

航空

航天

C H I N A A E R O S P A C E
S T U D I E S I N S T I T U T E

Selling a Maritime Air Force

The PLAAF's Campaign for a Bigger Maritime Role



Ian Burns McCaslin and Andrew S. Erickson

Printed in the United States of America
by the China Aerospace Studies Institute

ISBN-13: 9781729561812

To request additional copies, please direct inquiries to
Director, China Aerospace Studies Institute,
Air University, 55 Lemay Plaza, Montgomery, AL 36112

E-mail: Director@CASI-Research.ORG

Web: <http://www.airuniversity.af.mil/CASI>

[@CASI_Research](https://twitter.com/CASI_Research)

<https://www.facebook.com/CASI.Research.Org>

<https://www.linkedin.com/company/11049011>

Disclaimer

The views expressed in this academic research paper are those of the authors and do not necessarily reflect the official policy or position of the U.S. Government or the Department of Defense. In accordance with Air Force Instruction 51-303, *Intellectual Property, Patents, Patent Related Matters, Trademarks and Copyrights*; this work is the property of the US Government.

Limited Print and Electronic Distribution Rights

Reproduction and printing is subject to the Copyright Act of 1976 and applicable treaties of the United States. This document and trademark(s) contained herein are protected by law. This publication is provided for noncommercial use only. Unauthorized posting of this publication online is prohibited. Permission is given to duplicate this document for personal, academic, or governmental use only, as long as it is unaltered and complete however, it is requested that reproductions credit the author and China Aerospace Studies Institute (CASI). Permission is required from the China Aerospace Studies Institute to reproduce, or reuse in another form, any of its research documents for commercial use. For information on reprint and linking permissions, please contact the China Aerospace Studies Institute.

CASI would like to acknowledge the work and effort of our CASI Associates for this work.

China Aerospace Studies Institute

CASI's mission is to advance understanding of the capabilities, development, operating concepts, strategy, doctrine, personnel, organization, and limitations of China's aerospace forces, which include: the PLA Air Force (PLAAF); PLA Naval Aviation (PLAN Aviation); PLA Rocket Force (PLARF); PLA Army (PLAA) Aviation; the PLA Strategic Support Force (PLASSF), primarily space and cyber; and the civilian and commercial infrastructure that supports the above.

CASI supports the Secretary, Chief of Staff, and other senior leaders of the U.S. Air Force. CASI provides expert research and analysis supporting decision and policy makers in the Department of Defense and across the U.S. government. CASI can support the full range of units and organizations across the USAF and the DoD. CASI accomplishes its mission through conducting the following activities:

- CASI primarily conducts open-source native-language research supporting its five main topic areas.
- CASI conducts conferences, workshops, roundtables, subject matter expert panels, and senior leader discussions to further its mission. CASI personnel attend such events, government, academic, and public, in support of its research and outreach efforts.
- CASI publishes research findings and papers, journal articles, monographs, and edited volumes for both public and government-only distribution as appropriate.
- CASI establishes and maintains institutional relationships with organizations and institutions in the PLA, the PRC writ large, and with partners and allies involved in the region.

- CASI maintains the ability to support senior leaders and policy decision makers across the full spectrum of topics and projects at all levels, related to Chinese aerospace.

CASI supports the U.S. Defense Department and the China research community writ-large by providing high quality, unclassified research on Chinese aerospace developments in the context of U.S. strategic imperatives in the Asia-Pacific region. Primarily focused on China's Military Air, Space, and Missile Forces, CASI capitalizes on publicly available native language resources to gain insights as to how the Chinese speak to and among one another on these topics.

Preface

Inter-service rivalry is an ever-present condition for militaries around the world. The People's Liberation Army (PLA) is no exception to this rule. Since the end of 2015, the PLA has been undergoing massive reforms, both in strategic direction and in operational structure. The Chinese Communist Party has realized that, despite decades of investments, the PLA still has not caught up with the leading militaries of the world, although that is now an explicit goal. As part of this shift, the PLA is moving away from its traditional land-defense army-centric organization toward the more 'modern' arms of warfare - air, blue sea, space, and cyber.

As these newer, at least newer to the PLA, missions gain in importance, it is not surprising that the bureaucratic tendencies latent in any system have begun to show themselves. While the PLA Air Force (PLAAF) seems to have lost out on its bid to maintain control of PLA space issues, with the establishment of the PLA Strategic Support Force (PLASSF), it has started to make more concerted efforts to expand its presence and capabilities in the maritime domain. While both the PLAAF and the PLA Navy (PLAN) conduct aviation operations over water, the PLAAF is concerned that the rise of the PLAN's aircraft carriers, and its attendant Naval Aviation arm, may be gaining influence and importance. As such, the PLAAF has undertaken a campaign toward increasing its relevance, capabilities, and presence, in the maritime domain. This study outlines the contours of that campaign, and its relevance to the future of both the PLAAF and PLAN Naval Aviation.

Dr. Brendan S. Mulvaney
Director, China Aerospace Studies Institute

“Services have unique, service-specific preferences for both the national interest and the security of their service – two categories that tend to overlap closely in the minds of senior military leaders.” – Jeffrey W. Donnithorne.¹

“Interservice rivalry seems to be a constant fact of military life in peacetime. Indeed, armed services may sometimes even measure their relative success in terms of the accumulation of resources and authority at the expense of their sister services, regardless of the extent to which this detracts from their peacetime preparations for the pursuit of national objectives in time of war. The achievement of those objectives becomes more significant—though not necessarily paramount—in wartime.” – Dr. Ian Horwood.²

Introduction

Inter-service rivalry is a problem that plagues all militaries from the moment they have more than one service.ⁱ In the era of modern militaries, when ‘jointness’ is held up as the gold standard, inter-service rivalry, redundant capabilities, and service-specific interests are often vilified as examples of ‘backward’ thinking.³ Yet, while literature abounds on episodes of inter-service rivalry in Western militaries, particularly in the U.S. military, relatively little exists on this topic in English concerning non-Western militaries around the world. In particular, within the Chinese People’s Liberation Army (PLA), which despite recent personnel reductions is still the largest military in the world, and whose international profile has risen quickly in recent years, rarely has the service rivalry phenomenon been examined.

This work aims to address one small, but increasingly important part of inter-service rivalry in the PLA today, that of the concerted campaign by the PLA Air Force (PLAAF) to increase its relevance and responsibilities in the maritime domain at the expense of the PLA Navy (PLAN) and its branches, such as Naval Aviation and the Marine Corps. This campaign involves two parts. The first is the reshaping of the PLAAF to be better suited to carry out missions in the maritime domain through specialized training, increasingly complex and realistic exercises, highlighting the importance of air power to the success of naval operations, and developing previously undervalued branches of the service.ⁱⁱ The reshaping of the

i The four Chinese People’s Liberation Army (PLA) services are the PLA Army (ground force) (PLAA), PLA Navy (PLAN), PLA Air Force (PLAAF), and PLA Rocket Force (PLARF). The PLA has one new force that is treated almost like a service, the PLA Strategic Support Force (PLASSF). It also has another new force, the Joint Logistics Support Force (JLSF), which is still treated like a force, i.e. below the level or importance of a service. All six of these organizations are directly subordinate to the Central Military Commission (CMC).

ii The PLAAF branches include: Aviation, Airborne, Ground-to-Air Defense, Radar, and Electronic Countermeasures.

PLAAF is magnified by the second part of the overall campaign, a public relations (PR) effort or campaign to 'sell' the service in the maritime domain to the civilian government, the Chinese Communist Party (CCP), and even some of the public at large. This PR campaign makes use of both traditional media, such as commercials, television shows, and movies, as well as social media, especially Weibo, to convey the desired PLAAF message that the service is relevant in the maritime domain.ⁱⁱⁱ However, there is often a stigma attached to PR campaigns; they may be seen as attempts to manipulate the public's impression with no real sincerity behind them. This applies to a commercial brand, a politician, or a military. This feeling is something the PLAAF is likely trying to guard against during its PR effort. In order to bolster its image, it also appears the PLAAF relies on a small range of international good will activities, both done in real life and depicted in media, and is more heavily reliant on controversial Chinese sovereignty and maritime claims than the messaging of other PLA services, which tend to be more balanced.

ⁱⁱⁱ Weibo, or more fully Sina Weibo, is a popular Chinese social media platform similar to Twitter.

Why the Maritime Domain?

Domains are critical to military services. They define the service that enjoys primary jurisdiction over them. The Army is defined by the land, the Navy by the sea, and the Air Force by the sky; however, not all domains are created equal. A service's relative standing is typically influenced by the amount of a particular domain within and around a country, which is usually unchangeable, as well as the perceived value of that domain, which can change significantly. When the perceived value of a domain changes significantly, as was the case for aerospace starting in the 1940s, services often jockey for position. For example, in the U.S. and USSR, many organizations battled for control of emerging missile and space programs at the start of the Cold War.⁴ For the People's Republic of China (PRC), there is no domain that has risen in importance as quickly as the maritime domain in recent years. This domain includes a sea-based component, as well as an aerospace component in which the PLAAF, the PLA Rocket Force^{iv} (PLARF), and the PLAN all have a role to play. Since 1978, when the country began to open up economically, the PRC has become increasingly dependent on trade, the vast majority of which is transported over water.⁵ By 2006, "maritime industries" accounted for nearly 10% of China's gross domestic product (GDP).⁶ Since the launch of the Belt and Road Initiative (BRI) in 2013, the PRC has become even more reliant on trade and investment abroad, and by extension, the maritime domain. The importance of trade has grown so much that the maritime component of the BRI now even includes a "Polar Silk Road."⁷

^{iv} In 2016, the PLA Second Artillery Force (PLASAF) was upgraded to a service and renamed the PLARF. Prior to 2016, the PLASAF was an independent force, which was often treated as a service but lacked the bureaucratic standing.

However, it is not just the economy that has made the maritime domain so important, but also China's expansive and heavily disputed maritime and sovereignty claims. Three of China's most high-profile sovereignty disputes involve Taiwan, the South China Sea, and the East China Sea. They all involve islands or other physical features surrounded by vast bodies of water, all of which have become even more high-profile in recent years. Such factors have led officials to declare that "China is a maritime country."⁸ Given such importance, it is natural for the PLA as a whole to shift an increasing proportion of its attention towards the maritime domain.

Still, the rise of the maritime domain is only half the story. This rise comes at a time when the recorded defense budget for the military has dropped to single-digit growth after over two decades of annual double-digit growth.^v Combined with the mounting expense of increasingly complex weapons, equipment, platforms, and highly trained and educated personnel, the services of the PLA have strong incentive to look to the maritime domain for salvation from tightening budgets and mission irrelevancy.⁹

When the situation of the PLA is examined with the lessons learned from the field of inter-service rivalry and military politics in mind, the need for greater examination of the internal politics of the PLA and their implications for the decisions and development of each service only grows. The "intensity of interservice rivalry is frequently reputed to be inversely related to the size of the defense budget," or, in this case, the combined downward pressure of the shrinking growth of the budget and the growing expenses of the services.¹⁰ While the budgetary process does vary country by country, it is a process that all militaries must deal with. At its core, it is a negotiation between the military and the civilian government, with the services and their branches competing for a greater share of the resources. What resources a branch or service receives critically drives what current actions it can continue taking and what future actions it can afford to take. This can alter the structure, capabilities, and mission relevance for the services. For example, if the PLAN's share of the defense budget were to drop significantly, it would be unable to add aircraft carriers to its fleets, given the significant expense of such platforms.¹¹ Its planned expansion of its carrier-based air wing would therefore have to be shelved. Fewer cadets would then have to be allowed to enter the carrier aviation program at the PLAN's Naval Aviation University/Naval Aeronautical University.^{vi} With the only operational PLAN carrier, the Liaoning, limited to

v The military budget is closely tied to the gross domestic product (GDP) and government expenditure growth, both of which have slowed in recent years.

vi The names "Naval Aviation University" and "Naval Aeronautical University" have both been used by official state-run media outlets. The new university will be located in Yantai, Shandong, with a campus and training

serving only as a training carrier, the careers of the existing carrier-based aviators would stall. Fewer new cadets would then see the allure of a career in a stalled wing of Naval Aviation. The shrinking number of relevant personnel and limited number of platforms to perform air defense of PLAN fleets and strikes would then limit what operations the PLAN could perform on its own and what joint operations it could contribute to. In the end, these consequences would feed back into the budgetary process, and the PLAN's share of the budget might again be reduced.

Reports on the budgetary politics of American inter-service rivalries have indicated that, at times, domestic factors, like threats from one service towards another's missions and bureaucratic interests, can actually have a more significant impact on service strategic planning efforts and the policies services advocate, than do potential adversaries.¹² At times, protecting or expanding the interests of the service can supersede military requirements in decision making, regardless of what language its actions are couched in. The actions and words of a service can be based on helping itself, rather than necessarily being in the best interests of the country. How this situation arises can range from something as simple as service parochialism to something as subtle as the unintentional conflation of the 'service good' with the 'national good.'¹³ In the struggle to sell how they can benefit the nation, services can also end up promising more than they can deliver, which can result in distorted operational policy.¹⁴ How services sell themselves also tends to vary based on the characteristics of the particular service.¹⁵

There are two final reasons why the PLA services are focusing more on the maritime domain: genuine belief in its growing importance, and the need to obtain new personnel. There are undoubtedly many people outside of the PLAN who have genuinely come to believe in the importance of the maritime domain and believe that as part of a joint force, even the non-naval services can and should play a role in maritime operations. As to the second, aside from slowing budget growth, all of the services are struggling to recruit^{vii} future personnel from a drastically different society than existed only a few decades ago.¹⁶ While the Chinese population is better educated on average, which has meant higher quality potential personnel, economic growth has led to a boom in attractive civilian jobs that is luring many a potential recruit away from seriously considering a career

base in Qingdao, as well as training bases in Huludao, Liaoning, in Changzhi, Shanxi, and in Qinhuangdao, Hebei. See Wang Lei, "China's Only University to Train Carrier-Based Fighter Pilots Makes Debut," *CGTN*, May 29, 2017, available at <https://news.cgtn.com/news/3d517a4e3241444e/share_p.html>.

vii The PLA uses both the terms "conscription" and "recruitment," and often interchangeably in Mandarin. For the purposes of this paper, we will use the terms "recruit" and "recruitment" for brevity.

in the military.^{viii} At the same time, the pool of potential personnel, particularly for two-year enlistments, is also less physically and mentally fit than in the past, with an increasing percentage of them being ineligible for recruitment on health grounds.¹⁷ Greater competition for the remaining better educated candidates means the services are having to think more carefully about how to better entice them to join.¹⁸ Some of that greater competition is a result of the growing aviation programs in the services. In the past, if potential recruits wanted to fly, their only real option was to go to the PLAAF. Today, however, the other services are viable alternatives. For example, the PLAA's Army Aviation branch has the majority of the PLA's helicopters, which previously belonged to the PLAAF.^{ix} The PLAN's Naval Aviation branch now has both land-based aircraft and a growing fleet of manned and unmanned aircraft that can operate from its vessels at sea. Even the PLAN's Marine Corps now has its own air arm.¹⁹ Amid these pressures on PLAAF recruitment, the maritime domain offers all personnel not just the chance to travel far from the shores of their homeland, but an opportunity to protect the waters and physical features the education system has taught them are rightfully theirs. The domain is portrayed as new and exciting, as well as imbued with a higher political significance for a rising China reasserting itself.

Naturally, most observers would imagine that the rise in prominence of the maritime domain would be great news for the PLAN, and they would be correct; however, it is also an opportunity for the other services, especially the PLAAF, to expand their roles and subsequent relevance for future missions. The PLAAF has been the most aggressive non-naval service seeking to establish an expanded role in the maritime domain, not just through its training, education, assets, and patrols, but also through a concerted PR campaign aimed at the civilian government, the CCP, and the general public. The goal is for the targets of the PR campaign to view the PLAAF as a crucial actor, if not on par with the PLAN, for conducting operations in the maritime domain.

viii Historically, and across all militaries, a strong economy has meant greater difficulty for services in recruitment. See Nafeesa Syeed and Chloe Whiteaker, "Low U.S. Unemployment Is Making Army Recruiting Harder," *Bloomberg*, March 13, 2018, available at <<https://www.bloomberg.com/news/articles/2018-03-13/trump-s-army-buildup-confronts-headwinds-of-tight-labor-market>>.

ix Even though the PLAAF has been able to reacquire some helicopters, the PLAA still retains the majority of them, which were transferred in the 1980s. It was that original transfer which enabled the PLAA to set up its Army Aviation branch. See Kenneth W. Allen, *PLA Air Force, Naval Aviation, and Army Aviation Aviator Recruitment, Education, and Training*, (Washington, D.C.: The Jamestown Foundation, April 8, 2016), 50. For the number of helicopters per service, see International Institute for Strategic Studies, *The Military Balance*, (Routledge, February 16, 2017), 279-285. For the number of helicopters in each type of unit, see Dennis J. Blasko, "Recent Developments in the Chinese Army's Helicopter Force," *China Brief*, Vol. 17, Is. 8, June 9, 2017, available at <<https://jamestown.org/program/recent-developments-chinese-armys-helicopterforce/>>.

Why the PLAAF? Failure, Opportunity, and Need

All of the services have, to some extent, recognized the importance of the maritime domain, and have tried to make the changes necessary to maximize their presence and roles in that domain. However, to date, the PLAAF has been the most successful in inserting itself into the maritime domain. The other non-naval services have largely failed to make effective bids so far, while the PLAAF's primacy in the aerial domain, which stretches out over the seas, gives it a unique opportunity to naturally insert itself without having to push arguments that strain credulity or require special circumstances.^x The need of the PLAAF to ensure it maintains operational relevance as the potential areas for conflict move farther away from its traditional areas of operation likely added to its desire and bureaucratic need for expansion into the maritime domain.

The PLAA has been the slowest of the four services to respond to the new importance of the maritime domain. Claims that the service has “accelerated its advancement...towards the sea” aside, the PLAA has actually been the ‘biggest loser’ organizationally in the shift towards the maritime domain.²⁰ The PLAA continues to lose personnel, while the PLAAF, PLAN, and especially the PLAN Marine Corps (PLANMC) continue to expand. The reported quadrupling of the PLANMC is said to be largely drawn from the PLAA's amphibious units.^{xi}

x Although the PLARF has made interesting in-roads with the development of anti-ship ballistic missiles (ASBMs), it still lacks an active presence in or above the maritime domain. The PLAA's claims of maritime relevance, especially with regard to a potential role in capturing small physical features far out at sea, despite its limited maritime and amphibious capability, comes off as a desperate attempt to claim mission relevance.

xi The first members of the PLANMC came from the PLAA. See, Li Faxin, *The PLA Marines*, (Beijing, PRC: China Intercontinental Press, 2013), 10. Re-subordination of units from the PLAA in recent decades have also helped the PLANMC expand. See, Dennis J. Blasko, “What is Known and Unknown about Changes to the PLA's Ground Combat Units,” *China Brief*, Vol. 17, Is. 7, May 11, 2017, 7. As part of this rebalance, which included the dissolution of 5 of 18 group army headquarters, PLAA personnel are on track to become less than half of PLA personnel. See Office of the Secretary of Defense, *Military and Security Developments Involving the*

In December 2017, the PLANMC appeared to have already acquired another full brigade, bringing its total to three.²¹ This expansion in numbers has allowed the PLANMC to spread out beyond just the South Sea Fleet to the rest of the Fleets.^{xii} In fact, in its 2018 report, the Pentagon forecasted:

“By 2020...the PLANMC will consist of seven brigades, may have more than 30,000 personnel, and will expand its mission to include expeditionary operations on foreign soil, as PLANMC forces are already operating out of the PLAN’s base in Djibouti. A newly-established PLANMC headquarters is responsible for manning, training, and equipping the expanded PLANMC and, for the first time, the PLANMC has its own commander, although it is still subordinate to the PLAN. The PLANMC may also incorporate an aviation brigade, which could provide an organic helicopter transport and attack capability, increasing its amphibious and expeditionary warfare capabilities.”²²

Such an expansion would further reduce the room for the PLAA in amphibious or expeditionary operations.

The recognition by the PLA that “the main threat of war has already shifted from the traditional inland direction to the ocean direction” and that it will be “increasingly difficult to protect the homeland from the homeland and the near seas from the near seas, it might even become untenable” has continued to shift the PLA’s overall strategy away from the PRC and its immediate periphery, which favored the PLAA, toward the maritime domain, which does not.²³ The PLAA’s Army Aviation and special operations force (SOF) units are likely its best bet to have some involvement in overseas operations in future conflict, but while the PLAA has been recently emphasizing both, their development will still take years and significant resources to achieve the needed capability.²⁴

The PLARF has also made attempts to increase its presence and roles in the maritime domain, but with few tangible results. It has attempted to capitalize on the old Chinese approach of “using the land to control the sea” (以陆制海) through its control over most of the PLA’s large, diverse, and growing arsenal of advanced missiles, particularly land-based anti-ship ballistic missiles (ASBMs).²⁵ Missiles like the DF-21D, dubbed the “carrier-killer,” have obvious implications in the maritime domain, especially given the centrality of carriers in the U.S.

People’s Republic of China 2018 (Arlington, VA: Department of Defense, August 16, 2018), 3, 24, available at <<https://media.defense.gov/2018/Aug/16/2001955282/-1/-1/1/2018-CHINA-MILITARY-POWER-REPORT.PDF>>.

xii Previously, the PLANMC was only present in the PLAN’s South Sea Fleet, but now it has a presence in the PLAN’s North Sea and East Sea Fleets as well.

Navy.²⁶ The “carrier-killer” is joined by the PLARF’s DF-26, which also has an ASBM function and is dubbed by analysts the “Guam-killer” for its stated ability to hit the U.S. territory. This would seem to be another attempt by the PLARF to elevate its maritime-relevant capabilities.^{xiii} There are even indications that the PLARF has been practicing taking the lead in a preemptive strike on the U.S. Navy in the Asia-Pacific by practicing to strike U.S. vessels at Yokosuka, Japan.²⁷ However, while the PLARF can use its vast arsenal of missiles, including conventional cruise missiles, to target land-based objectives, such as ports and bases, and has a deployed capability against aircraft carriers, when forced to deal with vessels smaller and faster than an aircraft carrier, which are the majority of naval and maritime vessels, the PLARF might have greater difficulty in targeting them precisely.²⁸ Perhaps most importantly, at the end of the day, the PLARF lacks any capability to “put boots on the ground” or really participate in an amphibious landing. The PLARF’s lack of an active presence in or above the maritime domain will limit the degree to which the service can expand its ‘turf’ directly into the maritime domain; it will have to remain on the periphery of this particular turf war amongst the PLA services.

The PLA Strategic Support Force (PLASSF) has a significant role as a facilitator of operations in the maritime domain through its acting as an “information umbrella” for the PLA services.²⁹ The old adage, “information is power,” exists for a reason. The PLASSF’s control of the PLA’s space-based information assets, as well as its own aerial electronic warfare and early warning assets, will ensure a significant, if supporting, role in the increasingly contested maritime domain. While undoubtedly enticed by the growing emphasis on the maritime domain, given its explicit role as a facilitator, the PLASSF has little capability to make any substantive play for greater turf in the maritime domain.

The PLAN has obviously benefited the most from the growing emphasis on the maritime domain, as have its branches, such as Naval Aviation and the PLANMC. Despite advances by the other services, the PLAN has multiple avenues to limit the bureaucratic and rhetorical incursions into its primacy in the maritime domain by the other services.³⁰ Nonetheless, the PLAN is still likely wary about a concerted push by the PLAAF to move in ‘on its turf.’ Given the importance of control of the air for naval warfare and the growing reach of land-based aircraft, such an effort is worth monitoring.^{xiv}

xiii Control of such “assassin’s mace” (杀手锏) (or “silver bullet”) weapons undoubtedly gives the PLARF an important tool in establishing a foot-hold in the maritime domain. See Andrew S. Erickson and David D. Yang, “Using the Land to Control the Sea: Chinese Analysts Consider the Antiship Ballistic Missile,” *Naval War College Review*, Vol. 62, No. 4, (Autumn 2009), 60–61.

xiv There is historical rivalry, tension, and sometimes even animosity between navies and air forces (or early air arms) around the world. One of the most famous quotes on this relationship is from U.S. Air Force General

A combination of factors has led the PLAAF to focus greater attention towards operations in the maritime domain and to rely on a PR-heavy strategy as part of that expansion. Perhaps the most basic of which is the simple fact that the PLAAF's domain of primacy, the sky, extends over the entire sea, and indeed over the entire Earth. Despite this, historically the PLAAF has been, and to a certain extent remains today, tethered to the Chinese homeland.^{xv} While the PLAN was given its own service strategy, Offshore Active Defense, back in 1986, the PLAAF had to wait until 2004 before it was given its "first-ever component of the PLA's Active Defense...strategy."³¹ Prior to that point, the PLAAF "relied almost solely" on the PLAA's land-focused "Active Defense' operational component as its strategic-level doctrinal guidance."³² The 2013 Chinese Defense White Paper stated that, while the other services "all undertake some territorial air defense responsibilities," the PLAAF "is the mainstay of national territorial air defense."³³ This means that the primary mission of the PLAAF theoretically restricts it to operating in Chinese airspace and in China's immediate periphery.^{xvi} In addition, given the large number of disputes China has with its many neighbors, the PLAAF will likely be kept quite busy with operations in the country's periphery for quite some time.

Another limiting factor for the PLAAF was the lack of a strong clear mission in peacetime, and, in a way, really even during wartime. While in the 2015 Chinese Defense White Paper the PLAN was given the new focuses of "offshore [near seas] defense" with "open seas protection," the PLAAF's vague mission focus of "both defense and offense" was merely reiterated.³⁴ The continuation of the vague and, at times, inconsistent wording, in official documents and by top personnel of the service's "missions" and "tasks," belies the difficulty for the PLAAF in defining itself and what it is supposed to do.³⁵ While the air force of a country that regularly conducts long-distance combat operations could argue that the need for quick targeted strikes and the rapid deployment of soldiers and equipment requires air primacy in such operations, China does not currently conduct these types of missions; therefore, this argument is denied to the PLAAF for the time being. Although PLAAF analysts have called for the service to emphasize offensive operations over defensive ones, without a war going on, that argument

Curtis LeMay: "The Soviets are our adversary. Our enemy is the Navy." See Ward Carroll, "The complete hater's guide to the US Navy," *We Are The Mighty*, October 29, 2015, available at <<https://www.wereinthemighty.com/articles/the-complete-haters-guide-to-the-us-navy>>.

xv From its inception, Chinese military and civilian leaders rarely thought of the PLAAF in terms of operations beyond the territory that the PRC claimed. See Xiaoming Zhang, "The PLAAF's Evolving Influence within the PLA and upon National Policy," Richard P. Hallion, Roger Cliff, and Phillip C. Saunders, eds., *The Chinese Air Force: Evolving Concepts, Roles, and Capabilities*, (Washington, D.C.: National Defense University Press, 2012), 75 and 89.

xvi Operational range limitations also historically restricted the reach of the PLAAF.

has its limits. Without a clear or pressing mandate, as the PLAN has, and with its comparatively limited effective operational range, the PLAAF has had to rely more heavily on “selling” what it could do in a potential conflict and what it can still do in peacetime, in order to bolster its position.

As will be detailed in the next section, the PLAAF has been re-shaping itself to be more useful, and therefore competitive for missions, roles, and resources, in relation to the other services, though primarily the PLAN, in the maritime domain. The capabilities of the PLAAF relevant for the maritime domain are substantial and growing for operations along China’s periphery, particularly within the First Island Chain. The importance of air control for the operation of military vessels at sea was proven definitively in World War II. While the PLAN has land-based aircraft and an increasing number of aircraft that can be deployed from ships at sea, these represent only a small proportion of the land-based aircraft the PLAAF can employ. The sheer number of aircraft at the PLAAF’s disposal, in addition to its, albeit limited, aerial refueling capabilities, guarantees at least a protective role for the PLAAF in any maritime conflict on China’s periphery. However, the limited operational range of PLA aircraft of any service, combined with the PLAAF’s weak mid-air refueling capability, means that, while relevant for an attempted invasion of Taiwan, the PLAAF is not yet relevant for protecting the PLAN on the open seas.^{xvii} The PLAAF has therefore had to rely on a combination of continuing to change itself to be better suited for operations in the maritime domain and to advertise itself, particularly via social media, conducting actions like ‘patrolling’ around Taiwan. All of this is part of an effort to sell the idea of what could be called a capable ‘blue sky’ PLA Air Force.^{xviii}

xvii While the PLAAF has weak mid-air refueling capabilities, those of Naval Aviation are even weaker. For more on the weak mid-air refueling capabilities of both, see Wulong Fangwu Pinglun [乌龙防务评论], “The Chinese Air Force Aircraft’s Aerial Refueling Capabilities are Very Weak, the Chinese Navy’s Aerial Refueling Capabilities Are Even Weaker” [中国空军的空中加油机力量已很薄弱, 比它还弱的, 是中国海军], *Sina Watchpoint* [新浪看点], May 23, 2018, available at <http://k.sina.com.cn/article_2394530374_8eb9a246001007n6d.html>. For more on the role of the PLAAF in a potential invasion of Taiwan, see Ian Easton, *The Chinese Invasion Threat: Taiwan’s Defense and American Strategy in Asia*, (Arlington, VA: Project 2049 Institute, 2017), 178.

xviii This is a play on the naval phrase “blue water” navy. In this case, a ‘blue sky’ PLA Air Force (PLAAF) means the service being able to conduct effective, mainly independent, operations far away from China’s shores, especially over water. The service even set one of its promotional videos to the song “I Love the Motherland’s Blue Sky” while highlighting flights along new routes that extend farther from shore. See the second post on the PLAAF’s official Weibo account on May 13, 2018, available at <<https://m.weibo.cn/status/4239356933949601>>.

PLAAF Shaping Itself for the Maritime Domain

The PLAAF, so far, has made the clearest effort among the land-based services to ensure that it is not left out of the new emphasis on the maritime domain. Despite its traditional focus on overland operations, in the past few years, the PLAAF has taken significant steps to establish a foot-hold in over-water operations, the traditional domain of the PLAN, and particularly Naval Aviation.³⁶ Likely, this was particularly important for the PLAAF to aggressively move in on the growing maritime domain before other services did, as it faces the dilemma that it cannot “hold ground” the way the PLAN or PLAA can, due to its inability to loiter for long periods of time.³⁷ In 2008, the service began the process of transforming itself into a “modernized strategic air force,” which necessitated an expanded area of operations for the service.³⁸ While both the PLAAF and Naval Aviation have sought to extend their reach beyond the traditionally limited perimeter of China’s immediate periphery, the U.S. Pentagon’s 2018 report on the Chinese armed forces noted that “the PLAAF, in particular, has received repeated calls from its leadership to become a truly ‘strategic’ air force, able to project power at long distances and support Chinese national interests wherever they extend.”³⁹ One prominent article by a former member of the PLAAF’s Headquarters and the service’s military theory expert group that appeared in the PLAAF’s official newspaper stated that being *strategic* meant the service needed to be able to operate “within the entire strategic space of our country,” which itself was expanded to include “seas with resource development and administrative rights.”⁴⁰ The establishment of China’s East China Sea Air Defense Identification Zone (ADIZ) several years later in 2013 would give the PLAAF, “for the first time, an operational patrol space well away from China’s borders.”⁴¹ Since then, the service

has been expanding its area of operations further beyond that zone. This effort has been marked by a number of ‘firsts’ for the service.^{xix} Many of those ‘firsts’ have been high-profile and provocative. For example, PLAAF H-6K bombers have begun making “not infrequent” flights within range of Guam in what was described by U.S. defense officials briefing reporters as “practicing attacks on Guam.”⁴²

In order to keep advancing in the maritime domain, the PLAAF has overhauled training for its pilots to be better prepared for operations over water, including those farther from shore. This included the creation of new textbooks for its Aviation University, including *A Practical Handbook on Maritime Live-Fire Training with Trainer Aircraft* and *Safety Checklist for Maritime Live-Fire Training*.⁴³ Classroom work has been augmented by “regular high seas training” that was begun in 2015.⁴⁴ The PLAAF Aviation University also performed its first live-fire training at sea in 2015.^{xx} The service has been holding exercises practicing offensive and defensive operations at sea in “unfamiliar sea areas” more frequently.⁴⁵ The increasing focus on operations in the maritime domain has been incorporated into the “four key training brands” (四大品牌) of the PLAAF.⁴⁶ For example, in 2015, the *Golden Dart* competition, which involves attack aircraft and bombers and “aims to improve troops’ offensive air war-fighting capabilities,” was held over water for the first time.⁴⁷ The aforementioned change was made in response to “national security threats” and was aimed at “improving the maritime combat capability” of the PLAAF.⁴⁸ In another ‘maritime first,’ in 2017, the PLAN’s pilots participated in the *Golden Helmet* air-to-air competition, the winning of which is considered the “highest honor” for PLAAF fighter pilots.⁴⁹ This inclusion was likely, at least in part, to test and improve the maritime combat capability of the PLAAF’s aviation branch against a branch of another service that specializes in this capability. It might have even been done to try to best the PLAN in its own domain for bureaucratic and PR gain.

xix In March 2015, the PLAAF sent aircraft for the first time into the Western Pacific. See “PLA Air Force conducts first training in West Pacific,” *China Military Online*, March 30, 2015, available at <http://english.chinamil.com.cn/news-channels/2015-03/30/content_6420538.htm>. In December 2017, the PLAAF transited over the Tsushima Strait for the first time and carried out an exercise in the Sea of Japan. See Zhao Lei, “Air Force flies exercises over Tsushima Strait, Sea of Japan,” *China Daily*, December 19, 2017, available at <http://www.chinadaily.com.cn/cndy/2017-12/19/content_35330227.htm>.

xx The inclusion of regular high seas training and live fire training at sea are notable events as the PLAAF Aviation University only began conducting maritime flight training using a JL-8 trainer aircraft in 2014. See “PLA JL-8 Trainer Aircraft Conducts Maritime Training for First Time” [我军JL-8教练机首次进行海上训练低空掠过客轮], *Sina* [新浪], September 19, 2014, available at <<http://mil.news.sina.com.cn/2014-09-19/0922801951.html>>. Also, Li Kaiqiang and Zhang Hongwei [李开强, 张宏伟], “Air Force Organized First Live Fire Training at Sea for Flight School” [空军首次组织飞行院校海上实弹打靶], *PLA Daily* [解放军报], May 20, 2015, available at <http://www.mod.gov.cn/academy/2015-05/20/content_4585772.htm>.

Perhaps the best summation of just how far the PLAAF has come since it began “distant sea training” comes from a paraphrased statement given by PLAAF spokesperson Senior Colonel Shen Jinke to *Xinhua Online*: “in the two years since the Chinese Air Force launched distant sea training, interference from various obstacles has been dealt with, [and the Air Force has] engaged in reconnaissance and early-warning, maritime patrolling, maritime assault, and mid-air refueling training, which [have] improved distant sea mobility and tested distant sea combat capability.”⁵⁰ The service has also gone further, holding events, including events attended by its senior officers, to review its own early progress in overwater training and making corrections where it sees fit.⁵¹ The PLAAF is showing that it is committed to retaining and even expanding its overwater operations, putting it in more direct competition for relevant missions and resources with the PLAN and particularly Naval Aviation, which itself is rapidly expanding.

The PLAAF has sought to match its advancements during peacetime in the maritime domain with planned advancements for a possible conflict. However, any such advancements would encroach onto the turf of the PLAN, and particularly Naval Aviation, and could risk considerable pushback. The PLAAF has, therefore, gone about shifting the centrality of the sea in conflict in the maritime domain to the air. This is an attempt to give the PLAAF more options for maritime missions and responsibilities. The PLAAF has started to cast itself as a crucial defender of the PLAN, which itself is widely seen as necessary to enable the PLA to defend certain key Chinese economic and maritime interests, as well as certain sovereignty claims, in peacetime and wartime. Specifically, the PLAAF has been promoting the importance of command of the air^{xxi} as key to naval operations.⁵² An “expert” interviewed by the *People’s Daily Online* made one of the better pitches for the PLAAF:

*“With the assistance of the Air Force, in times of war, the Navy can more easily achieve command of the air over a large-scale area. In any conflict, the first thing to do is seize command of the air. Only when one possesses command of the air can aircraft carriers, large destroyers, and submarines exert their enormous capability to strike seaborne and ground targets.”*⁵³

xxi While some dictionaries translate “制空权” as “air supremacy,” “air superiority,” or “air domination,” the *Chinese Military Encyclopedia*, published by the Academy of Military Science, translates it as “command of the air.” See Fu Quanyou [傅全有], ed., *Chinese Military Encyclopedia* [中国军事百科全书], (Beijing: Military Science Press [军事科学出版社], July 1997, Vol. 3, 811-812. For this reason, this report will do the same. Thanks to Ken Allen for this distinction.

While this argument acknowledges the “primary role” of the PLAN, it emphasizes that the PLAAF is “also essential.”^{xxii} In 2014, then-Commander of the PLAAF, General Ma Xiaotian, gave a speech emphasizing the importance of air power on what happens at sea. According to General Ma, “winning the initiative in the air is important in effectively responding to all kinds of security threats at sea.... [We must] fully recognize the new circumstances in the defense of maritime rights. [It] gives the Air Force new meaning to accelerate the transition from territorial air defense towards attack and defense.... [We must] transform the ‘center of gravity’ of sea operations towards the employment of air power.”⁵⁴ Consequently, strike missions against maritime targets, islands, and reefs have become more frequent parts of PLAAF training and exercises.⁵⁵

General Ma’s successor as commander of the PLAAF, Lieutenant General Ding Laihang, stated in August 2017 that “exercises on the open seas will become a regular part of training.”⁵⁶ He elaborated that the service was “gradually expanding its blue-water training, and its weapons and equipment, communication systems, supplies and aviation search-and-rescue skills must catch up with the mission.”⁵⁷ High-level focus on maritime training and combat capabilities have continued, with Lieutenant General Ding at a major military training conference in January 2018 emphasizing the need to further deepen research and training to resolve the important and difficult issue of maritime combat operations.⁵⁸ PLAAF units have responded to the push, with at least one brigade in the Southern Theater Command explicitly stating that it had been increasing the proportion of sea-based training tasks it does compared to land-based ones.⁵⁹ This effort has been facilitated by the opening up of airstrips on Chinese-controlled artificial islands in the South China Sea, from which PLAAF aircraft can now take off and land during exercises and in a potential conflict.⁶⁰ In order to further extend the operational range of its aerial assets, the PLAAF has invested in acquiring additional and updated tankers, such as the IL-78/MIDAS and the rumored development of a tanker variant of the Y-20, to augment its small and aging fleet of tankers.⁶¹ An improved tanker fleet would be a needed boost to the maritime operation capability of the service, given that it has historically had limited mid-air refueling capabilities.⁶²

A further sign of the PLAAF’s focus on expanding operations in the maritime domain has been the increased emphasis on improving maritime search and rescue capabilities. With an increasing number of PLAAF pilots, both veterans and cadets, flying over water, the service needs to be able to rescue them after training

xxii This particular encapsulation came from Professor Shao Yongling of the PLARF Command Academy when arguing both the PLAAF and the PLARF have roles after the PLAN in the maritime domain. See Shao Yongling [邵永靈], *Weibo* [微博], February 26, 2016.

accidents and, if conflict breaks out, after being shot down. In November 2014, then-Commander of the PLAAF General Ma Xiaotian traveled to see the “Air Force’s first maritime unit” to hear an update on the construction of a maritime training base, visit with PLAAF ship crews, and emphasize the importance of improving the service’s maritime search and rescue capability.⁶³ On the new urgency of improving maritime search and rescue operations, General Ma stated that while “in the past, maritime activities were relatively infrequent,” now with “maritime military actions becoming more frequent,” the service must resolve such issues “as soon as possible.”⁶⁴ In parallel, it was urged that pilots must learn how to parachute over water and how to survive in the water until they can be found and rescued.⁶⁵

The push for increased jointness by the PLA also gave the PLAAF opportunities to insert itself into the maritime domain, and even amphibious operations, early on. For example, in 2013, the PLAAF was able to participate in a rare “tri-service joint beach seizing and landing [which] focused on joint intelligence gathering, maritime transport, assault landing, and joint firepower strikes.”⁶⁶ In fact, the Mission Action-2013 exercise “was the first cross-MR [(Military Region)] campaign exercise to involve amphibious landing operations and maritime force projection, and it was the first time that the PLAAF took a leading role in a Mission Action exercise.”⁶⁷ Similarly, “Joint Sea-2015 (II)” between Russia and China was notably the first international military exercise to involve both PLAN and PLAAF participants.⁶⁸ Given the growing importance of amphibious operations, such as against features, both natural and artificial, in the South China Sea in a potential future conflict, increased roles in joint operations, such as providing aerial cover, are quite valuable for the PLAAF as a service. They are especially valuable given that the PLAA, PLAN, and now even the PLANMC have their own aerial assets. As the capabilities of the PLAAF to conduct operations over water continue to improve, the push for jointness will offer the service further openings to increase its roles in operations during times of conflict in the maritime domain.

In order to further maximize its campaign to expand its missions and responsibilities in the maritime domain, including in potential combat situations, the PLAAF has expanded and further developed its branches which had previously received relatively little attention and fewer resources. In perhaps one of the more brazen moves to encroach upon the PLAN’s turf, the PLAAF has transformed and been expanding its own “vessel troops” for *on the water* operations.^{xxiii} While ^{xxiii} PLAAF vessel troops under the Southern Theater Command “established in 2012 a maritime training support base responsible for providing equipment and operational support for pilot parachuting and rescue at sea, maritime search and rescue, and surface targets setting up and recovery.” This base “is equipped with

the main task of these troops “is the transport of aviation fuel, materials and supplies,” in recent years the PLA AF has stepped up its “preparations on maritime combat and far seas combat patrol.”⁶⁹ In the words of *China Military Online*, there has been “a remarkable shift in the development focus of the vessel troops.”⁷⁰ Such a development could be a deliberate attempt to reduce the need of the PLA AF to rely on the PLAN for maritime security, as well as an attempt to produce assets that could then be used in traditional joint operations or operations traditionally solely handled by the PLAN.

The development of its vessel troops follows on the heels of the evolution of the PLA AF’s airborne troops. Since 2000, the PLA AF’s airborne troops “have been carrying out a transformation from a sole parachuting combat force to a synthesis of ground and air combat forces,” complete with their own “paratrooper assault and combat vehicles, self-propelled howitzers, self-propelled rocket launchers, [and] anti-tank missile launchers.”⁷¹ In 2008, according to one book that had “strong support and guidance” from the Ministry of National Defense, the PLA AF Airborne performed its “first ‘integrated parachuting’ of human and heavy equipment, marking a complete change of the PLA Air Force paratroopers from a lightly armed mode of ‘one person, one parachute, one gun,’ and light weapons with mortar to a new level of combat capability of long range rapid mobile operations.”⁷² In an interesting and PR-savvy move, the PLA AF chose to do this particular “first” “under the watchful eyes of 113 military observers from 36 countries.”⁷³ These airborne troops have begun to apply their new capabilities to operations in the maritime domain. In mid-2017, an air transport brigade of the airborne branch of the PLA AF conducted “an open sea, low-altitude, penetration tactical training over an unfamiliar sea area” in order to simulate an island airdrop. The PLA AF Airborne has also conducted simulated airdrops over “unfamiliar island targets” during exercises.⁷⁴ State-run media has indicated that the PLA AF’s airborne troops are being led in the direction of even greater maritime domain capabilities: those troops “are planning to foster the ability of vertical amphibious landing, namely sea-air combined operations.”⁷⁵ This is a particularly interesting plan, as the PLANMC already has this ability, and this push by the PLA AF might be a direct attempt to compete with the growing PLANMC for this role in missions.⁷⁶

Similarly, the PLA AF has been devoting renewed attention and resources to its only non-combat branch, its radar troops, which were traditionally relatively

tugboats, reconnaissance boats, landing boats and offshore rush-repair platforms,” as well as “combat vessels” “capable of performing alarm and guard duty during wartime maritime search and rescue.” See Li Jiayao, ed., “Vessel troops of the PLA Air Force,” *China Military Online*, January 19, 2018, available at <http://english.pladaily.com.cn/view/2018-01/19/content_7914789.htm>.

neglected. In line with the more recent push for more maritime turf, the PLAAF began adding new air defense radar stations after it was first put in charge of the joint air defense surveillance system in the East China Sea.⁷⁷ While this represents a low-profile aspect of the changes the PLAAF is undertaking, the service has sought to support and strengthen its growing network of radar stations, particularly those it operates on remote islands. General Ma even visited one such remote site in the old Guangzhou MR back in November 2014, where he “encouraged the officers and troops to ‘keep a sharp eye out’ for the good of the Motherland.”⁷⁸ Aside from involving the service in traditional air defense, control of such island facilities also gives the PLAAF a foothold in the “large-area maritime defense system” (大区域海上防卫体系), which utilizes a network of islands and reefs to help China project power into the maritime domain.⁷⁹ Yet, while military bases are often towns unto themselves, small radar stations on remote islands are psychologically isolating for those stationed there. Personnel feel farther from the amenities of home and in some cases cut off from the rest of the world. Some such PLAAF facilities, including the “East China Sea Number 1 Sentry,” have bolstered morale by establishing “mobile libraries,” as well as having officers organize regular events, like “WeChat Readings.”⁸⁰ Increased morale not only helps PLAAF personnel based on such islands perform better, but also can help reduce resentment towards such postings and work in radar stations in general.

However, it is not only in the classroom and operations where the PLAAF is moving into the maritime domain, but also in rhetoric. It is in the relatively unexplored realm of PLA PR that some interesting trends have emerged in the fight for a greater piece of the maritime domain.

PLAAF PR Campaign for the Maritime Domain

While the PLAN has indisputably been the PLA service to first and most successfully use the need to protect China's economic interests as an argument to support its continuing relevance, the PLAAF has attempted to follow its lead.^{xxiv} One book that was part of a series with the "strong support and guidance" of the PRC Ministry of National Defense, for example, contained an entire section on how the service was "supporting national economic development."⁸¹ Such highlighted support included sowing seeds via aircraft, conducting aerial mapping, providing aerial security for the 2008 Beijing Olympics, and delivering international aid.⁸² The PLAAF has even been involved in the cloud-seeding effort to ensure good weather for important national-level events.⁸³ But the service has seemingly been unable to tie itself as closely to important economic activities, such as trade, as the PLAN has been able to do. That ability, or lack thereof, to tie itself to missions in peacetime to protect Chinese interests abroad is of growing importance.

The PLAN has continued to run PRC anti-piracy patrols in the Gulf of Aden, and the PLA troops involved in UN peacekeeping missions continue to

xxiv Years ago, the PLAN began casting itself as the true protector of China's continuing economic development and growth, such as by protecting the vital routes for resources into the country and trade in and out of it. See M. Taylor Fravel and Alexander Liebman, "Beyond the Moat: The PLAN's Evolving Interests and Potential Influence," Philip C. Saunders, Christopher Yung, Michael Swaine, and Andrew Nien-Dzu Yang, ed., *The Chinese Navy: Expanding Capabilities, Evolving Roles*, (Washington, D.C.: National Defense University Press, 2011), 41 and 75-76. More recently PLAN leaders have continued to tie the strength of the PRC as a country to the strength of the PLAN. In 2014, Admiral Wu Shengli stated, "[s]ince the 21st century, the ocean has been closely linked with a nation's prosperity, people's wellbeing[,] and social stability as it had never been. The navy is the main part of a nation's sea power. A new naval relation is required by each country in the region to meet the challenges facing their common security, [and] is an important guarantee of regional prosperity and development, as well as a proper approach for building harmonious ocean[s]." See "Navy commander: Follow general trend, jointly build new naval relations," *China Military Online*, April 23, 2014, available at <http://eng.mod.gov.cn/DefenseNews/2014-04/23/content_4505000.htm>.

overwhelmingly come from the PLAA.⁸⁴ The PLAAF has had more difficulty finding a similar regular international good will opportunity in peacetime. The PLAN has also been able to use its more frequent joint military exercises with foreign countries, its regular port calls by its warships, as well as the free medical care provided by its visiting hospital ship, to build up the image of the service and the country around the world as a ‘global force for good.’^{xxv} It even led the state-run *CGTN* news network to say that as the PLAN “assume[s] greater authority on the high seas,” its officers have undergone “internationalization.”⁸⁵ The closest equivalent for the PLAAF, and really the only unique response it has to those international public good will builders, are the performances put on at air shows by the Bayi Aerobatics Team and the Hongying Aerobatics Team.^{xxvi} Nonetheless, it has similarly tried to sell the image of itself as contributing to the international good and protecting Chinese citizens and assets abroad, such as with its assistance to evacuate Chinese citizens from Libya in 2011 and the search for Malaysian Airlines Flight 370 in 2014, but has had limited success.^{xxvii} After all, according to one expert, the ‘first law of propaganda’ states that “even the best promotional buildup will ultimately fail to sell a questionable product.”⁸⁶ Compared to the success of what the PLAN actually does on a daily basis, it was always going to be a hard sell for the PLAAF on this topic.

xxv From 2002-2016, the PLAN participated in 47% of all international military exercises that involved the PLA, the most of any service. During that same time period, the PLAAF only participated in 10%. See Kenneth Allen, Phillip C. Saunders, and John Chen, *Chinese Military Diplomacy, 2003-2016* (Washington, D.C.: National Defense University, July 2017), 32. The phrase “a global force for good” was the tag line of a former advertising campaign by the U.S. Navy. See Jared Hill, “Navy Recruiting Command Releases New Advertising Campaign,” *United States Navy*, August 2, 2009, available at <http://www.navy.mil/submit/display.asp?story_id=48735>.” While the PLAN has not used the exact wording as the U.S. Navy, it has heavily used that same sentiment in how it publicizes its activities, real and fictionalized.

xxvi These two PLAAF exhibition teams are China’s version of the U.S. Navy’s famous “Blue Angels” or the U.S. Air Force’s “Thunderbirds.” For more on the Bayi Aerobatics Team and its participation in international air shows, see Michael S. Chase, Kenneth W. Allen, and Benjamin S. Purser III, *Overview of People’s Liberation Army Air Force “Elite Pilots,”* (Santa Monica, CA: RAND Corporation, 2016), 19-21.

xxvii One of the strongly suspected reasons why the PLAAF sent IL-76 transports to help with the nearly finished evacuation from Libya in 2011 was that the service had “a strong determination to ‘get into the game’ and showcase its long range air transport capabilities.” See Gabe Collins and Andrew S. Erickson, “The PLA Air Force’s First Overseas Operational Deployment: Analysis of China’s decision to deploy IL-76 transport aircraft to Libya,” *China SignPost*, March 1, 2011, available at <<http://www.chinasignpost.com/2011/03/01/the-pla-air-forces-first-overseas-operational-deployment-analysis-of-chinas-decision-to-deploy-il-76-transport-aircraft-to-libya/>>. In the end, the PLAAF only evacuated “less than six percent of total Chinese citizens evacuated out of Libya.” See Christina L. Garafola and Timothy R. Heath, *The Chinese Air Force’s First Steps Toward Becoming an Expeditionary Air Force*, (Santa Monica, CA: RAND Corporation), 25. There has been some argument between supporters of the PLAN and the PLAAF over which service is better suited to carry out the evacuation of citizens abroad. See Michael S. Chase, “The PLA and Far Seas Contingencies: Chinese Capabilities for Noncombatant Evacuations,” Andrew Scobell, Arthur S. Ding, Phillip C. Saunders, and Scott W. Harold, ed., *The People’s Liberation Army and Contingency Planning in China*, (Washington, D.C.: National Defense University Press, 2015), 310. For more on the involvement of the PLAAF in the search for Malaysian Airlines flight 370, see Zhang Tao, “Record of Chinese Air Force’s search for MH370,” *China Military Online*, April 11, 2014, available at <http://eng.mod.gov.cn/Database/MOOTW/2014-04/11/content_4503333.htm>.

The PLAAF has, however, seemingly found more success in signaling China's resolve over the country's disputed sovereignty claims, particularly against Taiwan. Again, following in the footsteps of the PLAN, it has begun asserting that its operations are critical to maintaining national sovereignty claims and maritime interests. For example, following the deployment of some of its most advanced aircraft, such as the Su-35, to exercise in the South China Sea, a professor from the Air Force Command Academy stated that such actions showed the service's "resolution to implement missions in the new era and firmly maintain national sovereignty and security and maritime interests."⁸⁷ The PLAAF frequently releases video of its 'patrols' around Taiwan, oftentimes using aircraft, such as the H-6K, that only it possesses. If the PLAAF's intent was not clear enough, on at least one occasion a video posted on its Weibo account had PLAAF aircraft on 'patrol' superimposed over a map of Taiwan, followed by the narrator saying how it was a sacred mission to ensure that not an inch of Chinese territory can be separated from it and how the PLA has the confidence and capability to defend national sovereignty and territorial integrity, all while only PLAAF aircraft are shown.⁸⁸ If performing and then highlighting one 'patrol' in a week on its Weibo account is not enough to get the message across, the PLAAF has also shown itself willing to dispatch multiple flights in a single week to deter "Taiwan independence forces."⁸⁹

However, the messages that the PLAAF has been trying to send are only part of the story. The ways in which the service has chosen to send them are important to understand, and reveal more nuance in this aspect of inter-service rivalry within the PLA.⁹⁰ The PLAAF has already begun bumping up against the PLAN, and particularly Naval Aviation, in public. While the PLAAF has prominently and frequently advertised its overwater flights, particularly those over greater distances, Naval Aviation has been less active in publicizing its own such flights.^{xviii} In fact, long-range flights over water by Naval Aviation H-6 bombers (including all its variants) only began to be announced after the PLAAF began to announce its own such flights. Prior to this, Naval Aviation had nine such flights that received no official Chinese coverage.⁹¹ Furthermore, much of the reporting on the same type of subsequent Naval Aviation flights was not from the PLAN itself, but from foreign sources, such as the Japan Self-Defense Forces' press releases. On the other hand, the world has primarily learned about noteworthy PLAAF flights directly from the PLAAF itself, especially from its social media accounts. One of

xviii Of all the long-range bombers flights over water by Naval Aviation between September 8, 2013 and May 18, 2018 that involved H-6 bombers (including all of its variants), only two were announced by PLAN entities, only one of which was made by Naval Aviation itself. See Derek Glossman, Nathan Beauchamp-Mustafaga, Logan Ma, and Michael S. Chase, *China's Long-Range Bomber Flights: Drivers and Implications*, (Santa Monica, CA: RAND Corporation, 2018), 60-66.

the spokespersons for the PLAAF, Senior Colonel Shen Jinke, openly stated that the service's use of traditional, and particularly social media, namely its Weibo account, is in part to increase its influence in Chinese society and to have a "bigger say."⁹² The PLAAF has benefited from social media, in particular, creating its own accounts years before another PLA service did. This includes its account for the entire service "Air Force Release" (空军发布) on Weibo and WeChat, as well as a popular, though unofficial,^{xxix} account for the Airborne (paratrooper) branch of the PLAAF titled "Our Sky" (我们的天空) on WeChat and Weibo.⁹³ The PLAAF established its own official service social media accounts back in 2015, and it did not face any competition from another PLA service until the PLAA launched its own official service WeChat and Weibo accounts in May 2018.⁹⁴ The PLARF would not do the same until February 2019.⁹⁵ As of early March 2019, the PLAN had still not established its own official service social media accounts. That lead-time on the other services has yielded dividends for the PLAAF, including experience in maximizing the utility of its accounts, establishing a rapport early on in a social media environment where users are not used to being able to interact with official service accounts, and even being able to get out in front of fake versions of its accounts that slowed the establishment of accounts for other services and damaged their brands.^{xxx} The service had plenty of time to learn the utility of certain social media tools, such as hashtags, to help connect posts and to help topics trend. Indeed, the PLAAF created the hashtag "双十空军节" (Double Eleven Air Force Festival), which is a play on the fact that the PLAAF's birthday, November 11th, falls on the same day as the huge "Singles' Day" shopping holiday, which itself is particularly popular among young people.⁹⁶ The service then used this hashtag in 17 posts over the 13 days leading up to the service's 68th anniversary. This effort included ten posts in one day to promote the occasion, which also included a festival. A number of the promotional posts notably featured the PLAAF flying in the maritime domain or explicitly over physical features claimed by China in the East or South China Seas.⁹⁷ Quite a few of the images showcased were, in fact, the creations of PLAAF "fans," whose works were selected and then promoted by the service's Weibo account. This is

xxix Chinese media have used differing language to describe such unofficial accounts. Some articles say "unofficial" and others describe them as "non-authenticated." As the majority appear to use the word "unofficial," this paper will do so as well. For more information, see endnote 92.

xxx For example, it was reported that a fake account for the PLARF was "publishing erotic and vulgar content" on WeChat. See Zhang Hui, "Fake social media accounts damaging image of Chinese military," *Global Times*, July 11, 2017, available at <<http://www.globaltimes.cn/content/1055923.shtml>>. The PLARF would not establish any official service social media accounts, on WeChat or Weibo, until February 2019. See "PLA Rocket Force opens first social media accounts with a bit of humor," *Global Times*, February 17, 2019, available at <<http://www.globaltimes.cn/content/1139121.shtml>>.

another tactic to bolster social media presence by helping to make followers feel they are really a part of, and contributing to, a community.⁹⁸

Being able to directly interact with a wider audience by commenting on “hot topics” in a timely manner via social media is also beneficial, not just for the messages being conveyed, but also to boost the number of followers of the account.^{xxxix} Similarly, the PLAAF has benefited by showcasing itself during general PLA events, such as anniversaries, and civilian events like the 19th Party Congress. Social media has also been useful for the PLAAF to promote PLAAF-specific events.⁹⁹ It can, among many other things, share glowing reviews by top foreign military officers on its progress in the lead up to important events.¹⁰⁰ It has even inserted itself into traditional holidays like the Spring Festival and Mother’s Day by releasing specialized videos that highlight itself as a service.¹⁰¹ Utilizing social media has given the PLAAF a powerful tool in “telling the Air Force story well.”¹⁰² Its use can complement more traditional and long-form mediums, such as books, that appeal to an older audience and/or an audience looking for more information than can fit in a normal Weibo post.^{xxxix}

The social media platform that the PLAAF has chosen to use as its primary PR tool shows a high level of media savvy. The three major online platforms the services can use to release information to the public, aside from traditional publications, are websites, WeChat, and Weibo. The PLAAF long ago chose to use its Weibo account primarily, while the PLAA has shown a preference for its own website and WeChat account.^{xxxiii} The PLAN, so far, has shown a preference

xxxix This was even noted by the head of the publicity statistics office of the Ministry of National Defense. See Zhang Zhihao and Zhao Lei, “PLA’s media volley seeks young recruits,” *China Daily*, January 5, 2017, available at <http://www.chinadaily.com.cn/china/2017-01/05/content_27864736.htm>.

xxxii Despite the PLAAF’s significant use of new social media to ‘tell its story’ and highlight its anniversaries, the service has not abandoned more traditional mediums. For example, while the PLAAF engaged in a social media blitz in the run-up to its 68th anniversary, it also used the occasion to launch the first part of its Air Force Story Series, a book series titled “Iron Blood Glory.” This first book series within this larger series showcases the service’s role in fending off ‘foreign aggression’ and defending Chinese sovereignty in the PLAAF’s early history, not just with an eye towards its main Aviation branch, but also its Airborne branch and Surface-to-Air Missile (SAM) units. See Zhang Wen and Guo Hongbo [章文, 郭洪波], “China Air Force Story Series ‘Iron Blood Glory’ Series Published” [《中国空军故事丛书》“铁血荣光”系列图书出版], *Guangming Daily* [光明日报], November 13, 2017, available at <http://www.xinhuanet.com/book/2017-11/13/c_129738998.htm>.

xxxiii In fact, in a December 2017 article in *China Daily*, PLAAF spokesperson Senior Colonel Shen Jinke stated outright that the service Weibo account “is the only platform where the air force releases its news.” See Shen Jinke, “Timely news on military will boost public confidence,” *China Daily*, December 16, 2017, available at <http://www.chinadaily.com.cn/opinion/2017-12/16/content_35315890.htm>. The PLAAF does use its WeChat account to make announcements, but they result in headlines less frequently. This can be seen from the fact that, while the PLAAF’s Weibo account has often made headlines, its WeChat account did not make the top 20 list of most influential Chinese military and central media accounts on that social media platform by *China Military Online* and the *Ministry of National Defense Online*. See Feng Lingling [冯玲玲], ed., “Military Affairs-Type Public WeChat Accounts Publicity Rankings” [军事类微信公众号排行榜公示], *Ministry of National Defense Online* [国防部网], June 19, 2016, available at <http://www.mod.gov.cn/topnews/2016-06/19/content_4677355.htm>. For an example of the PLAAF using its WeChat to make headlines, see Shan Jie, “PLA patrols and drills to continue,” *Global Times*, April 21, 2018, available at <<http://www.globaltimes.cn/>

for its fleet WeChat accounts and the official social media accounts of traditional military publications. WeChat is predominately a network-based social media platform, while Weibo, like Twitter, is an open platform, enabling a more effective transmission of messaging.¹⁰³ In addition, Weibo attracts a younger audience, which is more relevant for a military service looking to recruit future personnel and gain new allies that can show their support to the service for decades to come.¹⁰⁴ As of late 2015, nearly 70% of Weibo users were under the age of 30, while that figure was closer to 60% for the same demographic on WeChat.¹⁰⁵

The PLAAF as a service, or at least those involved with its PR efforts, also appears to be following the successful practices of foreign military services and officers who successfully utilize their accounts to communicate unique information, thereby giving users a real and continuous reason to follow their accounts.^{xxxiv} The service has repeatedly chosen to make major announcements on their social media accounts, particularly its popular Weibo account, which have often garnered significant national and international attention.¹⁰⁶ It chose to officially reveal advanced warplanes, such as the Su-30 fighter jet, in videos posted to its Weibo account.¹⁰⁷ When the PLAAF wanted to build hype for a large-scale flight of its H-6K bombers, which it alone possesses, flying “to a certain area to carry out military training,” it chose to release the teaser via its Weibo account.¹⁰⁸ Subsequently, whenever media outlets cover the news generated by the PLAAF’s posts, they mention that the news was made on the service’s Weibo account, further generating publicity for the account and the service.¹⁰⁹

The production quality of PLAAF promotional videos has also seen an increasing quality and industry maturity as they have adopted advertising techniques and choices more commonly seen in popular video game and movie trailers, such as the use of music by world-renown composition groups like *Two Steps From Hell*.^{xxxv} The PLAAF has even tried to explicitly highlight its more content/1098987.shtml>. As for the PLAA’s PR choices, it chose to announce its “Ingenious Soldiers” military skills competition for July 2018 on its website, rather than on its social media accounts. See Huang Panyue, ed., “PLA Army holds “Ingenious Soldiers” military skills competition,” *China Military Online*, July 9, 2018, available at <http://english.chinamil.com.cn/view/2018-07/09/content_8084257.htm>.

xxxiv This is something the U.S. Army highlighted as being important for units, bases, and officers in how to most effectively utilize a social media presence. In fact, in its service ‘social media handbook,’ the U.S. Army specifically pointed to officers who do this effectively, such as General Odierno and Lieutenant General Helmick, and encouraged others to follow their examples. See “U.S. Army Social Media Handbook,” Washington, D.C.: *Office of the Chief of Public Affairs*, January 2011), 15-16. Along the same lines of using best practices, the PLAAF’s Weibo account, like certain other major Weibo accounts, also releases images unique to it that bear its own emblem on the originals, which is then visible when shared by other media or individuals, similar to how original images or videos by a major media outlet bear its emblem.

xxxv “PLA Air Force promotional video gone viral in China,” *CGTN*, November 10, 2017, available at <<https://www.youtube.com/watch?v=uga9W1oW7j0>>. Note, some of these savvy techniques and choices have been adopted for at large PLA commercials, but those are still released through more traditional means, such as the websites of state-run media. See ““The Power of China”: China’s PLA army enlists pop-style music video to recruit young soldiers,” *People’s Daily*, May 4, 2017, available at <<https://www.youtube.com/>

savvy media content. One PLAAF video actually began with the words “This is not a Hollywood blockbuster, This is the Chinese Air Force.”¹¹⁰ Another, which was described as a “blockbuster-like promotion,” even departed from the usual recruitment commercial pattern and included artistic sand drawing transitions.¹¹¹ Including quality multimedia content, whether recruitment commercials or original images and videos, in social media posts is a clever move by the PLAAF, as research has demonstrated that Weibo posts with multimedia content are more popular and have a longer “life span” than posts without.¹¹² To ensure the further spread of its content, particularly to the international media and news markets, the PLAAF has even released additional versions of some of its original videos dubbed in languages other than Mandarin Chinese.^{xxxvi} One of the videos, ominously titled “Gods of War,” which featured its H-6K bombers flying over the South China Sea and around Taiwan, was dubbed in “Hokkien, a language strongly identified with Taiwan’s pro-independence movement.”¹¹³ The constant attempts by the PLAAF to tie itself in the mind of the public to the defense of China’s claimed territorial integrity on social media, particularly Weibo, make a great deal of sense as they can piggy-back off of top social media topics. In 2016, for example, the biggest topic on Weibo, according to the firm, was “China Cannot Become Even One Bit Smaller” using the hashtag #中国一点都不能少#, which became popular during and in the aftermath of the South China Sea ruling.¹¹⁴

Despite the growth of social media in China and the PLAAF’s high-profile use of social media to spread its narrative and role in the maritime domain, its campaign in the realm of social media remains largely uncontested by China’s actual maritime forces.^{xxxvii} Despite some apparent initial forays into the world of social media, as of early March 2019, the PLAN, as a service, still does not have its own explicitly official social media accounts.^{xxxviii} As previously stated, the

watch?v=Z6Jd5j91_E>. More than a month after the aforementioned PLAAF video set to music from *Two Steps From Hell* went viral, the PLAN’s SOF unit released its first commercial ever, and it featured not one, but two songs from *Two Steps From Hell*, as well as one from the lesser known, but still prominent, composition group *Audiomachine*. See “Chinese Navy’s Special Forces release first official trailer,” *CGTN*, December 27, 2017, available at <<https://www.youtube.com/watch?v=jtbbVFgEB1s>>.

xxxvi In another show of the service’s awareness of the international audience and impact its videos have, in a post commenting on its release of a promotional video, the PLAAF’s Weibo account explicitly acknowledged that the video in question (of new PLAAF overwater routes) was being “released at home and abroad,” and that the “Chinese Air Force is unwaveringly moving forward the coordinated development of hard power and soft power.” It would “strive to build...public opinion groups with offensive and defensive functions to lead the discourse.” See the second post on the PLAAF’s official Weibo account on May 13, 2018, available at <<https://m.weibo.cn/status/4239356933949601>>.

xxxvii The PLAAF’s Weibo account even received “great attention” and “widespread acclaim” at the “Weibo 2017 Military Influence Summit” for its success. See Air Force Release [空军发布], “Because of the Many Dry Goods, @Air Force Release at ‘Weibo 2017 Military Affairs Influence Summit Meeting’ Receives Attention” [因为干货多, @空军发布在“微博2017军事影响力峰会”上备受关注!], *Sina Military Affairs* [新浪军事], December 7, 2017, available at <<http://mil.news.sina.com.cn/2017-12-07/doc-ifypnqvn0890760.shtml>>.

xxxviii According to a *Global Times* article, the PLAN opened an “official microblogging account on people.

PLAN, so far, seems to prefer to support itself as a service in the social media realm by relying on fleet WeChat accounts and the WeChat and Weibo accounts of traditional military publication outlets. The three individual PLAN fleets each have and run their own official accounts on WeChat; respectively, the “North Sea Fleet” (北海舰队), “East Sea Fleet Release” (东海舰队发布), and “South Sea Fleet” (南海舰队).¹¹⁵ The other component of China’s ‘maritime forces’ (not media) that is officially active on Weibo is the China Coast Guard (CCG). The CCG began making announcements on its own Weibo account when it was established in mid-2018, rather than on a website.¹¹⁶ The traditional military publications on whose social media accounts the PLAN primarily relies are those of the magazine *Navy Today*, which is under the service’s newspaper *People’s Navy*, and the *PLA Daily* (not its social media accounts, but the branch of it that focuses on the PLAN). The accounts on Weibo and WeChat run by the *PLA Daily* (again, its branch that covers the PLAN), using the name “China Navy Online” (中国海军网), are even commonly mistaken for PLAN service accounts.¹¹⁷ Despite not being official service or unit accounts, both “China Navy Online” and the accounts of the magazine *Navy Today*, using the name “Navy Today Magazine” (当代海杂志社), have been considered successful, particularly on WeChat.^{xxxix} That being said, they are still accounts run by organizations that are separated by a number of degrees from the services and units themselves. While those connections still give them legitimacy to cover PLAN affairs, the separation between them still reflects meaningful, if subtle, differences.^{xl} This hodgepodge of PLAN units and media, as well as general PLA media focusing on the PLAN, unevenly distributed across Chinese social media, have so far been unable to match the level of impact

com.cn” in April, 2015. See “PLA Air Force opens new social media accounts to,” *Global Times*, November 12, 2015, available at <<http://www.globaltimes.cn/content/952219.shtml>>.

xxxix For example, in 2015, both WeChat accounts were ranked in the top five of “Military-Affiliated Media” on the platform. See “21st Edition of the National Military Affairs WeChat Rankings Chart, See Who is in the Top 10” [全国军事微信巅峰榜第21期, 看看前10名都有谁], WeChat Account of the *Military Correspondent* [军报记者], August 31, 2015. As of early March 2019, the last post by the “Navy Today Magazine” account on Weibo was December 25, 2013. See “Navy Today Magazine” [当代海军杂志社], *Weibo* [微博], accessed October 24, 2018, available at <<https://m.weibo.cn/u/1223417114?uid=1223417114&luicode=10000011&lfid=-100103type%3D1%26q%3D%E5%BD%93%E4%BB%A3%E6%B5%B7%E5%86%9B%E6%9D%82%E5%B-F%97%E7%A4%BE>>.

xl Service and unit accounts, for example, are run by personnel within them. The “content released every day [on these accounts] for the most part is collected, submitted, and compiled by their own grassroots officers and soldiers....” See Wang Tianyi [王天益], “The Praises and Concerns of Military Camp Public Accounts” [军营公众号的喜与忧], *PLA Daily* [解放军报], February 20, 2017, 5. While the publication accounts are run by media personnel from those publication organizations. When comparing posts between accounts run by active-duty service and unit personnel with those run by personnel from publication organizations, subtle, but important, differences emerge in content and writing style. Service and unit accounts can also benefit from the ‘authenticity factor,’ as they are run by ‘real troops,’ rather than media professionals who may even be civilians hundreds of miles away from the action. Both factors can benefit service and unit accounts by attracting audience members who might be turned off by the typical formulaic style and impersonal content of similar publication-run accounts.

in generating headlines as the PLAAF's Weibo account accomplishes alone. Since the PLAN would seem to have the authority to implement such a centralized arrangement, it is conspicuous that it has not done so.^{xli}

Another aspect of the campaign to promote the PLAAF as a service, and in some cases explicitly in the maritime domain, is the production of PLAAF-sponsored commercial media, namely mobile games, TV shows, and movies. In 2014, it was announced that in honor of the 65th anniversary of the PLAAF, the service jointly developed the "Chinese Air Force's first air combat mobile game," named "Golden Helmet" after the real-life, prestigious PLAAF *Golden Helmet* exercise series.¹¹⁸ The game, whose full trailer was even launched at the 10th Zhuhai air show for maximum media coverage, was described as a way for players to "experience thrilling simulated air combat and to enter into the hot-blooded glory of the 'Golden Helmet' arena."¹¹⁹ It also notably contains maritime combat missions.¹²⁰ Chinese public reception of the game was considered a success, with the game having received 10 million hits about a month after its release, and details of the game being widely shared online and receiving thousands and thousands of likes on social media.¹²¹ The game, which contains a link for PLAAF recruitment, was depicted as successful in boosting recruitment for the PLAAF, with at least one military video game fan stating that the game inspired him, and that he now hoped he could join the service.¹²²

In 2016, the PLAAF began to sponsor a reality television series titled "Takes a Real Man," which involved celebrities undergoing PLAAF training.¹²³ "The second season shot to No. 1 in the ratings after the first episode was aired" in October 2017.¹²⁴ However, the series has not just been a ratings success, it has also apparently had a direct and beneficial impact on recruiting. One of the producers stated that while filming the second season, "he met several recruits who said the first season of the show had inspired them to sign up."¹²⁵ It led the state-run *China Daily* to proclaim that the series "has arguably been" the "most effective weapon" in recruitment.¹²⁶ The PLAAF likely is looking to build on its television success, and in August 2018 announced it would produce a television drama on life in the Airborne force, called "The Soul of the Airborne Force."¹²⁷

In addition to recruitment videos and television shows, the PLAAF has also released some less-traditional media.^{xlii} For example, in April 2018, the PLAAF

xli With the establishment of three official service social media accounts by the PLARF, two on Weibo and one on WeChat, in February 2019, the PLAN is now, as of early March 2019, the only PLA service to not have an official service social media account. See "PLA Rocket Force opens first social media accounts with a bit of humor," *Global Times*, February 17, 2019, available at <<http://www.globaltimes.cn/content/1139121.shtml>>.

xlii In one particularly interesting case, a group of PLAAF personnel "perform[ed] the world popular Seve dance...to celebrate the May Day holiday," which subsequently "went viral on Chinese social media." See "Chinese Air Force soldiers perform popular Seve dance," *CGTN*, April 30, 2017, available at <<https://www>.

released a comic set to music that was drawn by “a former technician of [the] H-6K strategic bomber,” which was “a tribute to pilots and support personnel of [the] H-6K.”¹²⁸ This is notable for, among other reasons, the fact that the comic video focused on the H-6K, an aircraft that has become synonymous with PLAAF ‘patrols’ in controversial areas over which China claims sovereignty, and showed, among other things, the H-6K flying overwater with islands in the background.¹²⁹ While it probably has not hurt that Xi Jinping took the time to tour and be photographed and filmed in an H-6K, the focus on this aircraft in particular reveals the costly measures the PLAAF is willing to take to highlight itself as a service in the maritime domain.¹³⁰ Such frequent flights over such long-distances are a significant drain on the historically strained fuel supplies and flight hours of PLAAF pilots.¹³¹ For example, it is estimated that PLAAF bombers, on average, have yearly flight quotas of 165 hours, or 13-14 hours per month.¹³² This means if their flight hours are spaced out evenly, then one ‘patrol’ around Taiwan by PLAAF bombers would consume an equivalent of *at least* between 23% and 42% of one month’s worth of flight hours, depending on which base the bombers are operating from.^{xliii} However, the pilots flying in these ‘patrols’ have other responsibilities they have to meet, both for standard training and career advancement, and such ‘patrols’ take away a significant amount of time from both.¹³³ In particular, these ‘patrols’ consume precious flight hours that could otherwise be used for combat-realistic training against simulated opponents, which has become a central focus of PLA training in recent years as it seeks to improve its ability to

[youtube.com/watch?v=zP6SF1yr6oY](https://www.youtube.com/watch?v=zP6SF1yr6oY)>. It then may have inspired the People’s Armed Police (PAP) to do the same, as several months later a similar video of their personnel doing the same thing also went viral on Chinese social media. See “Chinese soldiers show off their swag dance moves,” *CGTN*, June 21, 2017, available at <<https://www.youtube.com/watch?v=oVp9iP4H8qc>>.

xliii While PLAAF pilots do not necessarily all distribute their flight hours evenly across the year, a single ‘patrol’ consuming the equivalent of at least a quarter of or a half of a month’s worth of flight hours still represents a large opportunity cost. The authors have estimated that PLAAF H-6K bombers operating from their base in the Eastern Theater Command take about three hours to complete a Taiwan ‘patrol,’ while those in the Southern Theater Command take about three and a half hours, and those in the Central Theater Command take about five and a half hours. These figures assume the flights did not include any additional activities that would necessarily extend the length of time it would take to complete them. Given the growing number of activities that are being squeezed into the average sortie, it is unlikely all these PLAAF ‘patrols’ around Taiwan only lasted as long as their base of origin would indicate. In fact, Taiwan government reporting has indicated that one of these ‘patrols’ took about four hours, which means, given the estimates for the bare minimum length of a ‘patrol’ from the two likeliest points of origin for this flight, that between 30 minutes and an hour was added onto the flight time, depending on which point of origin it had. This additional time, if taken as the average that is added onto each ‘patrol,’ would then significantly increase the percentage of monthly flight hours that one of these ‘patrols’ consumes. For the four-hour flight time, see Mark R. Cozad and Nathan Beauchamp-Mustafaga, *The People’s Liberation Army Air Force Operations over Water: Maintaining Relevance in China’s Changing Security Environment*, (Santa Monica, CA: RAND Corporation, 2017), 41. The estimated length of time for a ‘patrol’ from each of the three points of origin for these ‘patrols’ was arrived at by taking the estimated cruising speed of the H-6K, the distance each flight covers, and the time it takes to reach cruising speed after takeoff and to slow down before landing. A special thanks to the members of the U.S. Air Force who provided insight and assistance regarding this point and others.

fight and win wars in the near future.¹³⁴ In addition, such ‘patrols’ also compete with flight hours needed for operational duties such as the interception of U.S. intelligence, surveillance, and reconnaissance (ISR) flights, which are much maligned by the Chinese government and PLA, and the interception of other foreign aircraft within China’s East China Sea ADIZ, with which the PLAAF has been very active.¹³⁵

The issue of hours is particularly important within the PLAAF for another reason: ‘wear and tear’ on personnel and hardware (engines and airframes). Long overwater flights for the PLAAF have revealed new challenges for the pilots making them. Doctors to whom PLAAF media have spoken indicate that in flights lasting longer than four hours, PLAAF pilots have been suffering from “fatigue, psychological stress, and flight misperceptions.”¹³⁶ Given the estimated length of ‘patrols’ around Taiwan and the growing length of each average sortie, it is likely that many, if not most, of these ‘patrols’ pass the threshold beyond which the PLAAF pilots begin to suffer from such ailments. Due to the service’s relative lack of experience with long overwater flights, it is taking time for the PLAAF to figure out how to help its pilots adapt to the increasingly challenging circumstances. On the hardware side, long overwater flights have been particularly taxing on PLAAF engines and airframes. Chinese-made aircraft engines are a long acknowledged weakness of China’s aircraft industry.¹³⁷ While improvements are being made, the quality of Chinese aircraft engines used in PLAAF and PLAN aviation are still considered to be far inferior to those of the United States, including how many hours they can operate before needing to be overhauled.¹³⁸ With regard to the airframes, the maintenance requirements imposed by such long overwater flights are significant for the PLAAF.¹³⁹ Even if flown in an environment with a low risk of corrosion, for each day a PLAAF aircraft is flown, the day before and after have to be spent on maintenance.^{xliv} When flown over the sea, aircraft must be given additional maintenance to treat for salt and water corrosion. All this maintenance

xliv This conclusion was derived from the average number of flight hours per month for aviators flying bombers, combined with the number of maintenance and/or inspection days needed for each major flight. When combined with the number of quarterly, holiday, and seasonal maintenance days and the growing average length of each sortie, PLAAF bomber pilots are left flying about once every three days, except when they fly ‘patrols’ around Taiwan, which limits how many other flights they can make per month. The growing length of each sortie stems from the 2002 *Outline of Military Training and Evaluation* (OMTE), which promulgated “composite training” or the inclusion of more than one training topic per sortie; which necessarily extends the length of the average sortie, thereby reducing the overall number of sorties that can be done per month. See *People’s Liberation Army Air Force 2010*, (Wright-Patterson Air Force Base, OH: National Air and Space Intelligence Center, August 1, 2010), 83. For more on PLAAF “seasonal changeover” maintenance, see Fang Wenzhou [方文舟], “A Jinan Aviation Regiment’s Aircraft Maintenance Group -- Takes the Initiative for Prevention and to Improve the Quality of Outmoded Equipment Maintenance” [歼空军某团机务大队-- 主动预防提高老旧装备维护质量], *Air Force Daily* [空军报], May 29, 2013, 2; Luo Peiwu and Niu Haitao [罗培武, 牛海涛], “The Evaluation Site is the Battlefield: Dispatches from a Guangzhou Military Region Air Force Air Regiment’s Year-End Military Training Evaluations” [考场就是战场-- 广空军某团年终军事训练考核见闻], *Air Force Daily* [空军

work is then compounded by the fact that the PLAAF has reduced the number of maintenance personnel per aircraft from 7-8 to 4-5.¹⁴⁰ In addition, once the bombers, or the fighters escorting the bombers at least part of the way on such ‘patrols,’ reach their flight hour quota (for the aircraft, not the pilots), those aircraft are sent back to the factory to be overhauled for more intensive maintenance and upgrades.¹⁴¹ At this point in time, it is unknown what the air and ground crews for those aircraft do for the time their aircraft are away being overhauled, which can take up to a year, but it is reasonable to conclude that during this time their flight hours are significantly reduced if not suspended. Regardless, it is clear there are substantial costs to training, personnel, and maintenance imposed on the PLAAF by such flights. The end result is the apparently unsustainable nature of such PR-savvy long-distance overwater flights. The fact that the PLAAF has made them such a prominent feature of its campaign points to the strong desire of the service to make gains in the maritime domain, even with such costs.^{xlv}

Returning to the PLAAF’s fictionalized PR efforts, the service has also found success on the silver screen, even to some extent internationally. The main early movie attempt was the 2011 film *Sky Fighters*, which featured the PLAAF repeatedly warding off foreign military aircraft from airspace above what the Chinese said were territorial waters. The second and latest movie attempt was the 2017 film *Silent Hunter*, which, while not as successful as the PLAN’s 2018 movie *Operation Red Sea*, was still a notable step up from *Sky Fighters*.^{xlvi} In signs of increasing awareness and sensitivity to audience reaction, *Sky Hunter* featured music by the world renowned composer Hans Zimmer and visual effects by the firm that created the dragons in the hit television show “Game of Thrones,” the latter of which was particularly appropriate given the poorly animated fighter jets used in *Sky Fighters*.¹⁴² *Sky Hunter* was “China’s first big film to demonstrate modern aerial combat,” and featured advanced aircraft, such as the J-20.¹⁴³ The PLAAF even gave the film crew access to “several bases” “for the first time,” and allowed its “fighter pilots to perform aerobatics in the movie.”¹⁴⁴ While the [re]p, November 27, 2013, 2.

xlv This is not to say that there are no training benefits to these flights—indeed there are. However, given the decreasing training value of repeating the same basic ‘patrols’ over and over again, it seems that training benefits are not their primary driver. If the ‘patrols’ have nothing to do with the PLAAF’s service-specific interests, then it would seem that Naval Aviation aircraft and PLAN surface vessels would likely be more involved in such operations to fulfill national objectives in signaling Taiwan. However, the reality is that they are not.

xlvi It has been reported that the idea for *Sky Hunter* resulted from a discussion between the director and leaders from the PLAAF’s promotional bureau. The movie was even a co-production between the director’s own production studio and the production studio of the PLAAF. See Clarence Tsui, “How China’s military movie misfires highlight ideological battle,” *South China Morning Post*, October 13, 2017, available at <<http://www.scmp.com/magazines/post-magazine/arts-music/article/2115255/how-chinas-military-movie-misfires-highlight>>. For criticism of *Sky Fighter*, see Kyle Mizokami, “I Watched China’s ‘Top Gun’ So You Don’t Have To,” *War is Boring*, October 30, 2013, available at <<http://warisboring.com/i-watched-chinas-top-gun%E2%80%8A-%E2%80%8Aso-you-dont-have-to/>>.

movie itself was not about operating in the maritime domain, Lieutenant Colonel Zhang Li, who was one of the scriptwriters and producers for the film, stated that most of the PLAAF recruits he spoke to said that one of the main reasons they applied to join the PLAAF was their excitement from watching the American movie *Top Gun*, which notably is about U.S. naval aviation operating from an aircraft carrier.¹⁴⁵ It appears that the PLAAF is now jockeying publicly for greater support for its overwater mission by more actively publishing its activities, real and fictionalized, than Naval Aviation, which could help it acquire a greater share of the budget and perhaps even expand its own responsibilities at cost to those of the PLAN and its Naval Aviation.

While the PLAN is closer to the frontlines of the China's maritime and sovereignty disputes and has been far more involved with them, the PLAAF has gone on a PR blitz to hype its own importance in 'protecting' Beijing's claims. For example, in an attempt to show the progress it has made in operating in China's many disputed maritime and sovereignty claims, the service created a promotional video, which it released on Mother's Day, highlighting the new routes and 'patrol' flight milestones it has made.¹⁴⁶ The service even made a point of arguing on its Weibo account that those accomplishments, set to the song "I Love the Motherland's Blue Sky," showed how much its personnel loved the country and their mission in the New Era.¹⁴⁷ While the PLAN has by far the strongest service presence in the South China Sea and has more frequently published its activities in the area, the PLAAF has seemingly countered by focusing the attention of its much-publicized overwater 'patrol' flights on Taiwan.^{xlvii} However, the choice to focus such flights on Taiwan makes sense for another reason. The majority of the South China Sea claimant states do not have strong air forces, which would diminish the argument that the PLAAF is really needed in peacetime sovereignty advancement operations as the PLAN has been. Moreover, given the comparatively limited air awareness and interception capabilities of these regional states, it would be far more difficult for the PLAAF to provoke a decent aerial response to its flights for PR purposes, as it can reliably do with Taiwan. Few

xlvii This PLAN operation and coverage does not seem to extend to Naval Aviation's bombers, the overwhelming majority of whose long-range overwater flights have been focused on the Western Pacific. Similar PLAAF flights, on the other hand, have placed greater focus on Taiwan. See Derek Glossman, Nathan Beauchamp-Mustafaga, Logan Ma, and Michael S. Chase, *China's Long-Range Bomber Flights: Drivers and Implications*, (Santa Monica, CA: RAND Corporation, 2018), 60-66. It is also worth noting that the PLAAF has not performed joint rights exercises with law enforcement agencies or militia units as has the PLAN. The PLAAF cannot use a similar façade to allow it to engage in more operations against other forces (civilian, law enforcement, or military), such as the PLAN did in the HYSY-981 Oil Rig incident. See Ian Burns McCaslin and Andrew Erickson, "The Impact of Xi-Era Reforms on the Chinese Navy," Phillip C. Saunders, Arthur S. Ding, Andrew Scobell, Andrew N.D. Yang, and Joel Wuthnow, eds., *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, (Washington, DC: National Defense University Press, 2018).

things sell superiority like a visual side-by-side contrast. In Taiwan, however, the PLAAF has an easier and more politically acceptable opponent that it can use to justify its relevance and budgetary demands. That said, Taiwan has become aware that its responses to the frequent ‘patrols’ around it are being used for political purposes, though perhaps it has not considered the possibility of a PLA service-specific purpose; Taiwan’s Ministry of National Defense thus stated that it would no longer issue reports on those flights, as well as similar actions by the PLAN, unless something unusual occurred.¹⁴⁸ That said, some media released by the PLAAF and its subordinate components have been provocative enough that, in at least one case, the Taiwan Ministry of National Defense released its own higher-quality media in response, which demonstrates the dangers of such a PR campaign – potentially being upstaged by one your targets.¹⁴⁹

While the PLAAF might not be able to rely on Taiwan to regularly publicize knowledge of its flights, it does have other methods. The service has taken the added step of producing promotional videos with footage and images taken from these ‘patrols,’ as well as creating commemorative memorabilia. Some of the “inspiring” images were even used as cell phone background images.¹⁵⁰ According to the PLAAF, such PLAAF material is “to let Chinese people of all ethnic groups, especially compatriots in Taiwan and overseas Chinese, understand that not a single inch of China will ever be separated from the motherland.”¹⁵¹ The PLAAF has even brought film crews from state-run media outlets on quite a few of its flights, particularly those around Taiwan, to capture additional footage, which is then used to highlight the relevance and importance of the service in advancing expansive Chinese claims in subsequent articles and broadcasts.¹⁵² The PLAAF then often builds on that state-run media coverage by posting those article links or videos on its social media accounts. Similarly, the service has further produced additional promotional videos and commemorative memorabilia, such as envelopes and stamps, to highlight newly acquired aerial platforms, most of which the other services do not currently possess, such as the J-20 fighter.^{xlviii} This particular effort was described by *China Military Online* as “demonstrating the new image of the PLAAF in accelerating its strategic transformation and advancing combat preparations.”¹⁵³

The PLAAF has also directed its PR campaign not only towards the public, but towards the civilian government itself. During major national parades where

xlviii For an example of a stamp featuring the J-20 promoted by the PLAAF, see the March 18, 2018, post by the service on its Weibo account, <<https://m.weibo.cn/detail/4218993999414802>>. One newly enlisted PLAAF member told the PLAAF’s newspaper that he was actually inspired to join the service by the J-20. See Qu Yi and Zhang Lei [曲艺, 张雷], “Fresh Air Blowing, Military Spring Blooming” [新风扑面, 军旅春正勃发], *Air Force Daily* [空军报], December 11, 2017, 3.

all top officials often attend and the state-run media ensures every corner of the country can watch the proceedings, the mid-air refueling capabilities of the PLAAF, which are better than those of Naval Aviation and allow the service to operate farther from China's airspace than it otherwise would be able to, have been highlighted.¹⁵⁴ In another example, while acting as delegates at the 2018 National People's Congress, several PLAAF officers spoke to state-run media about the service and the maritime domain at length. In fact, *PLA Daily* and *Xinhuanet* gave the officers' comments on the maritime domain an entire section, which notably came before the smaller section on joint training. That smaller section on joint training was then dominated by the officers talking about the PLAAF's activities with foreign militaries, rather than with other PLA services.¹⁵⁵

Similarly, while serving as a delegate for the same congress, the commander of the Western Theater Command Air Force stated that strength of airpower in the maritime domain was one of the crucial factors for the PLAAF's future superiority. In that vein, the commander said "carrying out offshore training in distant seas is the responsibility and mission of the Air Force in the New Era."¹⁵⁶ He also stated the choice by the service to "deepen its preparation for military struggle in the maritime direction" was an "inevitable choice" for the service.¹⁵⁷ Since the initial overwater training of the service began, the PLAAF has "moved out from the First Island Chain, flown over many straits, [and] spread its wings in the Western Pacific."¹⁵⁸ It was implied that so important is the maritime domain for the service, that even the PLAAF contingent stationed in the Western Theater Command, far from any large body of water, had performed offshore training in distant seas.¹⁵⁹ A member of a PLAAF Aviation Brigade, who made a point of saying he had been involved in the service's duties with the ADIZ in the East China Sea, similarly told the press that now with the service "frequently organizing offshore training in distant seas," its pilots are "flying farther and farther with more and more confidence."¹⁶⁰

Such service-specific 'lobbying' by officers at high-profile inter-governmental events provides the PLAAF not only a megaphone with which to project its chosen narrative to the masses, but also an opportunity to spread such messaging at organization meetings that are experiencing "very modest political pluralization" in an environment where "other political actors are increasingly able to influence policy debates."¹⁶¹ While Xi Jinping has centralized power around himself more successfully than any other Chinese leader in decades, the Chinese government remains a colossal bureaucracy with many diverse interests, and societal, technological, and demographic changes in the country have given rise to an

increasingly complex network of power arrays. These arrays are comprised of poles of power, resources, and interests. They consist of everything from increasingly economically minded state-run enterprises and private firms to internet stars and the different PLA services. While the PLAN arguably began to successfully work with this diverse network of power arrays before the PLAAF, based on the re-shaping of the service and its subsequent PR campaign, the PLAAF has clearly joined the fray.¹⁶² Though the tapping of such a network of power arrays by a service primarily for its own ends might not be heavily studied in the case of the PLA, it has been extensively studied in the case of foreign militaries, and the results bear close examination.

Impact: Two Dragons Contending for the Ocean Blue?

As a study by the U.S. Army Air Forces' public relations staff in 1944 stated, through its exploits in the European theater, the U.S. Army Air Forces had "become the idol of the American public."¹⁶³ But because the public's favor can often be fickle, "the public's acceptance and support must be carefully planned and jealously guarded," according to the study.¹⁶⁴ It seems the services of the PLA are beginning to realize this is becoming true in China as well. One foreign example of competition between an air force and navy that is useful to consider when thinking about the situation between the PLAAF and PLAN in the maritime domain is the struggle between the U.S. Air Force and U.S. Navy that resulted in the infamous "Revolt of the Admirals."^{xlix} Like the current struggle regarding the maritime domain amongst the PLA services, the "Revolt of the Admirals" occurred during peacetime. While the event's debate and hearings were nominally over the procurement of the U.S. Air Force's B-36 bomber and the U.S. Navy's supercarrier *United States*, the whole affair was really over the rise of the U.S. Air Force and the threat it represented to the U.S. Navy's air arm.¹⁶⁵ This is not unlike the situation in the PLA today with the rise of the PLAAF in overwater operations. However, it might actually be worse for the PLAN, because the U.S. Navy had already fully developed carrier aviation, which made it unique from the land-based U.S. Air Force, before it was challenged. In the PLA today, the PLAAF is challenging the PLAN while its carrier aviation is still in its nascent stages.¹

xlix A more extreme example of a rivalry between an air force and navy would be the decimation of the German Navy's naval aviation arm by the German Air Force leading up to and during World War II. See Sonke Neitzel, "Kriegsmarine and Luftwaffe Co-operation in the War against Britain, 1939-1945," *War in History*, Vol. 10, Is. 4, (October 1, 2003), 450-451.

1 As of early March 2019, the PLAN has only one operational aircraft carrier, the Liaoning, which is currently only used as a training carrier.

In the aftermath of World War II and the push to consolidate and establish a more joint military, all of the services of the U.S. military

“were confronted with the need to hone their arguments, bolster their cases, and perfect their ‘sales pitches.’ The defense allocation process, indeed, came more and more to resemble modern advertising. Inter-service budget competition, previously a matter to be decided behind closed doors, in smoke-filled rooms, became increasingly politicized.”^{li}

However, some services realized this change and the new importance of public opinion on service missions, roles, and budgets later than some of their sibling services - much to their detriment.¹⁶⁶ Again, this environment is not unlike the one the PLA finds itself in today with the significant drop in annual defense budget growth and the move towards a more joint PLA. In another similarity with the U.S. military, the PLAAF seems to have seized the early initiative to perfect its ‘sales pitch’ and take it, not just to the wider civilian government, but to the public at large.

Even before the Revolt of the Admirals began, the leaders of the U.S. Army Air Forces, which would be made a separate branch of the military in 1947, were aware that they were fighting an uphill battle against the U.S. Navy. The U.S. Navy had gained significant public support with its victories in the Pacific, so the then-U.S. Army Air Forces chose to initially counter with such efforts as a “strong publicity campaign on the Twentieth Air Force’s long-range bombing of Japan.”^{lii} General Arnold of the U.S. Army Air Forces even “sent strong letters to his three top-level [U.S.] AAF [(Army Air Forces)] commanders” that acknowledged “the difficulties incident to a proper presentation of the part the air has played in the success of the campaigns conducted by various Theatre Commanders” in World War II, and exhorted them to “apply pressure” and make sure

“that our press releases more nearly picture in proper balance the relative contribution of ground, sea and air forces in our approach toward complete victory over our enemies....I consider the whole subject of realistic orientation

li Andrew L. Lewis, *The Revolt of the Admirals*, (Montgomery, AL: Air University, April 1998), 2. Despite continued increases in defense budgets, the PLA is in a similar (though perhaps less severe) environment with slowing budget growth and a push for consolidation and a more joint force.

lii The initial advantage in public support by the PLAN, gained through its anti-piracy patrols in the Gulf of Aden and its actions to advance Chinese sovereignty in the disputed South China Sea, is similar to that held by the U.S. Navy with its success in the Pacific Theater in World War II. For the quote, see Jeffrey G. Barlow, *Revolt of the Admirals: The Fight for Naval Aviation, 1945-1950*, (Washington, D.C.: Naval Historical Center, 1994), 45.

*of the public's concept of the effect of air power upon the outcome of the war so important that I will scour the country to provide you with the men most capable of putting into words the achievements of the [U.S.] Army Air Forces.*¹⁶⁷

The U.S. Army Air Forces began a multi-year campaign, which was continued later by the newly independent U.S. Air Force, for service expansion and independence by secretly attacking the U.S. Navy over the service unification debate that was ongoing. They did so by, among other methods, secretly supporting the writings of nominally independent and theoretically objective individuals.¹⁶⁸ The U.S. Army Air Forces and later-U.S. Air Force Office of Public Relations also brought in talented civilians, who in some cases had more latitude in their actions and statements than uniformed service personnel.¹⁶⁹ U.S. Navy PR efforts, on the other hand, relied heavily on service personnel, who were oftentimes less skilled and understanding of the importance of PR efforts than were the civilians and reservists, whom the service did not fully utilize.¹⁷⁰ The U.S. Navy also chose to rely on its Organizational Policy and Research Division of the Office of the Chief of Naval Operations (OP-23) and other covert PR groups to lead its PR fight. This was widely perceived to be a deceitful move by one service to attack another with propaganda.¹⁷¹ While the U.S. Air Force also utilized questionable methods to spread its point of views and attack those of the U.S. Navy, it was never explicitly caught doing so, and its use of civilians, rather than uniformed personnel, added a layer of protection when some actions came to light.

When the Congressional hearings portion of the Revolt of the Admirals came, the U.S. Navy proved unable to capitalize on the strengths of its own arguments and the weaknesses of the U.S. Air Force's.¹⁷² In fact, the hearings further hurt the U.S. Navy, making it appear as if it was using the hearings to directly and publicly attack another service, a gauche breach of etiquette.¹⁷³ Even if the PLAAF's logic and arguments are flawed, so long as it sells itself well and the PLAN does not do a good job of selling itself, the PLAN could easily suffer the same fate as the U.S. Navy following the failed Revolt of the Admirals.¹⁷⁴ In the aftermath, the U.S. Navy had its supercarrier *United States* cancelled and suffered a massive drop in public support with "an overwhelming 74% of voters favoring the [U.S.] Air Force role in future war...and 4% the [U.S.] Navy."¹⁷⁵ The U.S. Navy similarly seemed to lose its image to the U.S. Air Force as the "first line of defense" for the country, at least for a time.¹⁷⁶ The PR loss had a profound effect on not just morale within the U.S. Navy, but also led the U.S. government to consider significant reductions to the U.S. Navy in personnel, resources, and platforms.¹⁷⁷ The Revolt of the

Admirals remains a potent example of inter-service rivalry and a reminder of the importance of a strong and comprehensive PR campaign executed by a competent and cohesive service. It is an example worth keeping in mind when considering the PLAAF's own re-shaping and PR campaign to expand its presence and role in the maritime domain today, as well as how the PLAN responds. The PLAAF has strongly moved to assert its own narrative of being critical to protecting claimed Chinese sovereignty and maritime interests, but the PLAN seems to be fighting back.

While not as aggressive and blatant as the campaign being waged by the PLAAF, the PLAN has been engaging in its own service PR campaign. It has tapped more traditional mediums to help generate support, such as improved recruitment advertising and supporting the television shows *Ship in the Gulf of Aden* and *Deepwater Forces*.¹⁷⁸ Following the PLAAF's latest major foray on the silver screen in 2017, the PLAN released its own major, and far more successful, movie, *Operation Red Sea*, in 2018.¹⁷⁹ The PLAN film even adopted the Western blockbuster movie characteristic of adding a post-credits scene, one that shows the PLAN "driving away a foreign ship that had illegally entered the South China Sea."¹⁸⁰ Also of interest, the film itself was based on the 2015 evacuation of Chinese citizens from Yemen by the PLAN, an evacuation in which the PLAAF was not involved despite its involvement in the previous evacuation from Libya in 2014.¹⁸¹

Despite the PLAN's continuing lack of official service social media accounts as of early March 2019, the service has attempted to tap social media through its use of internet celebrities. In 2016, during a week-long campaign, more than 40 internet celebrities and more than 10 media representatives were brought to Woody Island in the Paracel Islands, in the South China Sea.¹⁸² They were shown the equipment, training, and work conditions of the PLAN and its branches, such as the PLANMC, on the island. The entire event was covered not just by PLAN media like *Navy Today* and general state-run media like *PLA Daily*, but it was also live-streamed and blogged by some of the internet celebrities, including a popular Weibo star.¹⁸³ The PLAN has also continued to release traditional recruitment advertising that highlights just how close the PLAN is to the 'frontlines' of China's sovereignty claims and maritime interests. While the PLAAF can post a flurry of short videos of 'patrols' high above disputed physical features, the PLAN can hold oath-swearing ceremonies on those features.¹⁸⁴ Finally, while the PLAN might not have been able to display all its most impressive assets at the 2015 World War II anniversary military parade hosted by the Chinese government and the 2017 military parade at Zhurihe as the other services were, it was more than able to

make up for that with what was called “the largest military parade in the history of the South China Sea” in 2018, according to state-run media.¹⁸⁵ It was an occasion that, unlike the two aforementioned military parades, was solely for one service, the PLAN. Traditional pageantry is one hallmark of naval services around the world with which sibling services have found it hard to compete.¹⁸⁶

While inter-service rivalry has existed to some degree in every military with more than one service, blatant evidence of that rivalry is still widely considered unprofessional and even possibly dangerous. Therefore, services cannot be too open about their strategies and actions for advancing their own interests. They nonetheless still occur. Whether it is lobbying government officials, supporting friendly news in traditional media, or trying to create viral hits on social media, the services constantly seek support for themselves. During such actions, service interests, views, and even service culture invariably come out. Understanding such things enables observers to gain insights into the motives of a service and even gain a better understanding of how the service may evolve in the near future.

Is the First Success of the PLAAF Campaign for the Maritime Domain the Bomber Role of Naval Aviation?

The PLAAF's campaign for a bigger piece in the maritime domain may be yielding its first fruits at the cost of the PLAN, specifically the future bomber role of Naval Aviation. The operational history of PLA bombers in general over water is quite short. The first publicly known Naval Aviation bomber flight over water was in 2013, while the first publicly known PLAAF bomber flight over water was not until 2015.^{liii} Even so, the role of bombers in the maritime domain may be one of first successes of the PLAAF's campaign to expand its role in this domain. While the images and videos of the PLAAF's bombers operating over water flood traditional and social media, virtually nothing has been heard or seen of Naval Aviation's bombers, even in the PLAN's own media.^{liv} Of the 22 overwater bomber flights that took place from September 2013 through December 2017 listed in the U.S. Pentagon's 2018 report on the Chinese armed forces, 17 of them were by PLAAF bombers, while only five were from Naval Aviation.¹⁸⁷ While news reports regularly highlight PLAAF bombers training for strikes against targets at sea and along the coast, relatively few cover Naval Aviation bombers

liii Several Naval Aviation H-6 bombers flew through the Miyako Strait in July 2013. PLAAF bombers would not do the same until March 2015 when H-6K bombers flew through the Bashi Strait. See Nathan Beauchamp-Mustafaga, Cristina Garafola, Astrid Cevallos, and Arthur Chan, "China Signals Resolve with Bomber Flights Over the South China Sea," *War on the Rocks*, August 2, 2016, available at <<https://warontherocks.com/2016/08/china-signals-resolve-with-bomber-flights-over-the-south-china-sea/>>.

liv Bombers have been a major focus of PLAAF commercials, while, by comparison, they are barely seen in PLAN and Naval Aviation commercials. In some cases, the PLAAF has devoted lengthy commercials to focusing on a single model of its bombers. For one example of this, see "Chinese Air Force H-6k bomber promo video goes viral," *New China TV*, March 31, 2018, available at <<https://www.youtube.com/watch?v=dk9OMX-7JAb0>>. In this particular example, not only are PLAAF H-6K bombers shown flying near disputed physical features, they are also shown flying quite low over the water and, in at least one shot, over an unknown vessel.

training for the same.^{lv} Other indicators similarly hint at an attempt by the PLAAF to take over, or at least significantly increase its share of, the bomber role in the maritime domain from Naval Aviation. Perhaps most notably, despite the rapidly expanding importance of the maritime domain for the PLA and of fighter aircraft in Naval Aviation, there are still only two regiments with bombers in this branch: one in the East Sea Fleet and one in the South Sea Fleet.¹⁸⁸ In addition, in 2018, modified H-6G Naval Aviation bombers with Electronic Countermeasure (ECM) pods attached from the Southern Theater Command Navy were seen playing “a supporting role in electronic warfare” for the first time.¹⁸⁹ This could indicate that Naval Aviation is modifying some of its bombers for non-bomber roles, perhaps even because it knows it cannot compete with the more advanced PLAAF bombers. Naval Aviation’s H-6G, for example, “lacks the range and endurance to patrol the western Pacific Ocean effectively and strike key U.S. and allied facilities,” unlike the PLAAF’s H-6K.¹⁹⁰ Naval Aviation’s use of its bombers for non-bomber roles could be an attempt to fight back by expanding the capabilities of its bombers and enabling them to play more roles, despite their more limited range.

lv The inclusion of such training by PLAAF bombers is particularly significant for the future of Naval Aviation bombers. While PLAAF bombers now train in the land and maritime domains, Naval Aviation bombers still only train in the maritime domain. See Kenneth Allen and Lyle J. Morris, *PLA Naval Aviation Training and Operations: Missions, Organizational Structure, and Training* (2013-15), (Montgomery, AL: China Aerospace Studies Institute, December 13, 2017), 28.

Conclusion

The desired shift in the ‘center of gravity’ that General Ma spoke of back in 2014 does seem to be slowly taking place in the public mind. The profile of the PLAAF in the maritime domain has risen significantly compared to where it was just a few years ago. Following a May 2018 exercise in the South China Sea by the PLAAF, the PRC’s Ministry of National Defense stated that the service had been “conduct[ing] take-off and landing training on islands and reefs in the South China Sea in order to improve our ability to ‘reach all territory, conduct strikes at any time[,] and strike in all directions’” in preparation for “the West Pacific and the battle for the South China Sea.”¹⁹¹ While the importance of aircraft for navies was proven definitively back in World War II, this aspect of warfare has been a longstanding weakness of the PLA. For decades, land-based aircraft were the best either the PLAAF or the PLAN could offer for aerial operations in the maritime domain. More recently, however, the imperative to go abroad and the inclusion and proliferation of destroyers that can launch helicopters and small unmanned aerial vehicles (UAVs), aircraft carriers, and airstrips on artificial islands hundreds of miles from China’s internationally recognized shores have resulted in a massive change for both services. New possibilities and ambitions are rising in the PLAAF and the PLAN, and the old service rivalries have not gone away. For all the talk of increased jointness, relatively little progress has been made.¹⁹¹ Slowing budget growth combined with increasingly expensive weapons, equipment, platforms, and personnel have only increased tensions.

¹⁹¹ Of all the international military exercises from 2002-2016 in which PLA service took part, only 7% were joint (involved more than one PLA service). See Kenneth Allen, Phillip C. Saunders, and John Chen, *Chinese Military Diplomacy, 2003-2016*, (Washington, D.C.: National Defense University, July 2017), 32.

While all is not ‘doom and gloom,’ outside observers should keep in mind how challenging and impactful similar rivalries have been in other militaries, as with the Revolt of the Admirals in the U.S. military. Although communist militaries have often been painted as monoliths, they are still organizations with their own bureaucratic interests and cultures. They are made up of separate services that have their own roles, viewpoints, and socialization processes. They are composed of men and women who often make a career out of the military due to a desire to protect their country and what they see as its interests. They have, at times, had serious disagreements as to how best to do those things and by whom they should be done. While the Chinese government is infamous for its regime of censorship, it is still possible to catch glimpses of fault lines behind the monolithic façade. By examining the actions of and PR choices by the PLAAF in this report, we have been able to see some of those fault lines.

Endnotes

- 1 Jeffrey W. Donnithorne, *Four Guardians: A Principled Agent View of American Civil-Military Relations*, (Baltimore, MA: Johns Hopkins University Press, 2018), 168.
- 2 Ian Horwood, *Interservice Rivalry and Airpower in the Vietnam War*, (Fort Leavenworth, KS: Combat Studies Institute Press, 2006), 2.
- 3 Samuel P. Huntington, "Interservice Competition and the Political Roles of the Armed Services," *American Political Science Review*, Vol. 55, No. 1, (March 1961), 42.
- 4 Stephen B. Johnson, *The United States Air Force and the Culture of Innovation, 1945-1965* (Washington, DC: Air Force History and Museums Program, 2002); John Noble Wilford, *We Reach the Moon* (New York: Bantam Books, 1969); Asif A. Siddiqi, *Challenge to Apollo: The Soviet Union and the Space Race, 1945-1974* (Washington, DC: NASA, 2000), available at <<https://history.nasa.gov/SP-4408pt1.pdf>>.
- 5 According to the "United Nations Conference on Trade and Development" in 2015, over 80% of "world merchandise trade" was transported via the sea. See United Nations Conference on Trade and Development, *Review of Maritime Transport 2015*, (New York, NY: United Nations, 2015), 22. China has even "generated much of the growth in world seaborne trade since 2009." See United Nations Conference on Trade and Development, *Review of Maritime Transport 2015*, (New York, NY: United Nations, 2015), 4.
- 6 Gabriel B. Collins, Andrew S. Erickson, and Lyle J. Goldstein, "Chinese Naval Analysts Consider the Energy Question," in Gabriel B. Collins, Andrew S. Erickson, Lyle J. Goldstein, and William S. Murray, ed., *China's Energy Strategy: The Impact on Beijing's Maritime Policies*, (Annapolis, MD: Naval Institute Press, 2008), 304.
- 7 For more on the addition of another maritime "road" to OBOR/BRI, see "China Focus: China publishes Arctic policy, eyeing vision of 'Polar Silk Road,'" *Xinhua Online*, January 26, 2018, available at <http://www.xinhuanet.com/english/2018-01/26/c_136927327.htm>. For the original Arctic White Paper, see "Full Text: China's Article Policy," *The State Council of the People's Republic of China*, January 26, 2018, available at <http://english.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm>.
- 8 Minnie Chan, "As overseas ambitions expand, China plans 400 per cent increase to marine corps numbers, sources say," *South China Morning Post*, March 13, 2017, available at <<http://www.scmp.com/news/china/diplomacy-defence/article/2078245/overseas-ambitions-expand-china-plans-400pc-increase>>.
- 9 As in all militaries, "[f]or the military services, the size of their budgets – both absolutely and relative to those of the other services – is a matter of organizational success." Arnold Kanter, *Defense Politics: A Budgetary Perspective*, (Chicago, IL: University of Chicago Press, 1979), 5.

- 10 Arnold Kanter, *Defense Politics: A Budgetary Perspective*, (Chicago, IL: University of Chicago Press, 1979), 24. Put more simply, “whenever funding decreases, interservice rivalry increases.” See William J. Crowe, Jr., *The Line of Fire: From Washington to the Gulf, the Politics and Battles of the New Military*, (New York, NY: Simon & Schuster, 1993), 155.
- 11 In 2016, Chinese media made it clear that terming the fleets theater command navies was an alternative and simultaneously equally appropriate way to refer to them. For example, the Navy’s East Sea Fleet [海军东海舰队] could also be referred to as the Eastern Theater Command Navy [东部战区海军]. See “Wang Huayong: The Navy East Sea Fleet and the Eastern Theater Command Navy are Both Appropriate” [原标题: 王华勇: 海军东海舰队和东部战区海军两种称谓同时存在都正确], *Observer Online* [观察家网], March 7, 2016, available at <<http://news.sohu.com/20160307/n439578698.shtml>>. From January 17, 2018 onwards, the PLAN’s official newspaper has only referred to the old fleets by their theater command designation in its articles. A special thanks to Ken Allen for this point. However, other PLA media, such as *China Military Online*, still use the old fleet names. See Yao Jianing, ed., “Ten-year escort operations in Gulf of Aden reflect rise of Chinese Navy,” *China Military Online*, June 22, 2018, available at <http://eng.chinamil.com.cn/view/2018-06/22/content_8068611.htm>.
- 12 Carl H. Builder, *The Masks of War: American Military Styles in Strategy and Analysis*, (Baltimore, MD: Johns Hopkins University Press, 1989), 62; Arnold Kanter, *Defense Politics: A Budgetary Perspective*, (Chicago, IL: University of Chicago Press, 1979), 100-101; Perry McCoy Smith, *The Air Force Plans for Peace, 1943-1945*, (Baltimore, MA: Johns Hopkins Press, 1970), 14-15.
- 13 As U.S. Admiral William J. Crowe once wrote: “Each service holds certain parochial beliefs dearly. These ideas may not be rational by some criteria, but that is irrelevant.” See William J. Crowe, Jr., *The Line of Fire: From Washington to the Gulf, the Politics and Battles of the New Military*, (New York, NY: Simon & Schuster, 1993), 156. For the conflation of what is good for the service with what is good for the nation, see Jeffrey W. Donnithorne, *Four Guardians: A Principled Agent View of American Civil-Military Relations*, (Baltimore, MA: Johns Hopkins University Press, 2018), 168.
- 14 Ian Horwood, *Interservice Rivalry and Airpower in the Vietnam War*, (Fort Leavenworth, KS: Combat Studies Institute Press, 2006), 1.
- 15 For a good study on the differences in how different U.S. services lobby Congress, see Stephen K. Scroggs, *Army Relations with Congress: Thick Armor, Dull Sword, Slow Horse*, (Westport, CT: Praeger Publishers, 2000).
- 16 The new personnel who enter the PLA can be broken down into officers and enlisted personnel. All the new officers are recruits (they join by choice), rather than conscripts. The new enlisted personnel are either recruits or conscripts. See Marcus Clay, *Understanding the “People” of the People’s Liberation Army: A Study of Marriage, Family, Housing, and Benefits*, (Montgomery, AL: China Aerospace Studies Institute, 2018), 5. It is currently unknown what level of freedom those conscripted have in deciding in which service or branch they enlist, but it is likely they have some say in the matter, which means where conscripts end up could be influenced in part by the success of the PR efforts of those services and branches. However, even if the incoming conscripted two-year enlistees have no say in what service or branch they go into, conscripts are becoming a smaller and less important part of the PLA, with a growing recruited noncommissioned officer (NCO) corps, whose members stay on for longer, gradually supplanting them. See Sijin Cheng, “The Challenges of Conscriptation in an Era of Social Change,” in David M. Finkelstein and Kristen Gunness, eds., *Civil-Military Relations in Today’s China: Swimming in a New Sea*, (Armonk, NY: M. E. Sharpe, 2007), 240.
- 17 Kerry Allen, “No Fizzy Drinks: Chinese Army Tells Recruits to Shape Up,” *BBC*, August 24, 2017, available at <<https://www.bbc.com/news/world-asia-china-41039233>>. The concerns over the mental fitness of potential recruits has less to do with intelligence or education and more to do with poor attitudes.
- 18 U.S. Secretary of the Navy Richard V. Spencer described the competition for new talent between the military and the civilian job market, between the military and the government, and among the various military services as a “war for talent.” At the same event, all three service secretaries agreed that the services will have to improve how they attract new recruits and retain existing talent. See Jim Garamone, “Service Secretaries: People Are Most Important Part of DoD’s Success,” *U.S. Department of Defense*, March 12, 2018, available at <<https://www.defense.gov/News/Article/Article/1464137/service-secretaries-people-are-most-important-part-of-dods-success/>>.

- 19 While previously the PLANMC had to rely on Naval Aviation for the use of aerial assets, reports from PLA, state-run, and PLAN media indicate that the PLANMC now has its own air arm, a de facto 'PLANMC Aviation.' It is unclear precisely when the nature of the aerial assets and personnel being utilized by the PLANMC began to change, but there are indications the conversion process may have begun several years ago. Back in 2013, a book, which was part of a series that had "strong support and guidance" from the Ministry of National Defense, referred to the helicopters used by the PLANMC as being part of a "海军陆战队直升机分队." See Li Faxin [李发新], *The PLA Marines* [中国人民解放军海军陆战队] (Beijing: China Intercontinental Press [五洲传播出版社], 2013), 107. In the English version of the same book, it described a "PLANMC helicopter unit." See Li Faxin, *The PLA Marines*, (Beijing, PRC: China Intercontinental Press, 2013), 122. A 2014 report from the *China Youth Daily* indicated the Z-20 helicopter would eventually be joining the PLANMC. See Li Youcheng and Li Wei [李友成, 李伟], "Z-20, Another Piece of Star-Status Equipment of the Chinese Troops" [直-20, 中国军队的又一款明星装备], *China Youth Daily* [中国青年报], February 7, 2014. A *CCTV* special commentator similarly stated in 2016 that the Z-10K helicopter would eventually be joining, among other branches, the PLANMC. See "Focus Today" [今日关注], *CCTV-4*, November 2, 2016. More recently, state-run media have been referring to the PLANMC as a "triphibious"/"triphibian" [三栖] force (land-, sea-, and air-capable). See Ni Guanghui [倪光辉], "Marine Corps: Triphibious Crack Force Rides the Waves (New Era Strong Military Fight Song)" [海军陆战队: 三栖劲旅踏浪来 (新时代强军战歌)], *People's Daily* [人民日报], February 11, 2018, 6; "Live News," *CCTV-Xinwen*, April 13, 2018. Where as previously the branch's land and amphibious attributes had been lauded, state-run media have more recently referred to the PLANMC as "tigers on the land, dragons on the sea, and eagles in the air." See Ni Guanghui [倪光辉], "Marine Corps: Triphibious Crack Force Rides the Waves (New Era Strong Military Fight Song)" [海军陆战队: 三栖劲旅踏浪来 (新时代强军战歌)], *People's Daily* [人民日报], February 11, 2018, 6. Other reports have similarly indicated an evolving PLANMC, such as one that stated it had gone "from a single branch to being composed of multiple branches." That same report also reiterated that the PLANMC are now "eagles in the air." See "Unmasking the Chinese Navy's Five Major Branches! Liaoning Warship Enters the Ranks to Produce a New Type of Main Combat Power" [揭秘中国海军五大兵种! 辽宁舰入列催生新型主战力量], *CCTV Online* [央视网], April 13, 2018, available at <<http://news.cctv.com/2018/04/13/ARTIVrCLD4fwObEHaemhpc3180413.shtml>>. At least one 2018 *CCTV* report referred to a helicopter pilot, whom it was interviewing, as "a pilot of a certain brigade of the Marine Corps." See "Our Military Frogmen Rapidly Transported Covert Infiltration to Successfully Carry Out a 'Decapitation' Operation" [我军蛙人快速输送隐蔽渗透 成功实施“斩首”行动], *People's Daily Online* [人民网], November 2, 2018, available at <<http://military.people.com.cn/n1/2018/11/02/c1011-30378714.html>>. At least two 2018 reports from *People's Navy* have also stated that the PLANMC does indeed have its own aviation assets. One of these reports stated that the PLANMC brigade being covered was strengthening the "operational and technical training for [its] newly selected and transferred pilots." It also spoke of a training exercise being undertaken by "a certain brigade of the Marine Corps Shipborne Aviation" [海军陆战队舰载航空兵某旅]. See Fan Xudong and Fu Yuanye [范旭东, 傅原野], "Standardize Training Method and Accumulate Power to Spread One's Wings and Soar – Marines of a Certain Brigade Sticks Close to Actual Combat and Launches Day-to-Night Flight Training" [规范施训方法 蓄力展翅高飞 – 陆战队某旅紧扣实战开展跨昼夜飞行训练], *People's Navy* [人民海军], March 12, 2018, 2. The other stated that the brigade being covered in this report (unclear if it is a different brigade from the report above) had already filled all of its "pilot training posts." All of this evidence indicates there is now a 'PLANMC Aviation,' in substance, if not in name.
- 20 Gao Qianyi [高千一], "Today, the Army Official WeChat 'People's Army' is Officially Launched" [今天, 陆军官方微信“人民陆军”正式上线], May 20, 2018, *PLA Army's WeChat* [人民陆军微信], available at <http://www.81.cn/2017zt/2018-05/20/content_8039123.htm>. For the PLAA being the 'biggest loser' of the shift in emphasis towards the maritime domain, see Ian Burns McCaslin and Andrew Erickson, "The Impact of Xi-Era Reforms on the Chinese Navy," in Phillip C. Saunders, Arthur S. Ding, Andrew Scobell, Andrew N.D. Yang, and Joel Wuthnow, eds., *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, (Washington, DC: National Defense University Press, 2019).
- 21 The new brigade appears to be based in Shandong, and, therefore, under the jurisdiction of the North Sea Fleet. See Wang Dengke and Liyan Ze, "In Extremely Cold Weather, Marine Brothers-in-Arms Set Out" [极寒天气中, 海军陆战队兵哥哥们出动啦], *China Military Online*, December 29, 2017, available at <http://www.81.cn/jwsj/2017-12/29/content_7889803.htm>.
- 22 Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China 2018*, 28.

- 23 On the direction of the main threat of war, see Shou Xiaosong [寿晓松], ed., *Science of Military Strategy* [战略学], (Beijing: Military Science Press [军事科学出版社], December 2013), 106. On where to protect the homeland from, see Shou Xiaosong [寿晓松], ed., *Science of Military Strategy* [战略学], (Beijing: Military Science Press [军事科学出版社], December 2013), 106. On the shift towards the maritime domain, see “White Paper Outlines China’s “Active Defense” Strategy,” *Xinhua*, May 26, 2015, available at <<http://en.people.cn/n/2015/0526/c90786-8898060.html>>.
- 24 Dennis J. Blasko, “Chapter Eight: The PLA Army/Ground Forces,” in Kevin Pollpeter and Kenneth W. Allen, eds., *The PLA as Organization v2.0*, (Vienna, VA: Defense Group Inc., 2015), 299.
- 25 Andrew S. Erickson, *Chinese Anti-Ship Ballistic Missile (ASBM) Development: Drivers, Trajectories and Strategic Implications*, (Washington, D.C.: The Jamestown Foundation, May 2013), 6-7.
- 26 Chen Heying, “New missiles or defensive purposes only,” *Global Times*, September 4, 2015, available at <<http://www.globaltimes.cn/content/940518.shtml>>.
- 27 Thomas Shugart, “Has China Been Practicing Preemptive Missile Strikes Against U.S. Bases?,” *War on the Rocks*, February 6, 2017, available at <<https://warontherocks.com/2017/02/has-china-been-practicing-preemptive-missile-strikes-against-u-s-bases/>>.
- 28 Andrew S. Erickson and David D. Yang, “Using the Land to Control the Sea: Chinese Analysts Consider the Antiship Ballistic Missile,” *Naval War College Review*, Vol. 62, No. 4, (Autumn 2009), 62.
- 29 “What Kind of Force is the Strategic Support Force Inspected by Xi Jinping?” [习近平视察的战略支援部队是一支怎样的力量?], *CCTV Online* [央视网], August 30, 2016, available at <<http://news.cctv.com/2016/08/30/ART12Xi1zgyuCfj6TYsecOcb160830.shtml>>.
- 30 Ian Burns McCaslin and Andrew Erickson, “The Impact of Xi-Era Reforms on the Chinese Navy,” in Phillip C. Saunders, Arthur S. Ding, Andrew Scobell, Andrew N.D. Yang, and Joel Wuthnow, eds., *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, (Washington, DC: National Defense University Press, 2019).
- 31 Kenneth W. Allen, “Chapter Ten: PLA Air Force Organization Reforms: 2000-2012,” in Kevin Pollpeter and Kenneth W. Allen, eds., *The PLA as Organization v2.0*, (Vienna, VA: Defense Group Inc., 2015), 344. The PLAAF’s “first-ever service-specific strategic concept” was “integrate air and space; be simultaneously prepared for offensive and defensive operations.” See Murray Scot Tanner, “The Missions of the People’s Liberation Army Air Force,” in Richard P. Hallion, Roger Cliff, and Phillip C. Saunders, eds., *The Chinese Air Force: Evolving Concepts, Roles, and Capabilities*, (Washington, D.C.: National Defense University Press, 2012), 134.
- 32 Kevin M. Lanzit and Kenneth Allen, “Right-Sizing the PLA Air Force: New Operational Concepts Define a Smaller, More Capable Force,” in Roy Kamphausen and Andrew Scobell, eds., *Right-Sizing the People’s Liberation Army: Exploring the Contours of China’s Military*, (Carlisle, PA: U.S. Army War College, September 2007), 449.
- 33 Information Office of the State Council, “The Diversified Employment of China’s Armed Forces,” *State Council*, April 2013, available at <http://english.gov.cn/archive/white_paper/2014/08/23/content_281474982986506.htm>.
- 34 State Council Information Office, “China’s Military Strategy,” *State Council*, May 2015, available at <<http://eng.mod.gov.cn/Database/WhitePapers/index.htm>>.
- 35 Murray Scot Tanner, “The Missions of the People’s Liberation Army Air Force,” in Richard P. Hallion, Roger Cliff, and Phillip C. Saunders, eds., *The Chinese Air Force: Evolving Concepts, Roles, and Capabilities*, (Washington, D.C.: National Defense University Press, 2012), 134-135.
- 36 Mark R. Cozad and Nathan Beauchamp-Mustafaga, *The People’s Liberation Army Air Force Operations over Water: Maintaining Relevance in China’s Changing Security Environment*, (Santa Monica, CA: RAND Corporation, 2017), vii. In fact, until the late 1990s, the PLAAF did not even fly over the waters along China’s coast, with those overwater flights being the sole domain of Naval Aviation, see Michael D. Swaine, Andrew N.D. Yang, and Evan S. Medeiros with Oriana Skylar Mastro, ed., *Assessing the Threat: The Chinese Military and Taiwan’s Security*, (Carnegie Endowment for International Peace, 2007), 181. In another example of the PLAAF encroaching on Naval Aviation, the first acknowledged presence of the PLAAF in the South China Sea did not occur until the summer of 2016 (all aircraft previously acknowledged had only been identified as Naval Aviation); however, since then, the PLAAF has

- publicly indicated that its patrols in the area would be “regularized.” See Mark R. Cozad and Nathan Beauchamp-Mustafaga, *The People’s Liberation Army Air Force Operations over Water: Maintaining Relevance in China’s Changing Security Environment*, (Santa Monica, CA: RAND Corporation, 2017), 30.
- 37 For more on this dilemma and how some members of the U.S. Air Force respond to it, see Mike Pietru-cha and Jeremy Renken, “Airpower Might Not Win Wars, But It Sure Doesn’t Lose Them,” *War on the Rocks*, August 19, 2015, available at <<https://warontherocks.com/2015/08/airpower-may-not-win-wars-but-it-sure-doesnt-lose-them/>>.
- 38 Dong Wenxian [董文先], “The Expansion of National Strategic Space Calls for a Strategic Air Force” [“国家战略空间扩展呼唤战略空军”], *Air Force Daily* [空军报], February 2, 2008, 2.
- 39 Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2018*, (Arlington, VA: May 16, 2018), 70.
- 40 Dong Wenxian [董文先], “The Expansion of National Strategic Space Calls for a Strategic Air Force” [“国家战略空间扩展呼唤战略空军”], *Air Force Daily* [空军报], February 2, 2008, 2.
- 41 Edmund J. Burke and Astrid Stuth Cevallos, “PRC Leadership Dynamics Shaping the Future of the PLA Air Force: Examining the Party’s Military Reform Efforts,” in Edmund J. Burke, Astrid Stuth Cevallos, Mark R. Cozad, and Timothy Heath, *Assessing the Training and Operational Capabilities Proficiency of China’s Aerospace Forces*, (Santa Monica, CA: RAND Corporation, 2016), 18. In 2013 alone, the PLAAF was reportedly able to complete 333 patrols. See, Zhu Ningzhu, ed., “Chinese Military Planes Regularly Patrol ADIZ: Spokesman,” *Xinhua*, January 23, 2014.
- 42 Tara Copp, “China has practiced bombing runs targeting Guam, U.S. says,” *Defense News*, October 31, 2017, available at <<https://www.defensenews.com/flashpoints/2017/10/31/china-has-practiced-bombing-runs-against-guam-us-says/>>.
- 43 Li Kaiqiang and Zhang Hongwei [李开强, 张宏伟], “Air Force Organized First Live Fire Training at Sea for Flight School” [“空军首次组织飞行院校海上实弹打靶”], *PLA Daily* [解放军报], May 20, 2015, available at <http://www.mod.gov.cn/academy/2015-05/20/content_4585772.htm>.
- 44 Liangyu, ed., “Chinese air force patrol South China Sea,” *Xinhua Online*, November 23, 2017, available at <http://news.xinhuanet.com/english/2017-11/23/c_136774671.htm>.
- 45 Yin Bangshi and Zhao Shijie [尹帮石, 赵世杰], “The ‘Four Emphases’ Assisting in Improving Real Combat Capabilities: Snapshots of Southern Theater Command Air Force Air Regiment Launches High-Intensity Live-Fire Training” [“四突出”助力实战能力提升: 南部战区空军航空兵某团开展大强度实弹训练掠影], *Air Force Daily* [空军报], July 20, 2017, 4.
- 46 “Military representatives talk about the Air Force’s actual-combat training,” [“军队代表畅谈空军实战化训练”], *Xinhua Online* [新华网], March 11, 2018, available at <http://www.xinhuanet.com/mil/2018-03/11/c_129827188.htm>. For more on the PLAAF’s key training brands, see Jana Allen and Kenneth Allen, *The PLA Air Force’s Four Key Training Brands*, (Montgomery, AL: China Aerospace Studies Institute, 2018).
- 47 Huang Panyue, ed., “PLA Air Force unveils ‘Golden Dart-2016’ military competition,” *China Military Online*, July 22, 2016, available at <http://eng.chinamil.com.cn/view/2016-07/22/content_7183724.htm>.
- 48 “China Air Force 2015 ‘Golden Dart’ Competition for the First Time Will be Organized to Orient Towards the Sea” [“中国空军2015年‘金飞镖’比武首次在海上方组织”], *China News Service* [中国新闻网], September 8, 2015, available at <<http://military.people.com.cn/n/2015/0908/c1011-27557653.html>>.
- 49 “China Air Force 2015 ‘Golden Dart’ Competition for the First Time Will be Organized to Orient Towards the Sea” [“中国空军2015年‘金飞镖’比武首次在海上方组织”], *China News Service* [中国新闻网], September 8, 2015, available at <<http://military.people.com.cn/n/2015/0908/c1011-27557653.html>>.
- 49 Jana Allen and Kenneth Allen, *The PLA Air Force’s Four Key Training Brands*, (Montgomery, AL: China Aerospace Studies Institute, 2018), 4. Zhang Yuqing [张玉清], “‘Golden Helmet’ Competition Pushes Air Force Actual Combat Military Training into a New Age” [“金头盔”比武推动空军实战化军事训练迈进新时代], *Xinhua News Agency* [新华社], November 13, 2017, available at <http://kj.81.cn/content/2017-11/13/content_7821660.htm>.
- 50 Zhang Yuqing and Zhang Mimi [张玉清, 张汨汨], “China’s Air Force Strengthens Distant Sea Training to Improve Strategic Capability” [“中国空军加强远海训练提升战略能力”], *Xinhua Online* [新华网], December 15, 2016, available at <http://news.xinhuanet.com/2016-12/15/c_1120123755.htm>.

- 51 Mark R. Cozad and Nathan Beauchamp-Mustafaga, *The People's Liberation Army Air Force Operations over Water: Maintaining Relevance in China's Changing Security Environment*, (Santa Monica, CA: RAND Corporation, 2017), 19.
- 52 Mark R. Cozad and Nathan Beauchamp-Mustafaga, *The People's Liberation Army Air Force Operations over Water: Maintaining Relevance in China's Changing Security Environment*, (Santa Monica, CA: RAND Corporation, 2017), 9.
- 53 Qiu Yue and Yan Jiaqi [邱越, 闫嘉琪], "Expert: Joint Navy and Air Force Exercise to Control the Contest of Command of the Air Helps to Exert the Navy's Strike Capability" [专家: 海空军联演助力制空权争夺发挥海军打击能力], *People's Daily Online* [人民网], November 4, 2015, available at <<http://military.people.com.cn/n/2015/1104/c1011-27774164.html>>.
- 54 Ma Xiaotian [马晓天], "Strive to Improve the Ability of the Air Force to Fight and Win" [努力提高空军部队能打仗打胜仗能力], *PLA Daily* [解放军报], April 2, 2014, available at <http://www.81.cn/2014-content_18620/2014-04/02/content_6153511.htm>.
- 55 For an example, see the first post on the PLAAF's Weibo account on May 18, 2018, available at <<https://m.weibo.cn/status/4241033086791115>>.
- 56 Mimi Lau and Liu Zhen, "China's new air force chief lays out long-range mission," *South China Morning Post*, September 4, 2017, available at <<https://www.scmp.com/news/china/diplomacy-defence/article/2109566/chinas-new-air-force-chief-lays-out-long-range-mission>>.
- 57 Mimi Lau and Liu Zhen, "China's new air force chief lays out long-range mission," *South China Morning Post*, September 4, 2017, available at <<https://www.scmp.com/news/china/diplomacy-defence/article/2109566/chinas-new-air-force-chief-lays-out-long-range-mission>>.
- 58 Xu Ban and Ren Daguang [许般, 任达光], "PLA Air Force Holds Military Training Conference" [空军召开军事训练会议], *Air Force Daily* [空军报], January 11, 2018, 1.
- 59 Yin Bangshi and Zhao Shijie [尹帮世, 赵世杰], "The 'Four Emphases' Assisting in Improving Real Combat Capabilities: Snapshots of Southern Theater Command Air Force Air Regiment Launches High-Intensity Live-Fire Training" ["四突出"助力实战能力提升: 南部战区空军航空兵某团开展大强度实弹训练掠影], *Air Force Daily* [空军报], July 20, 2017, 4.
- 60 In May 2018, the PLAAF's official Weibo account announced that its aircraft, including the H-6K, had landed on a physical feature(s) controlled by China in the South China Sea. See the first post on the PLAAF's official Weibo account for May 18, 2018, available at <<https://m.weibo.cn/status/4241033086791115>>. Subsequent reporting indicated the physical feature where at least one H-6K landed was Woody Island in the Paracels. See Ankit Panda, "South China Sea: What China's First Strategic Bomber Landing on Woody Island Means," *The Diplomat*, May 22, 2018, available at <<https://thediplomat.com/2018/05/south-chinasea-what-chinas-first-strategic-bomber-landing-on-woody-islandmeans/>>.
- 61 Jeffrey Lin and P.W. Singer, "Finally, A Modern Chinese Aerial Tanker," *Popular Science*, April 2, 2014, available at <<https://www.popsci.com/blog-network/eastern-arsenal/finally-modern-chinese-aerial-tanker>>. For the rumored development of a tanker version of the Y-20, see *Asia Times* Staff, "Chubby Girl's Sister To Boost China's Military Capability," December 14, 2017, available at <<http://www.atimes.com/article/chubby-girls-sister-boost-chinas-military-capability/>>.
- 62 Eric Heginbotham, Michael Nixon, Forrest E. Morgan, Jacob L. Heim, Jeff Hagen, Sheng Li, Jeffrey Engstrom, Martin C. Libicki, Paul DeLuca, David A. Shlapak, David R. Frelinger, Burgess Laird, Kyle Brady, and Lyle J. Morris, *The U.S.-China Military Scorecard: Forces, Geography, and the Evolving Balance of Power*, (Santa Monica, CA: RAND, 2015), 33.
- 63 Yang Qingqun [杨庆春], "While Inspecting a Certain Guangzhou Military Region Air Force Unit, Ma Xiaotian, Member of the Central Military Commission and Commander of the Air Force, Emphasized that Joint Maritime Search and Rescue Will Require Integration of Military and Local Organizations and High Command Efficiency" [中央军委委员, 空军司令员马晓天在广空部队检查调研时强调: 海上联合搜救要军地-体多元融合指挥高效], *Air Force Daily* [空军报], November 10, 2014, 1.
- 64 Yang Qingqun [杨庆春], "While Inspecting a Certain Guangzhou Military Region Air Force Unit, Ma Xiaotian, Member of the Central Military Commission and Commander of the Air Force, Emphasized that Joint Maritime Search and Rescue Will Require Integration of Military and Local Organizations and High Command Efficiency" [中央军委委员, 空军司令员马晓天在广空部队检查调研时强调: 海上联合搜救要军地-体多元融合指挥高效], *Air Force Daily* [空军报], November 10, 2014, 1.

- 65 Yang Qingqun [杨庆春], “While Inspecting a Certain Guangzhou Military Region Air Force Unit, Ma Xiaotian, Member of the Central Military Commission and Commander of the Air Force, Emphasized that Joint Maritime Search and Rescue Will Require Integration of Military and Local Organizations and High Command Efficiency” [中央军委委员, 空军司令员马晓天在广空部队检查调研时强调: 海上联合搜救要军地-体多元融合指挥高效], *Air Force Daily* [空军报], November 10, 2014, 1.
- 66 Mark R. Cozad and Astrid Stuth Cevallos, “Trends in PLA Air Force Joint Training: Assessing Progress in Integrated Joint Operations,” in Edmund J. Burke, Astrid Stuth Cevallos, Mark R. Cozad, and Timothy Heath, *Assessing the Training and Operational Capabilities Proficiency of China’s Aerospace Forces*, (Santa Monica, CA: RAND Corporation, 2016), 53.
- 67 Mark R. Cozad and Astrid Stuth Cevallos, “Trends in PLA Air Force Joint Training: Assessing Progress in Integrated Joint Operations,” in Edmund J. Burke, Astrid Stuth Cevallos, Mark R. Cozad, and Timothy Heath, *Assessing the Training and Operational Capabilities Proficiency of China’s Aerospace Forces*, (Santa Monica, CA: RAND Corporation, 2016), 45.
- 68 Huang Rui [黄锐], “Military Experts Explain Sino-Russian ‘Joint Sea-2015 (II)’ Exercise Highlights” [军事专家详解中俄“海上联合-2015 (II)”演习亮点], *Xinhua Online* [新华], August 24, 2015, available at <http://www.xinhuanet.com/world/2015-08/24/c_1116357242.htm>.
- 69 Li Jiayao, ed., “Vessel troops of the PLA Air Force,” *China Military Online*, January 19, 2018, available at <http://english.pladaily.com.cn/view/2018-01/19/content_7914789.htm>.
- 70 Li Jiayao, ed., “Vessel troops of the PLA Air Force,” *China Military Online*, January 19, 2018, available at <http://english.pladaily.com.cn/view/2018-01/19/content_7914789.htm>.
- 71 Lu Xiaoping, *The PLA Air Force*, (Beijing: China Intercontinental Press, January 2012), 104.
- 72 For the quote about the support and guidance, see Lu Xiaoping, *The PLA Air Force*, (Beijing: China Intercontinental Press, 2011), page 2 of the Preface. For the quote on the 2008 change, see Lu Xiaoping, *The PLA Air Force*, (Beijing: China Intercontinental Press, 2011), 105.
- 73 Lu Xiaoping, *The PLA Air Force*, (Beijing: China Intercontinental Press, 2011), 105.
- 74 Yi Wenbo and Jiang Long [尹闻博, 蒋龙], “Achieving Airdrop Capability Through All-Domain Direct Reach Operations: Air Force Airborne’s Air Transport Brigade Carries Out Simulated Airdrop Over Unfamiliar Island Targets” [全域直达练就能降: 空降兵某空运旅对陌生海岛目标实施模拟空降训练小记], *Air Force Daily* [空军报], June 7, 2017, 1.
- 75 Xi Zhigang and Jiang Long, “In-depth: A close look at Chinese airborne troops,” *China Military Online*, August 30, 2017, available at <http://eng.chinamil.com.cn/view/2017-08/30/content_7736996.htm>.
- 76 Zhang Tao, ed., “Marine Corps soldiers demonstrate parachuting skills,” *China Military Online*, November 9, 2017, available at <http://eng.chinamil.com.cn/view/2017-11/09/content_7818652.htm>.
- 77 Edmund J. Burke and Astrid Stuth Cevallos, “PRC Leadership Dynamics Shaping the Future of the PLA Air Force: Examining the Party’s Military Reform Efforts,” in Edmund J. Burke, Astrid Stuth Cevallos, Mark R. Cozad, and Timothy Heath, *Assessing the Training and Operational Capabilities Proficiency of China’s Aerospace Forces*, (Santa Monica, CA: RAND Corporation, 2016), 19.
- 78 Yang Qingqun [杨庆春], “While Inspecting a Certain Guangzhou Military Region Air Force Unit, Ma Xiaotian, Member of the Central Military Commission and Commander of the Air Force, Emphasized that Joint Maritime Search and Rescue Will Require Integration of Military and Local Organizations and High Command Efficiency” [中央军委委员, 空军司令员马晓天在广空部队检查调研时强调: 海上联合搜救要军地-体多元融合指挥高效], *Air Force Daily* [空军报], November 10, 2014, 1.
- 79 Shou Xiaosong [寿晓松], ed., *Science of Military Strategy* [战略学], (Beijing: Military Science Press [军事科学出版社], December 2013), 214.
- 80 Zhu Xiaobing, Ding Yibo, and Cheng Hainan [朱笑冰, 丁义波, 程海南], “What Happens When an Island Radar Station Encounters ‘WeChat Reading?’” [当海岛雷达站遇上“微信读书”, 究竟会发生什么?], *China Military Online* [中国军网], April 23, 2018, available at <http://www.81.cn/2018zt/2018-04/23/content_8013377.htm>.
- 81 Lu Xiaoping, *The PLA Air Force*, (Beijing: China Intercontinental Press, January 2012), 147.
- 82 Lu Xiaoping, *The PLA Air Force*, (Beijing: China Intercontinental Press, January 2012), 147-152.

- 83 Jonathan Watts, "China's largest cloud seeding assault aims to stop rain on the national parade," *The Guardian*, September 23, 2009, available at <<https://www.theguardian.com/environment/2009/sep/23/china-cloud-seeding>>.
- 84 As of November 2017, PLAA personnel made up 91.5% of all PLA peacekeeping troops. See Li Qinghua and Yang Qingmin [李清华, 杨庆民], "The Army has Begun the Establishment of Six Categories of 19 Contingents of a Peacekeeping Standby Unit" [陆军启动组建6类19支维和待命部队], *Xinhua News Agency* [新华社], November 18, 2017, available at <http://www.81.cn/jmywyl/2017-11/18/content_7831613.htm>. This strong involvement in such missions is reflected by the inclusion of an entire section on the service's participation in UN peacekeeping operations in a book that was part of a series with the "strong support and guidance" of the PRC Ministry of National Defense. See Wang Wei, *The Chinese People's Liberation Army*, (Beijing: China Intercontinental Press, January 2012), 204-211. Social media accounts associated with and under the PLAA have also chosen to highlight the service's participation in such operations. For one such example involving a social media account associated with the PLAA, see Sun Jiwei and Qian Xiaohu [孙继伟, 钱晓虎] "The Army has Started to Establish a Peacekeeping Standby Unit, 8,000 People that Can at the Quickest be Deploy in 60 Days" [陆军启动组建维和待命部队, 8000人最快60天内实现部署], "*China Army*" *WeChat Pubic Number* ["中国陆军"微信公号], November 18, 2017, available at <https://www.thepaper.cn/newsDetail_forward_1870351>. For one such example involving a social media account that is under the PLAA, see "Mali Terror Attack Causes 35 Peacekeeping Personnel Casualties, Chinese Military Personnel Immediately Dispatched" [马里恐袭致35名维和人员伤亡 中国军人第一时间出动], *Observer Online* [观察者网], January 22, 2019, available at <https://www.guancha.cn/international/2019_01_22_487834.shtml?s=zwyxgtjbt>.
- 85 "Internationalization of China's naval officers," *CGTN*, October 5, 2016, available at <<https://www.youtube.com/watch?v=7WHoMKUdZ1U>>.
- 86 William M. Hammond, *Public Affairs: The Military and the Media, 1962-1968*, (Center of Military History: Washington, D.C., 1990), 85.
- 87 Huang Panyue, ed., "Su-35, J-20 fighter jets help maintain China's airspace safety," *China Military Online*, February 12, 2018, available at <http://english.pladaily.com.cn/view/2018-02/12/content_7942685.htm>.
- 88 First video posted on the PLAAF's official Weibo account on April 23, 2018, available at <<https://m.weibo.cn/status/4231887629616281>>.
- 89 Bai Tiantian, "PLA sends second planes round Taiwan for second time in a week," *Global Times*, April 26, 2018, available at <<http://www.globaltimes.cn/content/1099897.shtml>>.
- 90 For a study on the methods the different U.S. military services employ in Congressional relations (one aspect of public relations), see Stephen K. Scroggs, *Army Relations with Congress: Thick Armor, Dull Sword, Slow Horse*, (Westport, CT: Praeger Publishers, 2000).
- 91 Derek Glossman, Nathan Beauchamp-Mustafaga, Logan Ma, and Michael S. Chase, *China's Long-Range Bomber Flights: Drivers and Implications*, (Santa Monica, CA: RAND Corporation, 2018), 60.
- 92 Shen Jinke, "Timely news on military will boost public confidence," *China Daily*, December 16, 2017, available at <http://www.chinadaily.com.cn/opinion/2017-12/16/content_35315890.htm>.
- 93 For an example of the use of the "non-authenticated" description, see Song Mingliang and Huang Yumin [宋明亮, 黄裕民], "What Kind of Media are the Military Public WeChat Accounts" [军队微信公众号是怎样的媒体], *Military Correspondent* [军事记者], May 10, 2017, available at <http://www.81.cn/jsjz/2017-05/10/content_7595213.htm>. The PLAAF Airborne, previously called the 15th Airborne Corps and now called the Airborne Corps and sometimes just referred to as the "airborne troops" or "paratroopers," has the Military Unit Cover Designation (MUCD) of 95829 (a holdover from its days as the 15th Airborne Corps), which is displayed on the banner of its Weibo account. A special thanks to Ken Allen for his help in confirming when the PLAAF Airborne first got this particular MUCD. Its accounts on both Weibo and WeChat are not official because it did not submit all the required information to the social media platforms. According to *Military Correspondent* (under the *PLA Daily*), the reason for this choice to withhold complete information was that it was "not convenient to reveal unit information." See Song Mingliang and Huang Yumin [宋明亮, 黄裕民], "What Kind of Media are the Military Public WeChat Accounts" [军队微信公众号是怎样的媒体], *Military Correspondent* [军事记者], May 10, 2017. This might have to do with the fact that it was stated that the Airborne is an "emergency mobile combat unit." See Zhuang Liren and Han Bing [庄立人, 韩兵], "Reposting/Type in Weibo 'Airplane' and 'Tank,' Who is so Big?" [转发微博就送"飞机""坦克", 谁这么大手笔?], August 17, 2018, *Sohu* [搜狐], available at <http://www.sohu.com/a/248323206_221650>. The account of the Airborne has had significant success on WeChat, in

particular. A 2016 report by *China Military Online* and the *Ministry of National Defense Online* that listed the top 20 most influential Chinese military and central media accounts on WeChat ranked the Airborne account as 7th. See Feng Lingling [冯玲玲], ed., “Military Affairs-Type Public WeChat Accounts Publicity Rankings” [军事类微信公众号排行榜公示], *Ministry of National Defense Online* [国防部网], June 19, 2016, available at <http://www.mod.gov.cn/topnews/2016-06/19/content_4677355.htm>. Similarly, despite not being an official account, official state-run media accounts on Weibo post images bearing the emblem of Airborne’s Weibo account on their own.

- 94 “PLA marches on social media to gain public support,” *People’s Daily*, May 21, 2018, available at <<http://en.people.cn/n3/2018/0521/c90000-9462468.html>>. A few months after the launch of the PLAA’s service social media accounts, two of its group armies, the 80th and then the 74th, both established their own official unit social media accounts. See Zhuang Liren and Han Bing [庄立人, 韩兵], “Reposting/Type in Weibo ‘Airplane’ and ‘Tank,’ Who is so Big?” [转发微博就送“飞机”“坦克”, 谁这么大手笔?], August 17, 2018, *Sohu* [搜狐], available at <http://www.sohu.com/a/248323206_221650>. According to a report by the *PLA Daily*, many units across the services have come to set up their own accounts on WeChat, but many of them have done so by “unofficial methods,” including some of the PLAA group armies. See Wang Tianyi [王天益], “The Praises and Concerns of Military Camp Public Accounts” [军营公众号的喜与忧], *PLA Daily* [解放军报], February 20, 2017, 5.
- 95 The PLARF established one Weibo account and one WeChat account with the same name of “China Rocket Force” [中国火箭军]. It also established another Weibo account named “Dongfeng Express” or “DF Express.” According to *Global Times*, the name “DF Express” was “a nickname conjured up [for the PLARF] by military enthusiasts years ago in praise of [the] Dongfeng ballistic missiles’ ability to strike a global target both quickly and accurately.” See “PLA Rocket Force opens first social media accounts with a bit of humor,” *Global Times*, February 17, 2019, available at <<http://www.globaltimes.cn/content/1139121.shtml>>. The *China Daily* translated this second Weibo account name more literally as “Eastwind Delivery.” See Zhang Wenfang, “PLA Rocket Force Weibo accounts take off in popularity,” *China Daily*, February 15, 2019, available at <<http://www.chinadaily.com.cn/a/201902/15/WS5c66814ca3106c65c34e99b3.html>>.
- 96 Liang Pengfei [梁鹏飞], “Air Force Party Representative Liu Wenli: Double Eleven is the Shopping Festival and the Air Force’s Birthday” [空军党代表刘文力: 双十一是购物节更是空军的生日], *Military Daily Reporter* [军报记者], October 24, 2017, available at <http://news.ifeng.com/a/20171024/52775093_0.shtml>.
- 97 For one example post, see the first post on the PLAAF’s official account on Weibo for November 10, 2017. available at <<https://m.weibo.cn/status/4172661989002821>>.
- 98 For one example, see the third post on the PLAAF’s official account on Weibo for November 8, 2017, available at <<https://m.weibo.cn/status/4171900898904960>>.
- 99 For an example of a the PLAAF highlighting the progress it has made since the last Party Congress during the 19th Party Congress, see the second post on the PLAAF’s official Weibo account on October 19, 2017, available at <<https://m.weibo.cn/status/4164621752011748>>.
- 100 The PLAAF’s post on Weibo for August 1, 2018, available at <<https://m.weibo.cn/detail/4135978022877613>>.
- 101 For 2018 Spring Festival PLAAF video, see “Chinese PLA Air Force Releases Spring Festival Promotion Clip,” *CCTV+*, February 17, 2018, available at <<https://www.youtube.com/watch?v=IJBuu-USDWk>>. For the Mother’s Day video, see the first post on the PLAAF’s official Weibo account on May 13, 2018, available at <<https://m.weibo.cn/detail/4239349446642893>>.
- 102 Guo Hongbo, Gao Jie, Li Guowen, and Li Jianwen [郭洪波, 高杰, 李国文, 李建文], “Soaring 10,000 Miles Towards the Sky -- Description and Commentary on Air Force Units’ All-Out Effort in Strong Armed Forces Reform and Accelerating the Strategic Transformation” [鹏飞万里向天空-- 空军部队奋力投身改革强军加快推进战略转型述评], *PLA Daily* [解放军报], May 4, 2017, 3.
- 103 Lotus Ruan, “3 things to remember when growing your business with WeChat and Weibo in China,” *Tech in Asia*, September 28, 2015, available at <<https://www.techinasia.com/talk/3-remember-growing-business-wechat-weibo-china>>.
- 104 Lotus Ruan, “3 things to remember when growing your business with WeChat and Weibo in China,” *Tech in Asia*, September 28, 2015, available at <<https://www.techinasia.com/talk/3-remember-growing-business-wechat-weibo-china>>.

- 105 Lotus Ruan, “3 things to remember when growing your business with WeChat and Weibo in China,” *Tech in Asia*, September 28, 2015, available at <<https://www.techinasia.com/talk/3-remember-growing-business-wechat-weibo-china>>.
- 106 Shen Jinke [申进科], “Optimize Information Supply to Lead Internet Public Opinion” [优化信息供给引领网络舆论], *Xinhua Daily Telegraph* [新华], December 8, 2017, available at <http://www.xinhuanet.com/mrdx/2017-12/08/c_136809637.htm>.
- 107 “Chinese Air Force Reveals Different Warplanes in Latest Promo Video,” *CCTV+*, December 17, 2017, available at <https://www.youtube.com/watch?v=-imiu_HC0u8>.
- 108 “Twelve H-6K bombers fly over South China Sea,” *China Military Online*, April 2, 2018, available at <<http://www.globaltimes.cn/content/1096259.shtml>>. On the noteworthy size of the flight, see Li Qiang and Liu Yang, “Show China’s will: PLA Air Force sends 12 H-6K bombers for remote maneuver,” *China Military Online*, March 29, 2018, available at <http://english.chinamil.com.cn/view/2018-03/29/content_7986473.htm>.
- 109 PLAAF spokesperson Shen Jinke stated that “some journalists keep a regular watch on the air force’s weibo account.” See Shen Jinke, “Timely news on military will boost public confidence,” *China Daily*, December 16, 2017, available at <http://www.chinadaily.com.cn/opinion/2017-12/16/content_35315890.htm>.
- 110 “PLA Air force promotion video gone viral in China,” *CGTN*, July 30, 2017, available at <<https://www.youtube.com/watch?v=1hz8Y6lYWcg>>.
- 111 “Recruiting ad for conscription into the China Air Force,” *CGTN*, July 31, 2015, available at <https://www.youtube.com/watch?v=Anw2VL6_MMs>.
- 112 Xun Zhao, Feida Zhu, Weining Qian, and Aoying Zhou “Impact of Multimedia in Sina Weibo: Popularity and Lifespan,” in Juanzi Li, Guilin Qi, Dongyan Zhao, Wolfgang Nejdl, and Hai-Tao Zheng, eds., *Semantic Web and Web Science*, (Springer, May 2013), 55-65.
- 113 “China air force goads Taiwan with Hokkien-language video,” *Reuters*, April 20, 2018, available at <<https://www.reuters.com/article/us-china-taiwan-defence/china-air-force-goads-taiwan-with-hokkien-language-video-idUSKBN1HR0G2>>.
- 114 Manya Koetse, “Weibo Night Awards: These Were the Most Influential Weibo Brands, Events and Celebrities,” *What’s On Weibo*, January 16, 2017, available at <<https://www.whatsonweibo.com/weibo-night-awards-influential-weibo-brands-events-celebrities/>>.
- 115 The North Sea Fleet WeChat account was not set up until May 14, 2016. See Lu Xintong [吕欣彤], “North Sea Fleet’s Public Number Officially Opened, Official MV Simultaneously Debuted” [“北海舰队”公众号正式开通 官方MV 同步首发], *PLA Daily Client* [解放军报客户端], May 16, 2016, available at <http://www.81.cn/hj/2016-05/16/content_7056105.htm>.
- 116 Xu Hailin, “Coast Guard, newly under military command, announces Diaoyu patrol,” *Global Times*, July 4, 2018, available at <<http://www.globaltimes.cn/content/1109496.shtml>>.
- 117 Hou Wosong [侯卧松], ed., “Chinese Navy Online” [中国海军网], *Chinese Navy Online* Public WeChat Account [中国海军网微信], available at <http://www.81.cn/jwsj/2016-09/14/content_7257811.htm>.
- 118 “Chinese Air Force Will Launch Its First Air Combat Mobile Game in a November Reveal” [中国空军将推出首款空战手游11月震撼亮相], *PLA Daily* [解放军报], October 9, 2014, available at <<http://war.163.com/14/1009/07/A83MAIP500014OMD.html>>. The promotional images even show PLAAF J-11 fighter jets blowing up U.S. F-15s. See Tyler Rogoway, “China’s Air Force Is Releasing A Game Where You Blow Up F-15s,” *Foxrot Alpha*, October 9, 2014, available at <<https://foxrotalpha.jalopnik.com/chinas-air-force-is-releasing-a-game-where-you-blow-up-1644217909>>.
- 119 “In Honor of the Air Force’s 65 Anniversary: “Golden Helmet” Mobile Game Trailer was Launched” [为空军65周年献礼: “金头盔” 手游预告片亮相], *Tencent Military Affairs* [腾讯军事], November 10, 2014, available at <<https://new.qq.com/cmsn/20141110/20141110056756>>. “Chinese Air Force Will Launch Its First Air Combat Mobile Game in a November Reveal” [中国空军将推出首款空战手游11月震撼亮相], *PLA Daily* [解放军报], October 9, 2014, available at <<http://war.163.com/14/1009/07/A83MAIP500014OMD.html>>.
- 120 Eric Jou, “The Chinese Air Force Has a Mobile Game,” *Kotaku*, November 18, 2014, available at <<https://www.kotaku.com.au/2014/11/the-chinese-air-force-has-a-mobile-game/>>.

- 121 “In Honor of the Air Force’s 65 Anniversary: ‘Golden Helmet’ Mobile Game Trailer was Launched” [为空军65周年献礼: “金头盔” 手游预告片亮相], *Tencent Military Affairs* [腾讯军事], November 10, 2014, available at <<https://new.qq.com/cmsn/20141110/20141110056756>>.
- 122 “In Honor of the Air Force’s 65 Anniversary: ‘Golden Helmet’ Mobile Game Trailer was Launched” [为空军65周年献礼: “金头盔” 手游预告片亮相], *Tencent Military Affairs* [腾讯军事], November 10, 2014, available at <<https://new.qq.com/cmsn/20141110/20141110056756>>.
- 123 Niu Ruili [牛锐利], “‘Real Men’ Second Season Trailer Large Assembly: 8 Celebrity Air Force Recruits Report for Duty” [“真正男子汉” 第二季预告片大集结: 8明星空军新兵特来报到], *China Air Force Online* [中国空军网], October 12, 2016, available at <http://kj.81.cn/content/2016-10/12/content_7297023.htm>. The idea for the show was taken from a similar reality TV show in South Korea. See Zhang Zhihao and Zhao Lei, “PLA’s media volley seeks young recruits,” *China Daily*, January 5, 2017, available at <http://www.chinadaily.com.cn/china/2017-01/05/content_27864736.htm>.
- 124 Zhang Zhihao and Zhao Lei, “PLA’s media volley seeks young recruits,” *China Daily*, January 5, 2017, available at <http://www.chinadaily.com.cn/china/2017-01/05/content_27864736.htm>.
- 125 Zhang Zhihao and Zhao Lei, “PLA’s media volley seeks young recruits,” *China Daily*, January 5, 2017, available at <http://www.chinadaily.com.cn/china/2017-01/05/content_27864736.htm>.
- 126 Zhang Zhihao and Zhao Lei, “PLA’s media volley seeks young recruits,” *China Daily*, January 5, 2017, available at <http://www.chinadaily.com.cn/china/2017-01/05/content_27864736.htm>.
- 127 “Military Report” [军事报道], *CCTV-7*, August 16, 2018.
- 128 “Comic musical based on comics drawn by former PLA Air Force personnel released,” *CGTN*, April 3, 2018, available at <<https://www.youtube.com/watch?v=QnNTaG7evmw>>.
- 129 “Comic musical based on comics drawn by former PLA Air Force personnel released,” *CGTN*, April 3, 2018, available at <<https://www.youtube.com/watch?v=QnNTaG7evmw>>.
- 130 Zhang Tao, ed., “Expert: China’s bombers embrace new opportunities,” *China Military Online*, February 25, 2015, available at <http://english.chinamil.com.cn/news-channels/china-military-news/2015-02/25/content_6366685.htm>.
- 131 Fuel has been particularly limited for more remote PLAAF bases, see Hu Kuo [胡扩], “For Heroic Eagles on Plateau To Soar Higher and Farther -- Record of Chengdu Military Region Air Force’s POL System Closely Following Needs of Expansion of Mission and Tasks To Solve POL Support Difficulties in High-Altitude and Frigid Areas on Plateau” [为了高原雄鹰飞得更高远 -- 成空油料系统紧跟使命任务拓展需要破解高原高寒地区油料保障难题纪实], *Air Force Daily* [空军报], June 27, 2012, 1. In order to bring their fuel consumption inline with their allowances, some PLAAF units, such as a regiment in the old Lanzhou MR, set up “Fuel-Conserving Project[s]” complete with events and awards to promote fuel conservation. See Gao Jie, Wen Huiqing, and Cao Chuanbiao [高杰, 温会卿, 曹传彪], “How 600 Tons of Airplane Fuel Are Cut - an Account of an Aviation Regiment of the Lanzhou Military Region Air Force in Guiding the Work of Conserving Fuel with the Scientific Development Concept” [600吨航油是如何节省下的 - 兰空航空兵某团以科学发展观指节油工作纪实], *Air Force Daily* [空军报], January 29, 2008, 2.
- 132 A lead PLAAF H-6 bomber pilot, Qian Shiping, who flew over Tiananmen Square as part of the PRC’s 60th anniversary, was described as having flown 4, 250 hours over his career (joined in 1981). This averaged out to be 165 hours per month. See Chen Yi, Wang Tao, and Zhao Qihong [陈翊, 王涛, 赵启洪], “Only the ‘Best’ Training Standards” [训练标准只有“最好”], *China Air Force* [中国空军], November 1, 2009, 57.
- 133 For example, pilots in operational units are required to serve a regular number of hours as flight instructors, see Kenneth Allen and Lyle J. Morris, *PLA Naval Aviation Training and Operations: Missions, Organizational Structure, and Training (2013-15)*, (Montgomery, AL: China Aerospace Studies Institute, December 2015), 62.
- 134 For more on the PLA’s focus on combat-realistic training with simulated opponents, see Ian Burns McCaslin and Daniel W. Peck, “50 Shades of Blue: Similarity and Diversity in PLA Confrontation Training and Blue Forces,” paper presented at the 2018 CAPS-RAND-NDU PLA Conference in Arlington, Virginia, November 30, 2018.
- 135 Kenneth Allen and Jana Allen, “Assessing China’s Response to U.S. Reconnaissance Flights,” *China Brief*, Vol. 11, Is. 16, September 2, 2011, 8-12.

- 136 Ceng Ke and Fan Yishu [曾科, 范以书], “In the Skies Above the Far Seas, Facing the Challenges of Difficult Problems -- Inquiry of the Officers and Men of a Certain Division of the Southern Theater Command Air Force on the Aviation Corps Far Seas Flights” [远海上空, 面临那些难题挑战 -- 就航空兵远海飞行访南部战区空军航空兵某部官兵], *China Air Force* [中国空军], July 2017, 29.
- 137 Siva Govindasamy, “Not Top Gun yet: China struggles with warplane engine technology,” *Reuters*, January 28, 2016, available at <<https://www.reuters.com/article/us-china-military-engines-idUSKCN0V7083>>.
- 138 Minnie Chan, “China ‘nearing mass production’ of J-20 stealth fighter after engine problems ironed out,” *South China Morning Post*, September 5, 2018, available at <<https://www.scmp.com/news/china/military/article/2162765/china-nearing-mass-production-j-20-stealth-fighter-after-engine>>.
- 139 Maintenance has been long considered one of the biggest weaknesses of the PLA as a whole. See Michael S. Chase, Jeffrey Engstrom, Tai Ming Cheung, Kristen A. Gunness, Scott Warren Harold, Susan Puska, Samuel K. Berkowitz, *China’s Incomplete Military Transformation: Assessing the Weaknesses of the People’s Liberation Army (PLA)*, (Santa Monica, CA: RAND Corporation, February 2015), xii.
- 140 Cheng Guo [程果], “Post Inspection Law’ Makes Troop Dispatch Even More Quick: A Certain Air Force Test Base Evaluation Center Adopts a New Method Improve Maintenance Support Efficiency” [“岗位检查法”使出动更快捷: 空军某试训基地评估中心采用新模式提高维修保障效率], *Air Force Daily* [空军报], December 5, 2017, 2.
- 141 Kenneth W. Allen, “PLA Air Force Logistics and Maintenance: What Has Changed?,” in James C. Mulvenon and Richard H. Yang, eds., *The People’s Liberation Army in the Information Age*, (Santa Monica, CA: RAND Corporation, 1999), 96.
- 142 Kyle Mizokami, “I Watched China’s ‘Top Gun’ So You Don’t Have To,” *War is Boring*, October 30, 2013, available at <<http://warisboring.com/i-watched-chinas-top-gun-%E2%80%8A-%E2%80%8Aso-you-dont-have-to/>>.
- 143 Serenitie Wang, “China gets its answer to ‘Top Gun’ with latest patriotic blockbuster ‘Sky Hunter,’” *CNN*, September 28, 2017, available at <<https://edition.cnn.com/2017/09/27/asia/china-sky-hunter-movie-top-gun/index.html>>. Xu Fan, “New film ‘Sky Hunter’ inspired by PLA Air Force,” *China Daily*, September 28, 2017, available at <http://www.chinadaily.com.cn/culture/2017-09/28/content_32582973.htm>.
- 144 Serenitie Wang, “China gets its answer to ‘Top Gun’ with latest patriotic blockbuster ‘Sky Hunter,’” *CNN*, September 28, 2017, available at <<https://edition.cnn.com/2017/09/27/asia/china-sky-hunter-movie-top-gun/index.html>>.
- 145 Xu Fan, “New film ‘Sky Hunter’ inspired by PLA Air Force,” *China Daily*, September 28, 2017, available at <http://www.chinadaily.com.cn/culture/2017-09/28/content_32582973.htm>.
- 146 For the video, see the first post on the PLAAF’s official Weibo account on May 13, 2018, available at <<https://m.weibo.cn/detail/4239349446642893>>. The PLAAF referred its title as “New Tracks of the Chinese Air Force.” See the second post on the PLAAF’s official Weibo account on May 13, 2018, available at <<https://m.weibo.cn/status/4239356933949601>>. However, *CCTV+* referred to it as “New Tracks at Sea.” See “China’s Air Force Publishes Promotional Video of “New Tracks at Sea,” *CCTV+*, May 14, 2018, available at <<https://www.youtube.com/watch?v=H-x2CdUuJcE>>.
- 147 Second post on the PLAAF’s official Weibo account on May 13, 2018, available at <<https://m.weibo.cn/status/4239356933949601>>.
- 148 Lu Hsin-hui, Chiang Chin-yeh and Evelyn Kao, “Chinese military activity near Taiwan no longer to be reported,” *Central News Agency*, December 21, 2017, available at <<http://focustaiwan.tw/news/acs/201712210006.aspx>>.
- 149 In the lead up the Lunar New Year in 2019, a ‘holiday’ video, titled “My Fighting Eagles Fly Around Formosa” [我的战鹰绕着宝岛], was released on the official Weibo account of the PLAAF Airborne. The approximately three-and-a-half minute video spoke of China’s desire to “reunite” with Taiwan, and showcased PLAAF bombers and fighter jets, as well as famous locations around Taiwan, including a shot of Taipei 101 with the symbol of the PLAAF Airborne next to it. See the official Weibo account of the PLAAF Airborne, “Our Sky” [我们的天空], on February 3, 2019, available at <<https://m.weibo.cn/detail/4335523591974726>>. However, this video caused the Taiwan Ministry of National Defense to release its own video in response, titled “Freedom Isn’t Free,” on the Facebook page of its spokesperson. See the post on the Facebook page of the Ministry of National Defense Spokesperson [國防部發言人], on February

- 3, 2019, available at <<https://www.facebook.com/MilitarySpokesman/videos/2246671795654981/>>. This approximately ninety-second video seemed to be the better social media product of the two, and even had the feel of a Hollywood movie trailer. It was half as long as the PLAAF Airborne video that was filled with the now-routine shots of PLAAF aircraft, which was a smart move on the part of the Taiwan Ministry of National Defense as shorter videos tend to do better on social media. It was released with far better resolution at 1080p, versus the 480p of the PLAAF Airborne video. Unlike the PLAAF Airborne video, some titles were in English, which broadened the potential audience. The Taiwan video had inspiring music, as is appropriate for media released by a military. It also, interestingly, featured footage of *all* of its military services, rather than just one as was the case with the video released on the PLAAF Airborne account. This difference in service representation highlights just how much of a single-service campaign these efforts have been on the PLA-side.
- 150 Shen Jinke [申进科], "Optimize Information Supply to Lead Internet Public Opinion" [优化信息供给引领网络舆论], *Xinhua Daily Telegraph* [新华每日电讯], December 8, 2017, available at <http://www.xinhuanet.com/mrdx/2017-12/08/c_136809637.htm>.
 - 151 Yamei, ed., "Chinese air force releases promotional video recapping island patrols," *Xinhua*, April 28, 2018, available at <http://www.xinhuanet.com/english/2018-04/28/c_137144293.htm>.
 - 152 For an example of footage shown by *Xinhua* from PLAAF's aircraft, see the first post of April 23, 2018, on the PLAAF's Weibo account, available at <<https://m.weibo.cn/detail/4231887629616281>>. For an example of an article produced after the PLAAF's release of footage from its 'patrols,' see "Chinese air force releases promotional video recapping island patrols," *Xinhua*, April 28, 2018, available at <http://www.xinhuanet.com/english/2018-04/28/c_137144293.htm>.
 - 153 Huang Panyue, ed., "PLA Air Force releases video and commemorative envelopes of J-16 warplane," *China Military Online*, March 1, 2018, available at <http://eng.chinamil.com.cn/view/2018-03/01/content_7956431.htm>.
 - 154 Wang Caishan [王财山], "Reading Behind the Collaboration" [协同受阅的背后], *China Air Force* [中国空军], November 1, 2009, 32.
 - 155 "Military Delegates Talk About Air Force Real Combat Training" [军队代表畅谈空军实战化训练], *PLA Daily* [解放军报], March 11, 2018, available at <http://www.xinhuanet.com/mil/2018-03/11/c_129827188.htm>.
 - 156 "Military Delegates Talk About Air Force Real Combat Training" [军队代表畅谈空军实战化训练], *PLA Daily* [解放军报], March 11, 2018, available at <http://www.xinhuanet.com/mil/2018-03/11/c_129827188.htm>.
 - 157 "Military Delegates Talk About Air Force Real Combat Training" [军队代表畅谈空军实战化训练], *PLA Daily* [解放军报], March 11, 2018, available at <http://www.xinhuanet.com/mil/2018-03/11/c_129827188.htm>.
 - 158 "Military Delegates Talk About Air Force Real Combat Training" [军队代表畅谈空军实战化训练], *PLA Daily* [解放军报], March 11, 2018, available at <http://www.xinhuanet.com/mil/2018-03/11/c_129827188.htm>.
 - 159 "Military Delegates Talk About Air Force Real Combat Training" [军队代表畅谈空军实战化训练], *PLA Daily* [解放军报], March 11, 2018, available at <http://www.xinhuanet.com/mil/2018-03/11/c_129827188.htm>.
 - 160 "Military Delegates Talk About Air Force Real Combat Training" [军队代表畅谈空军实战化训练], *PLA Daily* [解放军报], March 11, 2018, available at <http://www.xinhuanet.com/mil/2018-03/11/c_129827188.htm>.
 - 161 Susan V. Lawrence and Michael F. Martin, *Understanding China's Political System*, (Washington, D.C.: Congressional Research Service, March 20, 2013), 1-2.
 - 162 For an example of how the PLA, particularly the PLAN, was able to tap a wide array of support for the South China Sea cause, see Ian Burns McCaslin, *Role of the PLA in China's Foreign Policy and Behavior Abroad*, (Singapore: 2016), 138-145.
 - 163 Jeffrey G. Barlow, *Revolt of Admirals: The Fight for Naval Aviation, 1945-1950*, (Washington, D.C.: Naval Historical Center, 1994), 45.
 - 164 Jeffrey G. Barlow, *Revolt of Admirals: The Fight for Naval Aviation, 1945-1950*, (Washington, D.C.: Naval Historical Center, 1994), 45.
 - 165 Andrew L. Lewis, *The Revolt of the Admirals*, (Montgomery, AL: Air University, April 1998), vi.
 - 166 Andrew L. Lewis, *The Revolt of the Admirals*, (Montgomery, AL: Air University, April 1998), 3.
 - 167 Jeffrey G. Barlow, *Revolt of Admirals: The Fight for Naval Aviation, 1945-1950*, (Washington, D.C.: Naval Historical Center, 1994), 45-46.

- 168 Jeffrey G. Barlow, *Revolt of Admirals: The Fight for Naval Aviation, 1945-1950*, (Washington, D.C.: Naval Historical Center, 1994), 48-49. For more on the individuals who published pieces that advanced the views and interests of the U.S. Air Force, see Andrew L. Lewis, *The Revolt of the Admirals*, (Montgomery, AL: Air University, April 1998), 24-25.
- 169 Jeffrey G. Barlow, *Revolt of Admirals: The Fight for Naval Aviation, 1945-1950*, (Washington, D.C.: Naval Historical Center, 1994), 50-51.
- 170 Jeffrey G. Barlow, *Revolt of Admirals: The Fight for Naval Aviation, 1945-1950*, (Washington, D.C.: Naval Historical Center, 1994), 58.
- 171 Andrew L. Lewis, *The Revolt of the Admirals*, (Montgomery, AL: Air University, April 1998), 20-22.
- 172 Andrew L. Lewis, *The Revolt of the Admirals*, (Montgomery, AL: Air University, April 1998), vii.
- 173 John T. Correll, "The Revolt of Admirals," *Air Force Magazine*, July 2018, available at <<http://www.airforcemag.com/MagazineArchive/Pages/2018/July%202018/The-Revolt-of-the-Admirals.aspx>>.
- 174 Andrew L. Lewis, *The Revolt of the Admirals*, (Montgomery, AL: Air University, April 1998), 2-3 and 15-16.
- 175 Andrew L. Lewis, *The Revolt of the Admirals*, (Montgomery, AL: Air University, April 1998), 32.
- 176 Andrew L. Lewis, *The Revolt of the Admirals*, (Montgomery, AL: Air University, April 1998), 35.
- 177 Andrew L. Lewis, *The Revolt of the Admirals*, (Montgomery, AL: Air University, April 1998), 15-16. The U.S. Navy would be spared significant cutbacks over the long-term due to the outbreak of the Korean War a few years later. See, Phillip S. Meilinger, "The Admirals' Revolt of 1949: Lessons for Today," *Parameters*, September 1989, 94.
- 178 For information on *Ship in the Gulf of Aden*, see "'Ship in the Gulf of Aden'--Tonight the Eighth Voyage Sets Sail with a Terrific Story" ["舰在亚丁湾"今晚央八起航钟雷演绎侠骨柔情], *Xinhua Online* [新华网], September 3, 2014, available at <http://ent.ifeng.com/a/20140903/40285769_0.shtml>. For analysis on the series, see Andrew S. Erickson and Austin M. Strange, "China's Blue Soft Power: Antipiracy, Engagement, and Image Enhancement," *Naval War College Review*, Vol. 68, No. 1 (Winter 2015), 71-72. For information on *Deepwater Forces*, see Xu Fan, "A new TV series tells the story of PLA Navy submarine," *China Daily*, August 3, 2017, available at <http://www.chinadaily.com.cn/culture/2017-08/03/content_30338977.htm>.
- 179 According to IMDb, *Operation Red Sea* made an estimated \$568,044,854, while *Sky Hunter* only made an estimated \$50,000,000. For the numbers on *Operation Red Sea*, see "Operation Red Sea," *IMDb*, July 23, 2018, available at <<https://www.imdb.com/title/tt6878882/>>. For the numbers on *Sky Hunter*, see "Sky Hunter," *IMDb*, July 23, 2018, available at <<https://www.imdb.com/title/tt6908536/>>.
- 180 Emperor Motion Pictures [英皇电影], "'Operation Red Sea' Cannes Debut Strongest Anti-Terrorism Action Movie" ["红海行动"亮相戛纳林超贤打造最强反恐动作片], *WeChat* [微信], May 19, 2017, available at <https://mp.weixin.qq.com/s?__biz=MzA5MzkyNjQ2Mw==&mid=2652056692&idx=1&sn=7ac7f3b7a63c46d0aa789dafc98718>. Wei Xi and Guo Yuandan, "Patriotic movie co-produced by PLA Navy hits screens on Chinese New Year," *Global Times*, February 16, 2018, available at <<http://www.globaltimes.cn/content/1089789.shtml>>.
- 181 Wei Xi and Guo Yuandan, "Patriotic movie co-produced by PLA Navy hits screens on Chinese New Year," *Global Times*, February 16, 2018, available at <<http://www.globaltimes.cn/content/1089789.shtml>>.
- 182 Yan Jianyi [颜健颐], "Navy Today Official WeChat Takes Part in the Activities of 'Our Long March on the Road' -- Together with the Internet Celebrity, Exploring the 'Spirit Code' of the Ace Forces" [当代海军官方微信参加“我们的长征在路上”活动-和大V一起, 踏寻王牌部队的“精神密码”], *Navy Today* [当代海军], No. 273, (June 2016), 38-41.
- 183 Yan Jianyi [颜健颐], "Navy Today Official WeChat Takes Part in the Activities of 'Our Long March on the Road' -- Together with the Internet Celebrity, Exploring the 'Spirit Code' of the Ace Forces" [当代海军官方微信参加“我们的长征在路上”活动-和大V一起, 踏寻王牌部队的“精神密码”], *Navy Today* [当代海军], No. 273, (June 2016), 38-41.
- 184 Luo Qi, ed., "Fifth Naval Escort Formation Holds 'Towards the Ocean, Into the Deep Blue' Oath Swearing" [第五批护航编队举行“走向大洋, 挺进深蓝”宣誓], *China Online* [中国网], March 7, 2010, available at <www.china.com.cn/military/txt/2010-03/07/content_19546813.htm>.

- 185 “Official Media Commentary on the South China Sea Military Parade: Towards the Ocean Calls for Modernization of the Chinese Navy” [官媒评南海阅兵: 走向大洋呼唤现代化的中国海军], *People’s Daily Online* [人民网], April 13, 2018, available at <<http://mil.news.sina.com.cn/china/2018-04-13/doc-ifycyx-mu0054150.shtml>>.
- 186 For more on the importance of tradition for the U.S. Navy specifically, but which is applicable to most modern navies, see Carl H. Builder, *The Masks of War: American Military Styles in Strategy and Analysis*, (Baltimore, MD: Johns Hopkins University Press, 1989), 18.
- 187 Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2018*, (Arlington, VA: May 16, 2018), 119.
- 188 International Institute for Strategic Studies, *The Military Balance*, (Routledge, February 16, 2017), 286-287.
- 189 “China’s PLANAF H-6G Bombers Spotted with ECM Pods,” *Navy Recognition*, January 23, 2018, available at <<http://www.navyrecognition.com/index.php/news/defence-news/2018/january-2018-navy-naval-defense-news/5879-china-s-planaf-h-6g-bombers-spotted-with-ecm-pods.html>>.
- 190 Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2018*, (Arlington, VA: May 16, 2018), 118.
- 191 “Chinese long-range bombers land on South China Sea airstrip in show of strength,” *Australian Broadcasting Corporation*, May 19, 2018, available at <<http://www.abc.net.au/news/2018-05-20/china-air-force-lands-bombers-on-s.china-sea-island/9779614>>.