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Andrew Scobell

Michael McMahon

Cortez A. Cooper III

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CHINA'S AIRCRAFT CARRIER PROGRAM

Drivers, Developments, Implications

Andrew Scobell, Michael McMahon, and Cortez A. Cooper III

One of the most eye-catching episodes in China's defense buildup was the 25 September 2012 commissioning of Beijing's first aircraft carrier. The sixty-five-thousand-ton *Liaoning* was launched with much fanfare, presided over by the president of the People's Republic of China (PRC), then Hu Jintao, as well as by the vice president and Hu's political successor, Xi Jinping. The commissioning of *Liaoning* underscored both the remarkable advances in the PRC's shipbuilding in recent decades and the significant limitations that remain. The vessel immediately became the largest in the People's Liberation Army Navy (PLAN). Originally launched in 1988 for the Soviet navy, the carrier, at that point known as *Varyag* and lying incomplete in a Ukrainian yard, had been purchased by a Chinese shell company in 1998 and towed to China three years later. The vessel was fully refurbished in a Chinese shipyard, and an extensive array of systems was installed. *Liaoning* is considered a medium-sized carrier that can accommodate a combination of approximately thirty-six fixed-wing and rotary-wing aircraft, with a crew of at least one thousand.

One Chinese security analyst proclaimed the eventual relaunch was on a par in "strategic significance" (*zhanlue yiyi*) with China's earlier acquisition of the "two bombs [nuclear and hydrogen] and one satellite" (*liang dan, yi xing*), in the sense that the commissioning of *Liaoning* signaled China's entry into an exclusive club of great powers. But other naval analysts sought to downplay the event. Retired PLAN admiral Yin Zhuo stressed that the commissioning of the *Liaoning* was only a first step: China, he observed, was very much a "rookie" (*xinshou*) at operating this highly "complex technical system," while "other countries" (i.e., the United States) had more than a century of experience.¹ No matter how modest the beginnings, however, there are strong indications that China has ambitious

plans: *Liaoning* is likely to be the first of as many as five carriers that the PLAN intends to put into service in the coming years.

Some observers discern the emergence of a naval arms race in the Asia-Pacific.² But however military trends in the region are best characterized, it is clear that countries such as China and India are energetically expanding their navies. Without a doubt, carrier expansion in the early twenty-first century will be concentrated in Asia. Beijing and New Delhi each appear committed to commissioning multiple aircraft carriers in the near future. In addition to China and India, Japan commissioned a helicopter-carrying destroyer capable of being reconfigured to handle short-takeoff-and-vertical-landing aircraft. No decision, by Beijing or any other capital, to pursue such an involved program can be taken lightly, because it requires a massive commitment of resources and extended time horizons. An aircraft carrier is an expensive and complex system of systems. Carrier programs require sustained effort, substantial funding streams, and considerable technical and professional competence. Carriers are a luxury few countries can afford. Even fewer countries have the shipyards, engineering expertise, and associated infrastructure to build these vessels.

It is ironic that the country that has done more than any other to move aircraft carriers closer to obsolescence through advances in military technology has invested in its own aircraft carrier program. The People's Liberation Army (PLA), for example, has acquired highly accurate antiship ballistic missiles—"carrier killers." What is driving China's carrier ambitions, and what is the likely future trajectory of its carrier program? What new operational capabilities does a carrier provide the PLAN? How does the arrival of China's carrier affect the security situation in the Asia-Pacific? What are the implications of Chinese aircraft carriers for the United States?

We examine first the drivers, the operational capabilities, and then we consider the future trajectory of China's carrier program. Last, we evaluate the implications of the carrier program for the balance of maritime power in the western Pacific and beyond.

DRIVERS OVER THE DECADES

China's entry into the exclusive aircraft-carrier club played out over several decades in a slow-motion series of low-key and secretive developments, in a pattern that prompts a range of competing explanations about the drivers of the initiative.

The earliest explanation posited for driving China's maritime ambitions was that of bureaucratic interests. These interests were initially identified with the South China Sea and have been advanced collectively as the key driver for the PRC's aircraft carrier program.³ The emergence of an actual program suggested the growing influence of the PLAN in the armed forces. The navy's second-rate

status within the PLA was and is changing. Since 2004, for example, the commander of Beijing's navy has had a seat on the Central Military Commission (CMC)—the apex of military power in the PRC, a body roughly equivalent to the U.S. Joint Chiefs of Staff. Nevertheless, and while the maritime service has enjoyed an unprecedented rate of modernization in recent decades, the dominant service in the PLA continues to be the ground force.⁴ Moreover, as will be seen, the program's key champion appears to have been an individual rather than a bureaucracy.

A second explanation is that the PRC's carrier program is driven primarily by nationalism.⁵ Clearly China's carrier program has strong public support; there is considerable pride in the country's first aircraft carrier. A wave of aircraft carrier euphoria—or a “*Hangmu* style” craze—swept the country as people imitated the pose of two flight-deck crewmen shown in a publicity photo guiding a J-15 fighter as it made a historic shipboard landing on *Liaoning* in November 2012. Most Chinese would agree with Major General Zhang Shiping's insistence that “for China to become a major world power without an aircraft carrier is completely unthinkable.” The general, an Academy of Military Sciences researcher, insisted that “acquiring a carrier was an historical necessity” for China.⁶

Possession of multiple carriers epitomizes the overwhelming naval dominance of the United States, and their lack emphasizes the continued weakness of China's navy. One of the most jarring moments for China in post-Cold War East Asia occurred when in early 1996 the United States dispatched two aircraft-carrier strike groups in response to Chinese saber rattling in the Taiwan Strait. For Beijing, the act harked back to the nineteenth century, when China had been bullied first by Western powers and then by Japan and forced to sign “unequal treaties” trampling on national sovereignty and to concede territory. For the Chinese, U.S. aircraft carrier dominance represents a latter-day variant of gunboat diplomacy and underscores that China, despite greatly increased military might, continues to be inferior, impotent in the face of overwhelming U.S. naval power.

A third possible driver of China's carrier program is an evolving overarching strategic logic or coherent maritime strategy.⁷ According to this interpretation, the PRC is pursuing a grand strategic vision—widely attributed to Admiral Liu Huaqing (1916–2011) and first set out in the early 1980s—by which the PLAN would gradually extend its reach outward into the Pacific Ocean in a phased expansion of Chinese seapower. In the first phase, by 2000, the PLAN was to extend its area of operations in the “near seas” (the South China Sea, East China Sea, and Yellow Sea) out as far as the so-called First Island Chain—the Kuril Islands, Japan, the Ryukyus, Taiwan, the Philippines, Borneo, and Natuna Besar. In the second phase, by 2020, the PLAN aimed to project its operational reach out to the so-called Second Island Chain—the Bonins, the Marianas, and the Carolines.

In the third phase, by 2050, China would become a global seapower, and its navy would hence operate on a par with the U.S. Navy. In fact, the PLAN's activities and power-projection efforts have so far kept pace with this timeline.

This road map for the development of China's seapower grew in significance as China's economy underwent rapid growth and its seaborne trade experienced major expansion during the 1980s and 1990s. China's maritime strategy gained greater traction in the twenty-first century as the PRC perceived itself as being under growing threat from the United States. Particularly since the terrorist attacks of 11 September 2001, Beijing has viewed Washington's behavior around its periphery as aimed at containing or encircling the PRC.⁸ From the Chinese perspective, the United States has become increasingly assertive in the near seas, especially in the South China Sea.

We suggest that an evolving overarching strategic logic has propelled the PRC's carrier program inexorably forward. This analysis of the historical record suggests that while nationalism was certainly an important contextual factor and lobbying by PLAN leaders was significant in keeping the idea of a carrier program alive, ultimately the decisive driver was strategic logic and operational importance. Indeed, the program's lengthy gestation and its repeated failure early on to gain traction are attributable to the absence of a strategic imperative until quite recently. The emergence of this strategic imperative and the operational demands for a carrier in the twenty-first century correspond to the emergence of PLA and PLAN thinking and planning beyond a Taiwan scenario.⁹

GENESIS OF CHINA'S CARRIER PROGRAM

China's carrier program has evolved remarkably over five decades. In the span of forty years the program was transformed from one man's elusive dream in 1970 to the acquisition and refurbishment of a Soviet-era carrier to the actual commissioning of an aircraft carrier in 2012.

The 1970s: One Man's Dream

China's aircraft carrier program languished for many years, for lack of a strategic imperative. But the idea of an aircraft carrier never died completely, because of the persistence of a key PLAN leader, Liu Huaqing, who gradually rose to the highest post in the military hierarchy, assuming the vice-chairmanship of the CMC in 1989. The origins of the PLAN's aircraft carrier program are intimately intertwined with the career of this prominent military figure. Justifiably considered the most important and certainly the most dogged champion of the program, Liu is often dubbed the "father of China's aircraft carrier," as well as "China's Mahan."¹⁰ Irrespective of these labels, Liu certainly qualifies as the most influential military figure in post-Mao Zedong, reform-era China. Significantly,

Liu was the last uniformed member of the all-powerful Chinese Communist Party's Politburo Standing Committee, a seat he relinquished in 1997.

According to his memoirs, as early as 1970 Liu floated to his military superiors a proposal that China begin preparations to acquire an aircraft carrier. His suggestion does not appear to have received any support within the PLA hierarchy.¹¹ This is hardly surprising, since the PRC had nothing remotely resembling a blue-water navy in the 1970s; its main threat at the time was overland invasion or attack by the Soviet army, an attack that could come anywhere along the several-thousand-mile and very exposed common land border. Neither does the most logical maritime scenario—an attack on or invasion of Taiwan—appear to have received any serious attention at the time. Thus, there was no compelling strategic or operational rationale for the development of a PLAN carrier program in the 1970s, and nationalism did not even come into play.

The 1980s: A Vision

In the decade following Mao Zedong's death, the idea of an aircraft carrier seemed a more plausible, if still remote, possibility. While the PRC's primary military threat remained land-centric—the Soviet army—the “reform and opening” policy of Deng Xiaoping significantly altered its national security calculus and defense priorities. As the PRC embraced foreign investment and expanded international trade, Beijing began to attach much greater weight to maritime matters. PRC leaders had to be concerned not only with the security of their land borders but also with coastal waters and beyond—that is, both the “near shore” or littoral (*jinan*) and the “near seas” (*jinhai*).¹² Moreover, territorial claims in the South China Sea and the unresolved matter of Taiwan provided added impetus for modernizing the PLAN. In the mid-1980s, the PLA shifted its preparations from imminent all-out global conflagration likely involving nuclear and conventional conflict between China and one of the superpowers to limited, localized, conventional war-fighting scenarios.

The geostrategic reorientation and doctrinal transformation produced a new strategic logic that was more conducive to the idea of aircraft carriers. Liu recalls in his memoirs that in November 1986 he chaired a seminar comprising military and civilian leaders and experts: “Many comrades expressed the view that from the standpoint of our strategic mission of safeguarding the country's maritime interests, including the recovery of the Nansha [Islands], and the reunification of Taiwan, the navy should develop aircraft carriers. My own thinking was consistent with this view.”¹³

The purchase in 1985 of the decommissioned Australian navy carrier *Melbourne* by a PRC company, ostensibly for scrap, signaled Beijing's growing

interest in a carrier program. The vessel was reportedly scrutinized by Chinese engineers and naval architects, and the flight deck was kept intact when the rest of the ship was scrapped. In 1982, upon being promoted to commander of the PLAN, Liu commissioned a research institute in Shanghai to conduct a study on the feasibility of carriers. Three years later Liu directed the Guangzhou Naval Academy to initiate a training course for aircraft carrier commanders.¹⁴

1990s: A Serious Debate

By the mid-1990s, maritime challenges had moved to the front and center of Beijing's national security concerns. The Soviet breakup had created three new neighbors in Central Asia, but Beijing moved swiftly and deftly to recognize these states, resolve territorial disputes, and demilitarize border areas. It could then focus greater attention on the security of coastal regions and on unresolved maritime territorial disputes. The increasing importance of the near seas and China's growing dependence on the sea lines of communication (SLOCs) radiating out beyond the First Island Chain were highlighted by tensions in the South China Sea (in 1995), a crisis in the Taiwan Strait (1995–96), and by China's becoming (in 1993) a net importer of petroleum, most of it by sea from the Middle East and Africa.

Within a three-year span, Chinese entities bought three Soviet-era aircraft carriers: *Minsk* and *Varyag* (both in 1998) and *Kiev* (in May 2000). These buys represented a sizable expenditure—reportedly totaling some U.S.\$33.4 million—and thus a degree of high-level coordination. Moreover, the circumstances surrounding these purchases were suspicious, in terms of their announced purposes. For example, the buyer of *Varyag*, the Chong Lot Tourist and Amusement Agency, reportedly had several retired PLAN officers on its board of directors. The supposed intent of the company was to turn *Varyag* into a floating casino in the gambling mecca of Macau, but the waters around the former Portuguese colony are too shallow to accommodate the vessel, and no application for a gambling permit appears to have been filed. When in early 2002 *Varyag* arrived in China, it docked well away from Macau, in the northern port of Dalian.

This flurry of activity suggests that Beijing was engaged in a major debate about the viability of acquiring an aircraft carrier. The option being most seriously considered was to complete a carrier indigenously on one of the hulls purchased overseas, rather than buying a completely fitted, foreign-made carrier. During the mid-1990s Chinese entities reportedly made a considerable effort to acquire blueprints for an aircraft carrier from a Spanish shipbuilder that was constructing one for the Royal Thai Navy, showing far less interest in placing such an order themselves.¹⁵ By the end of the decade, CMC chair Jiang Zemin had reportedly given the PLAN the green light to commence work on designing a carrier.¹⁶

2000s: A Decision Is Made

With the dawn of a new century, the maritime domain loomed ever larger for Beijing in strategic significance. The result, according to an authoritative overview of PLAN history, was a “paradigmatic change” (*zhuanxing*) in naval thinking from the near seas to the “far seas” (*yuanhai*).¹⁷ PRC aircraft and surface and subsurface vessels routinely found themselves operating in the same vicinity as U.S. platforms, often at very close quarters. These encounters prompted a growing number of incidents. Of particular note was an April 2001 episode in which a PLAN J-8 fighter collided with a U.S. Navy EP-3 surveillance aircraft some seventy-five nautical miles south of Hainan Island. To Beijing, the event signaled a growing, perceived threat of U.S. strategic encirclement and the emergence of the near seas as a hot zone of U.S.-Chinese contestation.

The decision to go ahead with the construction of an aircraft carrier was reportedly made by the CMC in 2004 or 2005;¹⁸ the decision was almost certainly made in conjunction with CMC chairman Hu Jintao's December 2004 announcement of revised military strategic guidelines (*junshi zhanlue fangzhen*) for the PLA. These guidelines function as a “rolling national military strategy” that provides the key guidance and direction for planning and force development.¹⁹ Addressing the CMC on 24 December 2004, Hu outlined what became known as the “New Historic Missions,” representing an important modification of strategic guidelines issued in 1993. Two of the broad-brush missions he sketched for the PLA were protecting China's “national interests” and safeguarding “world peace.”²⁰ The former mission has since been defined ever more expansively to include China's maritime territorial claims inside the First Island Chain and its “overseas interests” well beyond. The latter mission provides the rationale for a greater global role for the PLAN in a broad spectrum of activities, including patrolling the SLOCs and contributing to international humanitarian assistance and disaster relief.²¹ Reportedly, Hu subsequently endorsed the concept of “far sea operations” (*yuanhai zuozhan*). Together these developments put in place the strategic and doctrinal logic for naval force modernization in general and for, by extension, the acquisition of several aircraft carriers.

Extensive work was under way throughout the middle of the first decade of the twenty-first century in a Dalian shipyard to complete *Varyag* as an operational aircraft carrier. But no official public statement was forthcoming; the PRC was equipping a major naval surface combatant but keeping mum about the matter. Noteworthy was the absence of any mention of the PLAN's carrier project in China's defense white papers of 2004, 2006, 2008, and 2010. However, in 2006 and 2007 several senior military officials did publicly comment that the PRC had decided to develop an aircraft carrier program, with the goal of indigenously

building them. Finally, in March 2009, the PRC minister of national defense, General Liang Guanglie, declared that the PLAN was preparing to build its own aircraft carriers.²²

2010s: Commissioning a Carrier

In the second decade of the century tensions emerged with the United States and China's neighbors in the near seas that seemed only to underscore the growing importance of seapower to the PRC. In 2010 China accused the United States of meddling in the South China Sea and then heatedly protested a planned U.S.–South Korean joint military exercise scheduled for the Yellow Sea. Tensions also rose in the East China Sea over the disputed Diaoyu/Senkaku Islands. Beijing claims a two-hundred-mile exclusive economic zone in all these areas and insists that other countries cannot operate military vessels or aircraft there without its prior approval. In November 2013, China announced the creation of an air-defense identification zone in the East China Sea. China also, looking beyond its immediate maritime vicinity to the Indian Ocean, took note of developments in India's aircraft carrier program. In 2009 New Delhi had laid the keel of INS *Vikrant* and proceeded with indigenous construction of carriers capable, like *Varyag*, of operating high-performance tactical aircraft using a short-takeoff-but-arrested-recovery (STOBAR) design.

The evolution of a strategic logic became more apparent: an aircraft carrier was needed to cope with the PRC's expanding array of maritime interests. It was against this backdrop that *Varyag* underwent its first sea trial in August 2011. The vessel cruised the Bohai Gulf and Yellow Sea for four days before returning to port. Further sea trials followed. In late September 2012 ex-*Varyag* was officially commissioned as *Liaoning*. The ship was ceremonially christened by Hu Jintao barely two months before he stepped down as chair of the CMC. As a result, Hu will go down in history as the leader responsible for China's first operational aircraft carrier, even though experts contend that the carrier will not become fully employable for several more years.

THE TRAJECTORY: A HYBRID NAVY

In the interim, the next three to five years, *Liaoning* will primarily serve as a training platform, operating mostly within the First and Second Island Chains. Most PLAN ships have three-digit Arabic hull numbers; *Liaoning's* two-digit number, 16, indicates its official rating as a training vessel.

While China now has a carrier with a sea-based tactical aviation capability, time will be needed for its air wing to become operationally competent and for the ship itself to conduct proficiency training with destroyers, frigates, and submarines (as *Liaoning* did in December 2013 for the first time, in the South China

Sea). Perhaps the most useful benchmark for the operational readiness of *Liaoning* is the level of training, equipment, and organization of its aviation component. Properly configuring *Liaoning* for carrier-group operations will take time, but establishing the naval aviation component—fully functioning squadrons of carrier-based aircraft—is likely to take much longer. Since its commissioning, most of *Liaoning's* at-sea time has been devoted to certification of shipboard air-operations systems and to initial pilot training, using experienced pilots and test aircraft. But China will not achieve a true aircraft-carrier capability until the two elements—an organized and trained air component and a fully tested, fleet-configured carrier—have been coupled. The passing of various signposts may be evident on this path as they occur, one being the establishment of a tactical aviation air wing. Incorporation of fully trained and organized, mission-capable, fleet tactical air wings is not likely until 2018 or later.

Furthermore, to gauge the timeline for the commissioning of China's second carrier—expected to be indigenously designed and built—it makes sense to monitor the development of air component training and organization and also full production of the J-15 aircraft, and perhaps as well the development of the J-31, potentially China's future, fifth-generation, sea-based tactical aircraft. Of course, these timelines will run concurrently with the design of any indigenous aircraft carrier. The challenge of balancing these two processes may explain the seeming deliberateness of the PLAN's pace in designing and commencing construction of its next aircraft carrier.

Moreover, additional aircraft carriers, almost certainly in the cards, will probably come online gradually, over the course of the next two decades. The longer a new, indigenously designed carrier is delayed, the more likely the design will be to adopt a large-deck format and increased capabilities. Such a platform could accommodate fifth-generation aircraft and incorporate leading technology, electronics, and design features. Also, the most modern computer-assisted-design tools, construction practices, and facilities that China's shipbuilding industry has to offer would be available for the project. The large scope of the design work involved in the conversion (i.e., from the original Soviet "aircraft-carrying cruiser" configuration) of *Liaoning* at the Dalian shipyard is likely to provide a "walking start" for a more modern carrier.

The PLAN does not appear to be building a future force that has aircraft carriers at its core. Such a goal would require a complete order-of-battle overhaul. There may have been a Chinese realization that the role of carrier-based aviation would be limited in any potential large-scale conflict with the United States. Instead, current doctrine and naval modernization suggest that while the PLAN is aiming for at least three additional carriers, they would be focused on power

projection—inside the island chains but also in the Indian Ocean, as well as distant areas where overseas interests in resources are strong, such as Africa and Latin America.²³ Nevertheless, as Yin Zhuo observes, the introduction, for whatever purpose, of carriers demands a major change in PLAN thinking and requires in the near term a modified “grouping format” of escort vessels with *Liaoning* at the center.²⁴ In short, China’s navy appears to have adopted a hybrid approach encompassing both carrier and surface-action groups for mission-specific operations and the projection of influence.

In addition, such an approach comports with political and fiscal realities. Aircraft carriers are extremely expensive. Whether the hull is acquired from abroad or built indigenously does not necessarily make much difference in overall cost; both options are expensive, and follow-on carriers may not be appreciably cheaper if they are of different designs or possess different subsystems. Moreover, while the PLAN has increased its power and influence vis-à-vis the other services in the past decade or so, the ground force remains, as noted, the dominant service and enjoys the preponderance of political clout. The navy must compete with the People’s Liberation Army Air Force, which has greater representation on the CMC—an unprecedented two seats are held by air force generals.²⁵ While the defense budget has been growing in double digits annually, overall military spending is carefully monitored, and continued increases presume further economic growth. In short, the size of the defense budget and constraints on funds allocated for PLAN acquisitions are limited.

The Operational Demands on Carriers

China’s growing oceanic interests expand the operational demands on the PLAN, from defending disputed maritime claims to protecting China’s fishing and merchant fleets.²⁶ The aircraft carrier can provide much-needed air protection for the surface ships and submarines operating several hundred miles out. The most obvious region for such operations would be in the southern portions of the South China Sea, some nine hundred miles from Hainan Island—well beyond the routine patrol range of PLAN land-based aircraft. Indeed, it is in this area that Liu Huaqing reportedly felt an aircraft carrier would prove its worth.²⁷

The most pressing operational logic for aircraft carriers relates to the value they add in wartime. PLA analysts who studied the Royal Navy’s performance in the Falklands/Malvinas War of 1982 concluded that aircraft carriers played a key role in the British victory over Argentina.²⁸ Today, carriers offer the PLAN extended blue-water capability—to the Second Island Chain and beyond—and an improved capacity for antisubmarine warfare (ASW) and airborne early warning (AEW). The ASW and AEW missions require multiple carriers; however, even one fully capable aircraft carrier could represent the PLA’s first steps toward

extended air (i.e., offensive) and air-defense cover for regional contingencies and an incremental extension of the air-defense umbrella in tandem with advanced escort combatants. For the present, ASW and AEW vulnerabilities remain too great to allow *Liaoning* to be successfully employed in high-intensity maritime combat; its size and configuration preclude the launch of the larger aircraft that would perform these missions. In short, as we have seen, there are limitations to what *Liaoning* can do, especially with such limited operational experience.

What difference would one or two aircraft carriers make in a contingency inside the First Island Chain? In a South China Sea clash, *Liaoning* would provide extra airpower projection against opposing combatants, especially in the southernmost reaches of that body of water; it would also present adversaries with a “nice, big target.” One carrier or even two would offer little in an East China Sea battle. As for a Taiwan contingency, carrier air would not contribute much in the fight itself, although it might have utility as a diversion in more easily protected zones away from Taiwan and Japan. Moreover, the use of an aircraft carrier would severely complicate the PLA's current doctrinal approach—missile-centric fire-power strike and counterintervention operations, supported by advanced information warfare. This would be especially true in a Taiwan contingency.

The choice to retain the original, Soviet-era STOBAR design suggests that *Liaoning*'s missions will be more limited than those of U.S. aircraft carriers. A “ski jump” bow and the absence to date of catapults restrict the size and weight of an aircraft that can take off from the deck (and accordingly the payload and amount of fuel it can carry). Thus the onboard air wing will focus on air defense, protecting the carrier and escort vessels at sea. Finally, *Liaoning* is conventionally powered, which limits its range and necessitates regular refueling.

Noncombat Operations

Additional demands are represented by the contributions an aircraft carrier will be expected to make to peacetime operations. Indeed, this noncombat dimension has received considerable attention in recent years in China. Moreover, the PLA neither has recent war-fighting experience nor anticipates significant combat operations in the near future. Thus *Liaoning* and any subsequent aircraft carriers can expect considerable noncombat operational employment. Since at least 2008 China's armed forces have emphasized military operations other than war (MOOTW) as a doctrinal component. While MOOTW “with Chinese characteristics” has a significant domestic dimension, this body of doctrine also includes substantial maritime and overseas elements, and the PLAN appears poised to play a central role in it. Its MOOTW missions could include “flat deck” (i.e., large air-capable ship) operations in support of SLOC protection, humanitarian assistance, and disaster relief. China became acutely aware of the usefulness of

aircraft carriers during the U.S. Navy's response to the Southeast Asian tsunami in 2004. Furthermore, recent PLA experiences with noncombatant evacuations in such places as Libya have highlighted the value of air and naval assets.

In peacetime, a carrier provides a high-profile presence wherever it steams. It can symbolize power and commitment without necessarily raising alarm. But the challenge for China in the not-too-distant future will be how to operate a carrier close to home without being perceived as threatening by its neighbors. A carrier is much more likely to be warmly welcomed outside the First and Second Island Chains than within them. If the challenges of the vast distances involved in far-seas operations can be met, a Chinese carrier off the coast of Africa or Latin America would be a strong symbol of national pride and could also serve as a goodwill ambassador, whether visiting ports or patrolling the global commons.

Program Prospects and Implications

China's carrier program was powered to ultimate realization by an overarching strategic logic and still-evolving national maritime strategy. While nationalism and bureaucratic interests have played—and will continue to play—important roles in the trajectory of the program, the push for a Chinese carrier could neither have been sustained across many decades nor have ultimately triumphed without the impetus of a larger strategic rationale and the emergence of a coherent maritime strategy. The program's lengthy gestation and repeated failure to gain traction are attributable to the absence of a strategic imperative before the end of the Cold War. This growing strategic logic and the emerging operational demands for a carrier in the twenty-first century correspond to an extension of PLA thinking beyond a Taiwan Strait scenario. When the PRC's military was narrowly focused on operations against Taiwan, an aircraft carrier did not make much sense. But its operational value is more evident in other scenarios, including protection of the South China Sea and beyond the First Island Chain. Moreover, strategic and operational value increases as the PLAN expands its horizons beyond the First and Second Island Chains.

More than two years after its commissioning, *Liaoning* is far from fully operational. It is still without a fighter wing, although numerous practice takeoffs and landings have occurred. It functions essentially as a training vessel and has yet to venture outside the First Island Chain. Nevertheless, in China the carrier has captured the imagination of leaders and ordinary people who have come to view a PLAN aircraft carrier as the ultimate symbol of full-blown Chinese military power. A carrier signals China's desire for global power projection—or at least extended offshore reach.

While the PLAN is still years away from being able to project and sustain significant naval power—let alone in the form of an aircraft carrier—out of area (i.e.,

beyond the island chains), Beijing is intent on becoming able to play a greater role in patrolling SLOCs farther afield. Given China's dependence on imported energy and the importance it attaches to energy security, a logical priority location for increased PLAN operational activity will be in the Indian Ocean. Although China has increased the number of overland routes for oil and gas (witness the construction of pipelines in recent years from Central Asia, Russia, and Myanmar), the PRC remains reliant on seaborne energy, especially petroleum from fields in Africa and the Middle East.

Liaoning is a visible symbol of China's growing naval prowess wherever it steams and is useful in noncombat missions. But in an era of precision-guided munitions and enhanced over-the-horizon surveillance and reconnaissance, in wartime *Liaoning* becomes vulnerable, a sitting (or more accurately, floating) duck, especially in any conflict involving a highly capable adversary.

China's carrier program in and of itself, therefore, does not merit alarm by the Pentagon. It does not fundamentally transform the balance of military power in the western Pacific. One or two PLAN aircraft carriers will not be especially useful in the East China or South China Sea. Of course, carriers will extend the range of Chinese airpower, and their presence will further complicate an already complex maritime operating environment in the near seas. This prospect does signal both China's unmistakable intent to project military power beyond the First Island Chain and its aspirations to become a global naval powerhouse. And yet by the time—decades hence—that China does possess multiple large aircraft carriers and has become adept at operating them, the carrier itself may have become almost irrelevant in the conduct of naval warfare.²⁹

Perhaps the greatest impact for the U.S. military of one or more Chinese carriers will be more perceptual than operational.³⁰ Indeed, the United States and other countries in the Asia-Pacific have yet to come fully to grips psychologically with the arrival of a new, increasingly capable, and active blue-water navy in the region.

NOTES

1. Cited in *Jiefangjunbao* [Liberation Army Daily], 26 September 2012, p. 2.
2. Geoffrey Till observes that Asia's "navies are modernizing at an unprecedented extent" and suggests that the region may be experiencing a "slow motion" arms race. See his *Asia's Naval Expansion: An Arms Race in the Making?* (London: International Institute for Strategic Studies, 2012), pp. 35, 241.
3. John W. Garver, "China's Push through the South China Sea: The Interaction of Bureaucratic and National Interests," *China Quarterly*, no. 132 (December 1992); Ian Storey and You Ji, "China's Aircraft Carrier Ambitions: Seeking Truth from Rumors," *Naval War College Review* 57, no. 1 (Winter 2004), pp. 77–93.

4. See Andrew Scobell and Andrew J. Nathan, "China's Overstretched Military," *Washington Quarterly* 35, no. 4 (Fall 2012), pp. 135–48.
5. For the clearest articulation of this interpretation, see Robert S. Ross, "China's Naval Nationalism: Sources, Prospects, and the U.S. Response," *International Security* 34, no. 2 (Fall 2009), pp. 46–81. According to Ross, Beijing's national security needs do not justify carriers. Ross dismisses the possibility of a strategic rationale and appears to argue that all PRC aircraft-carrier proponents are rabid nationalists. See the critique by Michael A. Glosny and Phillip C. Saunders, "Correspondence: Debating China's Naval Nationalism," *International Security* 35, no. 2 (Fall 2010), pp. 161–69.
6. Zhang Shiping, *Zhongguo Haiquan* [China's Sea Power] (Beijing: Renmin Ribao Chubanshe, 2009), p. 2.
7. Bernard D. Cole, *The Great Wall at Sea: China's Navy in the Twenty-First Century*, 2nd ed. (Annapolis, Md.: Naval Institute Press, 2010); Andrew S. Erickson, Abraham N. Denmark, and Gabriel Collins, "Beijing's 'Starter Carrier' and Future Steps: Alternatives and Implications," *Naval War College Review* 65, no. 1 (Winter 2012), pp. 15–54.
8. See, for example, Andrew J. Nathan and Andrew Scobell, "How China Views America: The Sum of Beijing's Fears," *Foreign Affairs* 91, no. 5 (September/October 2012), pp. 32–47.
9. Roy Kamphausen, David Lai, and Andrew Scobell, eds., *Beyond the Strait: PLA Missions Other than Taiwan* (Carlisle Barracks, Pa.: U.S. Army War College Strategic Studies Institute, 2009).
10. See, for example, Bai Ma, "Zhanwang Zhongguo haijun de hangmu shidai" [The Prospects for China's Navy in the Era of Aircraft Carriers], *Jianchuanzhishi* [Naval and Merchant Ships] (March 2011), p. 18.
11. Liu Huaqing, *Liu Huaqing Huiyilu* [Memoirs of Liu Huaqing] (Beijing: Jiefangjun Chubanshe, 2004), p. 477.
12. Tang Fuquan and Han Yi, "Renmin haijun yanzhe dang zhiyin de chuanxiang polang qianjin" [People's Navy Advances along the Course Set by (the) Party] *Zhongguo Junshi Kexue* [China Military Science], no. 4 (2009), pp. 13–14.
13. Liu Huaqing, *Liu Huaqing Huiyilu*, p. 478.
14. Storey and You Ji, "China's Aircraft Carrier Ambitions," pp. 78–79.
15. *Ibid.*, pp. 81–84.
16. Cole, *Great Wall at Sea*, p. 88.
17. Tang Fuquan and Han Yi, "People's Navy Advances along the Course Set by [the] Party," p. 14.
18. Author interviews with civilian and military analysts in China indicate that a decision was made in this time frame.
19. David M. Finkelstein, "China's National Military Strategy: An Overview of the Military's Strategic Guidelines," in *Right Sizing the PLA: Exploring the Contours of China's Military*, ed. Roy Kamphausen and Andrew Scobell (Carlisle Barracks, Pa.: U.S. Army War College Strategic Studies Institute, 2007), pp. 69–140.
20. The two others are protecting the "ruling position" of the Chinese Communist Party and guaranteeing "national development." The text of Hu Jintao's speech has not been made public but has been widely cited. For a concise overview, see Daniel Hartnett, "China Military and Security Activities Abroad," *Hearings before the U.S.-China Economic and Security Review Commission*, 111 Cong., 1st sess., 4 March 2009 (Washington, D.C.: U.S. Government Printing Office, April 2009), pp. 45–55. See also Andrew Scobell, "Discourse in 3-D: The PLA's Evolving Doctrine, Circa 2009," in *The PLA at Home and Abroad: Assessing the Operational Capabilities of China's Military*, ed. Roy Kamphausen, David Lai, and Andrew Scobell (Carlisle Barracks, Pa.: U.S. Army War College Strategic Studies Institute, 2010), pp. 100–101.
21. See, for example, Andrew Scobell and Gregory Stevenson, "The PLA (Re-)Discovers Nontraditional Security," in *Not Congruent but Quite Complementary: U.S. and Chinese Approaches to Nontraditional Security*, ed. Lyle J. Goldstein, China Maritime Study 9 (Newport, R.I.: Naval War College Press, July 2012).
22. Cole, *Great Wall at Sea*, pp. 88–90.
23. "At least three carriers" is a RAND estimate. See also Richard D. Fisher, Jr., "Dalian Official Says Chinese Planning Four Aircraft Carriers," *Jane's Defense Weekly*, 21 January 2014.

24. Cited in *Jiefangjunbao*, 26 September 2012, p. 2.
25. See James Mulvenon, "The New Central Military Commission," *China Leadership Monitor*, no. 40 (January 2013), pp. 1–10. Gen. Xu Qiliang, one of two uniformed CMC vice-chairs, and Gen. Ma Xiaotian, the air force commander, were selected at the Eighteenth Party Congress in November 2012.
26. See, for example, Tang Fuquan and Han Yi, "People's Navy Advances along the Course Set by [the] Party," p. 14.
27. Storey and You Ji, "China's Aircraft Carrier Ambitions," p. 86.
28. Christopher D. Yung, "Sinica Rules the Waves? The People's Liberation Army Navy's Power Projection and Anti-access / Area Denial Lessons from the Falklands/Malvinas Conflict," in *Chinese Lessons from Other Peoples' Wars*, ed. Andrew Scobell, David Lai, and Roy Kamphausen (Carlisle Barracks, Pa.: U.S. Army War College Strategic Studies Institute, 2011), pp. 88, 93.
29. For this argument from a U.S. perspective, see, e.g., Robert C. Rubel, "The Future of Aircraft Carriers," *Naval War College Review* 64, no. 4 (Autumn 2011), pp. 13–27.
30. Many Chinese analysts have noted this vulnerability. In 2011, Adm. Robert Willard told the press that as commander of U.S. Pacific Command he was "not concerned" about the prospect of dealing with the operational challenges of China's first aircraft carrier. Nevertheless, he observed that the psychological impact on the region of this development would be "significant." Viola Gienger and Tony Capaccio, "China's Carrier Poses Mostly Symbolic Threat, U.S. Admiral Says," *Bloomberg News*, 12 April 2011.

Andrew Scobell is a senior political scientist at the RAND Corporation and adjunct professor at the Edmund A. Walsh School of Foreign Service at Georgetown University. He earned a doctorate in political science from Columbia University. He is the author of China's Use of Military Force: Beyond the Great Wall and the Long March (2003) and China's Search for Security (2012) with Andrew J. Nathan, as well as monographs, reports, journal articles, and book chapters.

Michael McMahon is a senior researcher in the Acquisition, Technology, and Policy Center at RAND's National Defense Research Institute. Dr. McMahon retired from the U.S. Navy in 2011 as a rear admiral, having served as Program Executive Officer for Aircraft Carriers and previously as the Supervisor of Shipbuilding for the Navy in Newport News overseeing nuclear carrier and submarine construction and refueling.

Cortez A. Cooper III is a senior international policy analyst at the RAND Corporation. Prior to joining RAND, Cooper was the director of the East Asia Studies Center for Hicks and Associates, Inc. He has also served in the U.S. Navy Executive Service as the senior analyst for the Joint Intelligence Center Pacific, U.S. Pacific Command. His twenty years' service in the U.S. Army included experience as a China Foreign Area Officer.