ultimately on China itself, nevertheless "winning the support of even more countries, creating a favorable external environment, is also a key step in resolving the Taiwan issue." If necessary, Russia might be able to exert some useful influence at the right time by "intimidating some nearby countries that have become threatening." According to this article, the fact Russian media would pose this "sensitive" question that has been the subject of much Western attention was "interesting." The article speculated that Russia might be trying to draw out China's views on this subject, or possibly trying to steer the relationship toward an alliance, or possibly seeking to strengthen Russia's own position in an increasingly lopsided partnership.<sup>8</sup>

Other accounts in Chinese media interpreted Zhang's comments as stressing the need for China to resolve the Taiwan issue by itself while downplaying the need for outside support, including from Russia, at least in the military sphere. In one analyst's view, Zhang's "brilliant answer" to this "tricky question" contained the "unspoken implication . . . that China has the ability to resolve any problem, and certainly doesn't need Russia's support in such areas as the military; it only needs to maintain moral consistency, if it adheres to the one-China principle, then that will do."<sup>9</sup> One article went so far as to declare that China had no need for direct Russian military support and would not even accept it because it could greatly exacerbate the situation.<sup>10</sup>

## **Russian Assistance in Advance of Protracted War**

Regardless of what forms of support it might ultimately provide to China in an armed conflict, Russia has already played an important role in improving China's strategic position. Through the strengthening of its relationship with Russia and the pledge of mutual nonaggression, China has removed the threat to its northern frontier that it experienced during the Sino-Soviet split. This enables China to focus on other strategic challenges while benefiting from the ways Russia's threat to European security potentially distracts the United States from focusing on China. Russian arms sales have also played an important role in strengthening China's military capabilities and thus in improving China's prospects in various military contingencies. An institutionalized series of defense consultations and joint military exercises has also given Chinese military leaders the opportunity

to learn from their Russian counterparts. In each of these areas, bilateral cooperation has already improved China's preparedness for war. The pattern of cooperation in this sphere might also offer clues about the potential extent and limits of Russian support following the outbreak of a war that becomes protracted.

By posing simultaneous security challenges in the Indo-Pacific region and Europe, respectively, China and Russia are placing increased strain on US defense strategy and presenting defense planners with difficult choices.<sup>11</sup> The report of the Commission on the National Defense Strategy, published in July 2024, argues that the US military is unprepared for threats it may face in the coming years, especially from China and Russia.<sup>12</sup> Under current US force structure and doctrine, the United States would be hard-pressed to fight great-power wars against China and Russia at the same time.<sup>13</sup> Both China and Russia recognize this situation, by stretching US attention and resources, may afford both of them some additional room to maneuver in their own regions. In a war against China, the United States would have to be concerned about the possibility of simultaneous Russian aggression, which could create a multifront great-power war.

Russian arms sales and other forms of military-technical cooperation have strengthened China's military capabilities in ways that would cause concern for the US military in the event of war. Throughout China's military modernization, which began more than three decades ago, Russia has been China's top foreign arms supplier. From 1990 through 2024, Russia sold more than \$38.5 billion worth of arms to China, accounting for nearly 78 percent of China's total arms imports during this period.<sup>14</sup> Russian arms sales have been particularly important in strengthening China's air, naval, air defense, and anti-ship capabilities.<sup>15</sup> Two prominent systems Russia sold to China in recent years, namely the S-400 air defense system and Su-35 fighter jets, strengthened China's ability to contest airspace in the Indo-Pacific, thus increasing the difficulty the United States would face in defending Taiwan or in helping Japan to defend the Senkaku Islands.<sup>16</sup>

In the coming years, additional forms of Russian military-technical assistance could further enhance China's capabilities. Russia is helping China to build a missile attack early warning system, and the two countries are engaged in the joint development of heavy-lift helicopters, conventional attack submarines, and missiles. Potential Sino-Russian cooperation on hypersonic technologies is an issue that deserves close scrutiny. The possibility that China could acquire Russia's submarine quieting technology, either by imitation or direct transfer, is of particular concern.<sup>17</sup> According to one recent report, China's Type 096 ballistic missile submarine, which is scheduled to be operational by 2030, features jet-pump propulsion and

internal quieting devices based on “imitative innovation” of Russian technology. The quieting technology could significantly increase the difficulty of tracking these submarines.<sup>18</sup>

Joint military exercises with Russia have also contributed to China’s military capabilities. China and Russia have held joint ground exercises since 2005, joint naval exercises since 2012, and joint bomber patrols since 2019. In recent years, these exercises have increased in frequency, intensity, and geographical scope.<sup>19</sup> In September 2024, China and Russia participated in a two-phase set of joint naval exercises under China’s leadership called Northern/Interaction-2024. The first phase occurred in the Japan Sea, and the second phase took place in the Sea of Okhotsk. China also sent naval forces to participate in Russia’s Great Ocean-24 naval exercises.<sup>20</sup> Chinese and Russian naval ships conducted their fifth joint ship patrol, sailing between Sakhalin and Hokkaido to enter the Sea of Okhotsk.<sup>21</sup> These exercises followed a joint air patrol in July, during which two Chinese H-6 bombers and two Russian Tu-95 bombers, all of which are capable of carrying nuclear arms, flew into the US air defense identification zone near Alaska.<sup>22</sup> Joint military activities serve as a means of political signaling, demonstrate each country’s commitment to the other’s security interests and the importance of military cooperation in their relationship, and allow Chinese military officers to learn from the Russian military’s training practices, doctrine, and combat experience.

By conducting joint ground and naval exercises, China and Russia might increase the interoperability of their armed forces, thus making progress toward an eventual ability to conduct joint operations. For now, such interoperability remains limited. The Chinese and Russian militaries lag behind those of the United States and its allies in the sophistication of their joint ground and naval exercises and in their level of interoperability. At present, China and Russia lack the capability to conduct true bilateral joint military operations.<sup>23</sup> Because each country views itself as an independent great power, they might be unlikely to seek the kind of interoperability US and allied militaries have established.<sup>24</sup>

Energy cooperation, which has been a cornerstone of the Sino-Russian relationship, has also contributed to China’s preparedness for protracted war. Russia has built oil and gas pipelines to China and is a major provider of both commodities. Following Russia’s full-scale invasion of Ukraine in February 2022, China has taken advantage of the opportunity to buy additional Russian oil and gas at favorable prices. The volume of China’s purchases of Russian crude oil rose by 8 percent in 2022 and by 24 percent in 2023.<sup>25</sup> China’s imports of Russian natural gas through the Power of Siberia pipeline more than doubled from 2021 to 2023, increasing from 10.4 billion cubic meters (bcm) to 22.7 bcm as the pipeline

approached full capacity.<sup>26</sup> In 2025, the pipeline is projected to operate at full capacity, transporting 38 bcm.<sup>27</sup> In the sphere of liquefied natural gas (LNG), China's imports from Russia grew by 44 percent in 2022 and by 23 percent in 2023.<sup>28</sup> At the same time, China has increased its storage capacity for oil, gas, and other resources, which could be useful in the event of a protracted war.<sup>29</sup>

The construction of additional oil and gas pipelines from Russia could further strengthen China's energy security. A new gas pipeline connecting the Russian Far East and China, with a capacity of 10 bcm per year, is scheduled to open in 2027.<sup>30</sup> China and Russia have engaged in protracted negotiations over the construction of an additional gas pipeline, Power of Siberia 2, with a projected capacity of 50 bcm per year, but the two countries have yet to reach an agreement.<sup>31</sup> Putin has said that an additional oil pipeline could be built along the same route, passing through Mongolia.<sup>32</sup> China, however, has taken a patient approach toward the construction of additional pipelines, placing a priority on the use of its bargaining leverage to secure the best possible terms rather than rushing to secure the construction of new pipelines on the fastest possible timeline.

## Potential Russian Assistance in Protracted War

In an armed conflict involving China, including one that became protracted, Russia might consider supporting China in various ways. At a minimum, Russia would be likely to provide China with the kind of diplomatic and economic support China has provided to Russia since the start of the Russia-Ukraine War.<sup>33</sup> Russia could also serve as a strategic rear and support base for China.<sup>34</sup> This support could be especially significant if the war were to become protracted. In this case, Russia could help China to counter various measures the United States could impose to place pressure on China's economy.

According to one recent estimate, Russia has a strategic oil reserve of 80 billion barrels, which constitutes 4.8 percent of the world total and would be enough to sustain China's daily consumption of 14 million barrels for over a decade.<sup>35</sup> If the US Navy were to restrict China's access to seaborne oil and LNG deliveries by blockading the Strait of Malacca, then China could rely on Russia as a source of secure overland supplies. However, as David Stone argues in his chapter in this volume, the limits of the existing pipelines' capacity and the long timelines required to construct new pipelines would constrain Russia's ability to surge oil and gas supplies to China following the outbreak of a war.<sup>36</sup> Russia could also provide China with additional weapons, including air defense batteries. Unlike China, which has refrained from providing weapons to Russia under the threat of Western sanctions, Russia already faces heavy sanctions and would therefore be likely

to have few reservations about providing further weapons to China. Russia might also consider conducting cyberattacks against US military logistics or infrastructure.<sup>37</sup>

Less likely, but still conceivable, are scenarios in which China and Russia might engage in coordinated military action.<sup>38</sup> In view of Russia's growing dependence on China, which has become more pronounced since the start of the Russia-Ukraine War, Russia might eventually feel compelled to support China in military conflict to preserve this indispensable partnership. Given the lack of interoperability between their militaries, China and Russia would be unlikely to attempt joint operations. Instead, Chinese and Russian forces would be more likely to engage in military action in separate sectors, fighting separately but for common purposes.

Russia could also benefit China by creating distractions for the United States and its allies. This could occur either in Europe, far from the theater of a war between China and the United States, or in the Indo-Pacific region itself. As noted earlier in this chapter, in the event of a war against China in the Indo-Pacific, US defense planners would have to be concerned about simultaneous, opportunistic Russian aggression in Europe. Short of actual armed aggression, Russian troop movements or major exercises in Europe that occurred during a Sino-American armed conflict, potentially distracting the United States, could be one form of assistance Russia might provide to its strategic partner. In the Indo-Pacific region, Russia could create distractions that might be especially relevant to the US-Japanese alliance or to US operations in the Pacific Ocean. The frequent occurrence of Sino-Russian joint naval exercises, air patrols, ship patrols, and other military activities in the waters and airspace near Japan in recent years indicates scenarios involving this major US ally could be especially likely.

In recent years, Japan has revised its national security strategy and boosted its defense spending, driven partly by concerns about growing Sino-Russian defense cooperation.<sup>39</sup> In any conflict involving both China and Japan, Russia could complicate matters for the US-Japanese alliance. For example, Russia might offer China a show of support by deploying submarines to the Western Pacific or conducting ship and air patrols in the waters and airspace around Japan.<sup>40</sup> If Russia were to threaten Hokkaido, presenting Japan with the prospect of a two-front war against both China and Russia, then Japan's freedom of maneuver could be limited.<sup>41</sup> Russia could set up its own defensive air patrols in Northeast Asia, justifying such an action as homeland defense. This action would create sanctuaries for Chinese offensive power, distract Japanese forces, draw down Japanese resources, and prevent the United States from establishing air and naval superiority by denying US forces access to important positions. Such a step might complicate a potential intervention by Japanese forces to help defend Taiwan against a Chinese invasion.<sup>42</sup> Russia could also engage in such activities in the context of a direct Sino-Japanese

clash, for example in the East China Sea, or amid efforts by Japan to intervene in support of the Philippines, with which Japan has recently strengthened security ties.

Opinions differ on the role Russia might play in a conflict on the Korean Peninsula. Putin's visit to Pyongyang in June 2024, during which he and North Korean leader Kim Jong-Un signed a defense pact pledging mutual military assistance in the event either country is attacked, as well as North Korea's subsequent deployment of soldiers to Russia to fight against Ukrainian forces in Kursk Oblast, highlighted the increasingly close relationship Russia and North Korea have built since the beginning of the Russia-Ukraine War.<sup>43</sup> This relationship is a potential source of irritation for China, which may be concerned that Russian assistance could encourage North Korea to take provocative actions that could lead the United States to strengthen its military posture and its alliances in the region.<sup>44</sup> According to one view, China would have little to gain from Moscow's involvement in an armed conflict on the peninsula and would prefer Russia remain on the sidelines.<sup>45</sup> In the view of some Russian analysts, however, China might wish to bring Russia's powerful nuclear deterrent into play, along with Russian air defense and anti-ship systems, which might prevent US military forces from crossing the demilitarized zone into North Korea.<sup>46</sup> China's participation in Russia's large Vostok-2018 domestic exercises occurred at a time of tension on the peninsula and had relevance to scenarios there.<sup>47</sup>

In various scenarios, including a war over Taiwan, a war on the Korean Peninsula, or simultaneous wars in both locations, China would have to calculate the extent to which it would welcome Russian involvement. In a war that remained confined to the Taiwan Strait, China would be likely to welcome whatever diplomatic support, energy supplies, and weapons Russia might be able to provide. China might also welcome Russia's assistance in complicating Japan's potential intervention in a range of scenarios. Such considerations would also apply to a potential war on the Korean Peninsula, whether it occurred in isolation or as the result of horizontal escalation from a war over Taiwan. In either case, China would also have to consider whether direct Russian military involvement in or around the peninsula would be useful for its cause.

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## About the Authors

### Editor

**Mr. Joshua M. Arostegui** is the chair of China studies and research director of the China Landpower Studies Center at the US Army War College (USAWC) Strategic Studies Institute. His primary research topics include Chinese strategic landpower, People's Liberation Army (PLA) joint operations, and Indo-Pacific security affairs. Arostegui is also a chief warrant officer 5 in the US Navy Reserve, where he serves as a flag adviser in the Information Warfare Community.

### Part 1: Understanding the PRC's Views on Historical and Protracted Wars

**Dr. Jerad I. Harper** is an associate professor and director of the Joint Warfighting Program at the USAWC. Harper is a retired US Army strategic intelligence colonel with 30 years of active-duty service. Harper is the project leader of the 2024 USAWC integrated research project, *How to Prepare, Fight, and Win a Protracted War with the PLA in the Indo-Pacific, 2025–2035* (book forthcoming from the USAWC Press). He is the coauthor of *Sustaining America's Strategic Advantage* (2022) and is published in *Foreign Policy*, *Parameters*, and *War on the Rocks*.

**Mr. Daniel Rice** is the China political and military strategy subject matter expert at the Marine Corps War College. With Marine Corps War College leadership, he is working to establish the China Warfighting Initiative. Rice teaches courses across the Marine Corps University and the Armed Forces of the United States. In addition to his role at Marine Corps University, Rice is the founder of Dong Feng LLC, an instructor on Booz Allen Hamilton's China Way of War team, and a nonresident senior fellow at the Mitchell Institute for Aerospace Studies. Rice holds a graduate degree from the Hopkins-Nanjing Center and the Johns Hopkins University School of Advanced International Studies. He is fluent in Mandarin Chinese and is published in Chinese.

**Mr. Dennis J. Blasko** is a retired lieutenant colonel, US Army, with 23 years of service as a military intelligence and foreign area officer specializing in China. Blasko's experience includes serving as an Army attaché in Beijing and Hong Kong in the 1990s. His experience also includes serving in infantry units in Germany, Italy, and South Korea, and in Washington at the Defense Intelligence Agency; Headquarters, Department of the Army (Office of Special Operations); and the National Defense University War Gaming and Simulation Center. Blasko is a graduate of the United States Military Academy and the Naval Postgraduate School. He is the writer of numerous articles and chapters on the Chinese military and is the author of *The Chinese Army Today*, second edition.

**Dr. Jake Rinaldi** is a defense analyst at the China Landpower Studies Center in the USAWC Strategic Studies Institute. Rinaldi holds a PhD and a master of philosophy degree from the University of Cambridge, where his doctoral dissertation examined Sino–North Korean military relations and his master's degree focused on China's nuclear forces.

## **Part 2: Assessing the PLA's Operational Endurance in the Land, Maritime, and Air Domains**

**Mr. Jake Vartanian** is a military analyst at the China Landpower Studies Center in the USAWC Strategic Studies Institute. His primary research topics include PLA Army operational and tactical capabilities, PLA joint operations, and Chinese strategic landpower.

**Mr. Conor M. Kennedy** is a China research analyst at Exovera, SOSi. He also has previous experience serving as an assistant professor at the Naval War College's China Maritime Studies Institute. His research focuses on the People's Republic of China's maritime and military development. He holds a master of arts degree in international studies from the Johns Hopkins University School of Advanced International Studies (Hopkins-Nanjing Center), and two bachelor of arts degrees in political science and Chinese language from the University of Massachusetts Amherst. He is the recipient of the National Security Education Program's David L. Boren Fellowship to China, 2013–14.

**Mr. Eli Tirk** is a researcher at the China Aerospace Studies Institute. His main research areas include the PLA Air Force, PLA Navy aviation, and the People's Republic of China defense industry. Tirk has been at the China Aerospace Studies Institute since 2021, and his prior experience includes serving as an analyst at Exovera's Center for Intelligence Research and Analysis. Tirk holds a bachelor of arts degree from the George Washington University and a master of arts degree from the Hopkins-Nanjing Center, a joint degree-granting program of the Johns Hopkins University School of Advanced International Studies and Nanjing University. Tirk is a recipient of the 2017–18 National Security Education Program's David L. Boren Fellowship to China.

### **Part 3: Analyzing China and the PLA's Ability to Command and Control a Protracted War**

**Mr. Rick Gunnell** is the research professor of China military studies at the China Landpower Studies Center in the USAWC Strategic Studies Institute. Gunnell focuses on the People's Liberation Army's land-domain people, organizations, and activities. Rick is proficient in Chinese and holds a bachelor of arts degree from Dickinson College.

**Mr. Roderick Lee** has worked for the US Department of Defense for more than 10 years. His research focus is on how the People's Liberation Army organizes and employs the joint force.

**Dr. Joel Wuthnow** is a senior research fellow in the Institute for National Strategic Studies at the National Defense University, where his research areas include Chinese foreign and security policy, Chinese military affairs, Sino-American relations, and strategic developments in East Asia. Wuthnow's recent books and monographs include *China's Quest for Military Supremacy* (Polity, 2025), *Crossing the Strait* (National Defense University Press, 2022), and *Gray Dragons* (National Defense University Press, 2022). His prior experience includes serving as a China analyst at CNA and a postdoctoral fellow at Princeton University. Wuthnow holds a PhD in political science from Columbia University, a master of philosophy degree in modern Chinese studies from the University of Oxford, and a bachelor of arts degree in international affairs from Princeton University.

## Part 4: Determining How Russia and North Korea Could Support the PRC in a Protracted War

**Dr. David R. Stone** is the William E. Odom professor of Russian studies in the Strategy and Policy Department of the US Naval War College. Stone holds a PhD in history from Yale University, and his experience includes teaching Russian and military history at Kansas State University and participating in Kansas State University's graduate program in security studies. Stone is the author and editor of several books and dozens of articles on Russian and Soviet military history and foreign policy.

**Mr. Markus Garlauskas** is the director of the Indo-Pacific Security Initiative of the Atlantic Council's Scowcroft Center for Strategy and Security. Garlauskas's prior experience includes a senior executive appointment as National Intelligence Officer for North Korea, leading US Intelligence Community strategic analysis and supporting deliberations regarding North Korea. He has 12 years of experience serving at the Combined Forces Command under the UN Command and United States Forces Korea, including as the intelligence estimates chief and strategy director, earning the Joint Civilian Distinguished Service Award—the Chairman of the Joint Chiefs of Staff's highest civilian honor. Garlauskas holds a bachelor of arts degree in history from Kent State University and a master's degree from Georgetown University's Security Studies Program, where he is now an adjunct professor.

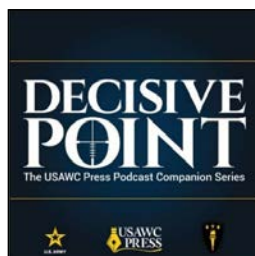
**Dr. Brian G. Carlson** is a research professor of Indo-Pacific security studies at the Strategic Studies Institute. Carlson's research focuses primarily on the relationship between Russia and China. He holds a PhD in international relations from the Johns Hopkins University School of Advanced International Studies in Washington, DC. Carlson speaks both Mandarin Chinese and Russian.



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