In China's Shadow

The Strategic Situation in the Western Pacific

Lt Col Thomas R. McCabe, USAFR, retired

Disclaimer: The views and opinions expressed or implied in the Journal of Indo-Pacific Affairs (JIPA) are those of the authors and should not be construed as carrying the official sanction of the Department of Defense, Air Force, Air Education and Training Command, Air University, or other agencies or departments of the US government. This article may be reproduced in whole or in part without permission. If it is reproduced, the JIPA requests a courtesy line.

East Asia and the Western Pacific (WestPac) are undergoing what amounts to China (PRC) from the wheelbarrow age into an age where they are becoming a modernized superpower. China intends to change its security architecture—traditionally having been a land power, Beijing is now building a major Navy—and other major maritime powers should consider it a strategic warning. China also intends to establish itself as the dominant military power in the region. While Beijing's current posture on totally excluding the United States is at least somewhat ambiguous,¹ the Chinese would undoubtedly like our military presence there to cease and to reconstitute what amounts to a Chinese empire in the region.² As with the Russians and various other non-Western countries, the Chinese objection to past Western and Japanese imperialism was not that it was imperialism but that such imperialism was at their expense. Beijing does not have an objection to imperialism if China is the imperial power. Meanwhile, the United States does not intend to leave, and as a rule, the rest of the region wants the United States to remain as a counterweight to China. Therein hangs a tale.

The Danger of War

Unfortunately, several scenarios for the start of a WestPac war have at least some measure of plausibility. First, the possibility exists for parallel or competitive interventions in North Korea in the event of a war or a collapse in North Korea.³ An example of a parallel intervention would be North Korea starting a war, with the United States and China having somehow agreed on the need for regime change in North Korea. Both the United States and China are intervening, but the interventions are not necessarily hostile to each other and may even be coordinated. A

competitive intervention example would be the 1950–53 Korean War, where the Chinese were intervening to support the North Koreans.

A second scenario involves a theoretical Chinese attempt to annex Taiwan forcibly, from Taiwan moving toward official independence or if Taiwan continuing to refuse annexation.⁴ Both the Chinese and the Taiwanese consider the question of the independence of Taiwan to be an existential conflict where an ultimate compromise is impossible.⁵ Beijing has said the PRC will not tolerate the current situation indefinitely, and in 2013, the Taiwanese ministry of defense reported that China had a plan to invade Taiwan by 2020.⁶ Beijing, not surprisingly, denies the veracity of that report. More recently, China has threatened to invade if a US Navy ship visits Taiwan.⁷

The third possibility involves an accident (or skirmish) in the South China Sea (SCS) that escalates—especially under pressure of public opinion—in China.⁸ This could happen if Beijing attempts to enforce its interpretation of international law, such as not allowing foreign military operations in its exclusive economic zone without its permission. The most extreme variant would be Chinese declaration that the SCS, or most of it, is Chinese internal waters and subsequently attempt to prevent any American operations there by force. Beijing sometimes defines the waters inside the First Island Chain (FIC)—the Japanese archipelago, the Ryukyus, Taiwan, and the Philippines—as China's "Blue Territories," and Chinese policies are intended to define these waters as Chinese territory eventually.⁹ Furthermore, Pres. Xi Jinping claims that reclamation of SCS islands is one of his greatest accomplishments.¹⁰ Therefore, he may take more of a proprietary interest in what happens there—with greater sensitivity to events and especially affronts—than one might otherwise expect.

A fourth situation deals with war resulting from a third party's action. One of the more likely of these would be a Sino-Japanese skirmish over the Senkaku Islands that escalates.¹¹

Yet a fifth scenario involves war developing from an economic crisis. As the Trump administration moves against the massive Chinese trade surplus with the United States and what is widely considered predatory Chinese practices—such as Beijing's theft of intellectual property—the United States and the PRC may well be in the opening phases of a trade war.¹² While that one factor may not cause a war, it can be expected to strain relations. Furthermore, some major Chinese banks are continuing to work with North Korea, and American sanctions against those banks might cause a major economic crisis for China and the rest of the world.¹³ Further poisoning the well is widespread Chinese suspicion that Trump's recent moves are part of an overall effort to strategically contain and block the rise of China.¹⁴

However, overshadowing these scenarios are what might be considered three systemic factors. First, among these is the consolidation of power by President Xi. The days when China had a degree of collective leadership—with at least some potential for diversity of views and checks on rash actions—are ending. The PRC's leadership now answers to Xi.¹⁵ Politburo members will now be evaluated yearly on their performance and "loyalty to the Party," which will undoubtedly be interpreted as loyalty to Xi.¹⁶ Since he is now China's supreme leader, Xi is in a position to decide policy largely on his authority.

Second, an additional potential source of danger may be what some suggest is a quirk of Chinese strategic culture that believes that a sudden, sharp attack on an enemy will coerce that enemy to deal with China on the terms Beijing sets.¹⁷ The most extreme case of this would be the Chinese leadership believing it could decisively solve major problems through military force. With any luck, the Chinese will notice these tactics have not worked well for them in the past: i.e., the border war with India in 1962. Also, they should remember that the United States has a term for such an attack—a *Pearl Harbor attack*—and a track record for responses to such attacks.

Finally, there is the question of the Thucydides Trap, described by Graham Allison as the conflict between an existing hegemon (the United States) and an aspiring one (China).¹⁸ Beijing expects current favorable trends to continue and ultimately to preside over a unipolar world with itself as the dominant power.¹⁹ In particular, the PRC sees its efforts to revise the current WestPac regional order by means just short of war as successful. Would the PRC change its strategy and tactics if its current "salami slicing" stopped working? Alternatively, might China's contempt for or annoyance at America—and the regional or world order America supports—cause China to accelerate the process or upend the system by force? It seems unlikely now, but in 1931 few would have foreseen Japan's air and naval blitzkrieg of 1941–42. In any case, China would undoubtedly perceive the balance of interest—and therefore will—in a crisis as strongly favorable to its side.

With hope, the Chinese will not take the enormous risks and inevitable costs of such a dangerous policy. The United States can be expected to treat China as a systemic and existential threat whatever the aftermath, to repudiate its debt to China as part of the war, and to deny China access to the US market—among other pun-

ishments. Unfortunately, the bottom line is that one cannot rule out the possibility of a great power war in the WestPac. Furthermore, it may be a war that the United States and its allies could conceivably lose.

The Military Situation in the Western Pacific

If a major war should break out in the foreseeable future, it is all too likely to have many parallels to the opening stages of World War II in the Pacific, with the Chinese in the position of the Japanese. The major differences will be that, unlike the Japanese, the Chinese will have neither a massive surface naval superiority over Beijing's antagonists nor the ability or, necessarily the desire to overrun and occupy major territories of its enemies, including Taiwan.²⁰

Whatever their war aims, the PRC can be expected, like imperial Japan in World War II, to aim to avoid a long war by rapidly presenting its enemies with a fait accompli. Beijing's expectation (or hope) will be that the United States will be unwilling or unable to undertake the effort and expense of fighting its way back into WestPac, or, failing that, China will be able to prevent the United States from doing so.

Due to geography and the ongoing Chinese military buildup, the United States will not be able to count on its historic advantages of air, naval, and technological superiority. Instead, the United States is all too likely to be facing not only a peer competitor but also what may be a more-than-peer competitor. This competition will have a massive impact at all levels of war.

US leaders must expect the Chinese will have the strategic, operational, and tactical initiative at the opening of the war, and the United States will be reacting. Washington may be surprised and likely reluctant to believe that war is imminent. Militarily, this means that the US administration cannot expect to be permitted to amass overwhelming power as was the case during Desert Shield, and US leaders must expect to fight a war with little preparation. Depending on the circumstances, such as American involvement in major military action in another part of the world, the US military may not have overwhelming power to amass.

Depending on the circumstances, some or all of our allies may choose not to join the fight. This decision may be true even if a clear case of Chinese aggression triggers the war, unless allies are directly attacked. This may be due partially to the great distance from the relevant crisis. The southern tip of the Republic of Korea (ROK) mainland is more than 800 miles from northern Taiwan. Other factors include the perception that it is not a matter of concern to America's allies, intimidation by China, and the possibility of Chinese bribes or concessions to the leaders of US allies.

Due to the geographic proximity of the PRC, Beijing will likely outmatch us in combat power, especially in aircraft, throughout the war. This is especially likely to be the case at the beginning of the war. The Chinese have the option of exploiting their internal lines of communications to concentrate their military power on areas adjacent to the planned theater of operations, possibly under cover of exercises. Meanwhile, American military power is deployed worldwide and will need time to relocate to the WestPac to reinforce.

We must expect to be operating against an increasingly mature Chinese precision-strike system.²¹ In particular, American and allied bases in the WestPac (and possibly the rest of the Pacific) will *not* be sanctuaries. For the foreseeable future, the American and allied ability to deter and defeat a Chinese air-and-missile attack against our bases by China's steadily improving military is increasingly uncertain. As the Chinese increasingly integrate intelligence, surveillance, and reconnaissance systems with precision-guided munitions, it will be a steadily increasing challenge for the United States and its allies to defeat China.²² US leaders must expect China to attempt to neutralize hostile forward bases and forward naval units in the FIC immediately. This will be accomplished by using a combination of ballistic and cruise missile and air attacks against forward bases and ships—possibly far from the Asian mainland, including areas such as Guam and the Marianas. Such an attack will have two major aims:

- To establish and maintain air supremacy over the targeted areas of the FIC, and
- To establish sea control within at least the FIC and to convert those waters into a bastion by disarming and dominating the FIC, in particular, Taiwan, and making it too dangerous for American and allied surface ships to operate on the waters between the FIC and the Chinese mainland. This control will be combined with and reinforced by what might be called "hemispheric denial" by using land-based tactical missiles and long-range aircraft with cruise missiles, probably supplemented by People's Liberation Army Navy (PLAN) surface ships and submarines, to control access to the WestPac theater.

Planners can expect Beijing to supplement and reinforce these attacks with swarm attacks, using mini unmanned aircraft systems (UAS) on friendly air bases throughout the Pacific.²³ The intention is to disrupt the movement of replacement equipment and reinforcements. US leaders must also expect such attacks against military facilities in the United States that support US Indo-Pacific Command (INDOPACOM), although the UASs used in rear areas may be unarmed to minimize the chance of escalation.²⁴ In a war where the United States is fighting to restore the prewar geopolitical status quo while avoiding escalation to a larger war, the United States, as in the Korean and Vietnam Wars, may not have a choice except to permit the enemy at least a partial geographic sanctuary. US forces may not be allowed to attack some categories of targets. This result could be due to a variety of factors. The PLA Rocket Force controls China's conventional tactical missiles and its strategic nuclear missiles.²⁵ If conventional missiles use the same facilities or deployment sites in China as nuclear systems, attacking those facilities is potentially escalatory. In particular, attacking command-and-control targets, especially systematic attacks on the Chinese national command structure, would carry grave risks of escalation to an even larger, perhaps nuclear, war. This situation means Beijing is likely to think it may have escalation dominance.



Figure 1. A USAF B-52H Stratofortress bomber is refueled over the Pacific Ocean during a routine training mission. This mission was flown in support of US Indo-Pacific Command's Continuous Bomber Presence operations, which are a key component to improving combined and joint service interoperability. (Photo by Airman 1st Class Gerald Willis)

American forces will not be in a permissive environment. US planners must assume that Beijing will contest everything US forces attempt. The PRC will strive to keep American and allied bases suppressed with follow-up air-and-missile attacks. There may be a limited number of access points for American entry, and US leaders must presume that these will be serious targets and expect the mining of seaports and naval bases, including American bases.²⁶ Planners should assume US logistics ships to be high-priority targets.²⁷ Reinforcement and resupply efforts must anticipate attacks en route, and such efforts may have to fight their way into the region. We must presume that the Chinese will make a comprehensive attempt to disrupt our command, control, communications, computer, intelligence, surveillance, and reconnaissance (C4ISR), using a combination of kinetic, directed energy, special operations, and cyberattacks. In particular, the Chinese consider US space systems to be key to our center of gravity. US leaders should anticipate that attacks against our satellites by antisatellite systems, of which the Chinese have several potential systems, will occur. We should also suppose missile-and-air attacks against our airborne intelligence, surveillance, and reconnaissance (ISR) systems and jamming of our communication satellites and systems, GPS, and radars.²⁸ Another likelihood is the breaking of the oceanic cables linking the region to the rest of the world. Beyond targeting C4ISR, US leaders should presume attacks, especially cyberattacks, against a wide variety of other targets. In Taiwan, planners should expect comprehensive attacks against all portions of the military, the government, and the economy, especially its infrastructure. Attacks against the United States and other allied states might be more selective, at least at first, concentrating especially against weapons, combat support, and combat service-support systems.²⁹ Chinese forces may even be able to hack into and attack individual components within our equipment.³⁰ However, they may not immediately make massive and indiscriminate attacks against American infrastructure, since they believe Chinese infrastructure to be equally vulnerable.³¹ This fear means that a degree of mutual deterrence may exist, at least in the beginning. Also, the United States has reserved the right to retaliate with nuclear weapons against major conventional attacks, including cyberattacks, against American infrastructure.³²

American military readiness may be in short supply as a result of wars and conflicts in recent decades. Detracting from readiness is the fact we will not have the cushion of supplies that US forces had available in Operations Desert Shield and Desert Storm or Operation Iraqi Freedom. Further, once US forces use up their stockpiles of munitions, they may not have the industrial capability to replace them quickly or in the massive amounts needed for a war with China.³³

US planners should expect comprehensive adversarial information and disinformation campaigns, attempting to create and exploit any political discord from the war while countering our information efforts against China. The United States cannot assume friendly ISR supremacy. As mentioned, US leaders must assume the Chinese will do everything possible to degrade friendly ISR systems. Meanwhile, the Chinese have built or are building a variety of systems, which planners must expect to be available for military use. When these systems' data is integrated (likely an early priority for application of artificial intelligence), they will be able to provide resilient coverage of the Chinese mainland and the bordering seas. These systems include:

- *Satellites.* The Chinese have developed and are rapidly deploying constellations of dual-use and military satellite reconnaissance systems. Of special interest are the Yaogan ("China remote-sensing satellite") satellites, which includes both electro-optical imagery reconnaissance satellites and synthetic aperture radar satellites. Both rely on data downlinking, not film return, which means the Chinese can access and exploit their data rapidly.³⁴ Recently, Beijing has started deploying military electronic intelligence satellite systems,³⁵ and many Yaogan satellites are reported to be such satellites, intended to track and locate foreign warships by their optical and electronic signatures.³⁶ In addition, the PRC is starting to deploy a series of nominally civilian satellites—under the Chinese Academy of Sciences—to maintain a real-time watch on the SCS. Beijing has announced its intention to launch large constellations of optical microsatellites.³⁷
- Unmanned air systems. The Chinese are making an extensive effort in ISR UASs. These include at least two reported clones of the American high-altitude, long-endurance Global Hawk—the Divine Eagle and the Xianglong/Soaring Dragon—both of which have entered production.³⁸ In addition, a large unmanned airship and several systems for the medium-altitude, long-endurance (MALE) UAV role are in production.³⁹ The most-widely reported MALE systems are the Yilong/Wing-loong and the BZK-005, roughly similar to or maybe larger than the American Predator,⁴⁰ and the CH-5, which is roughly equivalent to the American Reaper.⁴¹ The MALE systems, like their American counterparts, can also carry bombs and missiles.⁴²

- *ISR aircraft.* While China has historically deployed a modest force of ISR aircraft,⁴³ it has recently started to mass-produce the KJ-500 airborne early warning and control aircraft with an active electronically scanned array radar.⁴⁴
- Ships. On a humbler note, US planners should expect the PRC to deploy lesssophisticated, early warning and surveillance vessels in-depth by keeping their fishing boats and sea traffic deployed as potentially expendable warning systems and munitions sinks to detect movements of hostile surface warships. The USCG did something similar on the American East Coast in the early days of World War II with the Coastal Picket Patrol, composed of yachts, motorboats, and converted fishing boats.⁴⁵



Figure 2. The Cloud Shadow high-altitude, long-endurance (HALE) unmanned aerial system. This UAS was unveiled at the Airshow China 2016 exhibition held in Zhuhai, China.

US leaders cannot assume the air superiority they have largely come to take for granted since the end of the Cold War. There are at least three reasons for this in addition to attacks on our bases and aircraft carriers: 1) Beijing is deploying large numbers of sophisticated combat aircraft; 2) the Chinese are developing extreme long-range air-to-air missiles, and 3) Chinese forces are deploying a sophisticated integrated air defense system (IADS). The Chinese Air Force (PLAAF) and Naval Air Force (PLANAF) possess large numbers of modern fighter aircraft and are steadily deploying more. The technical sophistication of many or most of these aircraft and aircraft weapons may be comparable to American models. US planners must assume that China will have largely reequipped the PLAAF and PLANAF with J-10s, J-11s, J-16s, and next-generation J-20s. These are at least roughly equivalent, if not better than, the United States' F-15s, F-16s, and F-18s that will predominate in the USAF, USN, USMC, and allied inventories for the near future. Ominously, this sophistication may include air-to-air missiles (AAM).⁴⁶ As part of rebuilding, the Chinese are working to develop extremely long-range AAMs. The PL-15 may have a maximum range of up to 200 kilometers,⁴⁷ especially against large nonmaneuvering targets, such as tankers and airborne early warning and control aircraft (AEW&C). Beijing may be developing an AAM with a range of up to 400 kilometers.⁴⁸ Chinese forces are deploying an IADS, based specifically on modern, long-range surface-to-air missiles (SAM). Once deployed along the coast, this system has the potential to reach well beyond the PRC's coastlines. Along with being one of the major buyers of advanced Russian SAMs-including SA-20s⁴⁹ and S-400s/SA-21s⁵⁰—China is currently producing at least four domestic advanced long-range SAMs: the HQ-9 (Chinese-built SA-10),⁵¹ the HHQ-9 (naval version of the HQ-9),⁵² the HQ-15 (upgraded SA-10),⁵³ and the HQ-18 (Chinese-built SA-12).⁵⁴ The PLAAF has claimed the HQ-9 has a range of 200 kilometers and a speed over Mach 4.55 Beijing is also building the FT-2000 missile system, which uses a modified HQ-9 missile with an antiradar seeker intended to target AEW&C and electronic warfare aircraft.⁵⁶ Reportedly, this system can intercept tactical ballistic missiles. Additionally, US planners should note that the PLAN is steadily deploying modern ships carrying advanced SAMs, including a class of at least six Type 055 Renhai-class guided missile cruisers, with 112 vertical launch tubes for HHQ-9s each.⁵⁷ In addition, their Type 052 Luyang II-class air defense frigates carry 48 HHQ-9 missiles in vertical launch tubes.⁵⁸ Assuming that the Chinese can integrate the SAM systems of these ships with the IADSadmittedly a major assumption—it will potentially extend the reach of the IADS

even further offshore. At least at the tactical level of air combat, US planners should not assume qualitative superiority in the level of training. The PLAAF is making a major effort to improve the tactical training of its aircrews.⁵⁹ Over the long term, planners should expect this to have an impact on the balance of quality between aircrews.

Finally, US leaders cannot assume overall technological superiority—the technical sophistication of many Chinese weapons and aircraft may be at least as good as American counterparts. Further, the Chinese science-and-technology base may be surpassing that of America in at least some areas.⁶⁰ For example, hypersonics is an area of possible Chinese superiority that US planners cannot rule out in the arena of technological surprises. Beyond that, we should remember that even a developing nation could develop and launch unpleasant technological surprises, as the Japanese did with the Mitsubishi A6M "Zero" long-range fighter and the Type 93 "Long-Lance" torpedo at the start of World War II.

Chinese forces have ample potential to wage a very big and very grim war—unfortunately, one with very uncertain prospects for US success. Moreover, US leaders should not expect such a war to end quickly. Even if the Chinese do not risk an attack as outlined earlier in this article, military power casts a political shadow. Beijing, with a perception of military superiority, is all too likely to be more assertive and less likely to be deterred in situations short of war, such as a blockade of Taiwan. The United States may be entering an era in which deterrence of China may result less from Beijing's perception of our strength than introspective knowledge of its own weaknesses.

Conclusions and Implications

The strategic situation in the WestPac has changed, and not for the better for America and its allies. The United States must anticipate further change in the future. The implications are ominous; clearly, US forces cannot expect to have the naval, air, and technological superiority they have taken for granted for decades, and American leaders cannot assume US bases and ships will be sanctuaries.

American and allied strategy, tactics, and deployments need to transform to adapt to the altered situation. The bottom line is that the United States needs to rebuild its capability to fight a high-tech war that will only be, at best, one step short of a world war. Above all, since US planners must assume they will be on the wrong end of the first salvo, an urgent priority is hardening and defending US bases, facilities, and ships to survive, fight through, and recover from such an at-

tack. US leaders must stress survivability in our C4ISR systems. The United States and its allies need to deploy their own antiaccess/area denial systems against China. Finally, US forces will need to be able to wage effective joint operations; long past are the days where each service can fight independently.

This is not the first time the United States has faced a massive threat to the survivability and operation of its forward bases and forward-deployed forces. During the Cold War, US bases in the Federal Republic of Germany faced such a threat from Soviet forces in Eastern Europe and the western Soviet Union.⁶¹ American naval forces faced the threat of massive attack from Soviet air and naval forces, and our US bases in the ROK have assumed they are vulnerable to attack for decades. American efforts to counteract these threats relied on a combination of active and passive defenses and rapid repair and reconstitution. The United States and its allies need to duplicate these measures at its WestPac bases and, more selectively, at other facilities in the Pacific or those that support the INDOPACOM.

For decades, American bases in the ROK have operated on the assumption that they are on the front line.⁶² The time has come for other bases in the region, ships in the area, and US regional allies to start thinking of themselves as being in the forward area. The front line is not just Korea, and US air and naval facilities in the region should not function as typical peacetime bases.

The possibility of a war in the WestPac today is probably unlikely. However, the same could be said about the threats of a Soviet attack on Western Europe and a nuclear attack on the United States during the Cold War. In the interest of prudence, America invested immense resources in preparing against those possibilities. If the United States wants to remain a power in the Pacific, it will need to repeat those efforts.

Notes

1. Steven F. Jackson, "Does China Have a Monroe Doctrine? Evidence for Regional Exclusion," *Strategic Studies Quarterly* 10, no. 4 (Winter 2016), http://www.airuniversity.af.mil/Portals/10/SSQ/documents/Volume-10_Issue-4/ Jackson.pdf.

2. The Chinese have an ancient concept for a Chinese-centered world system called *tianxia*, or "all under heaven." While the Chinese define this notion as benevolent, a more skeptical view is that it envisions a world empire dominated by the Chinese. For an explanation of *tianxia*, see Zhao Tingyang, "Rethinking Empire from the Chinese Concept 'All-Under-Heaven' (Tianxia)," in William Callahan and Elena Barabantseve, *China Orders the World: Normative Soft Power and Foreign Policy* (Baltimore, MD: Johns Hopkins, 2011), https://pdfs.semanticscholar.org/7ab1/3108b384a666cc4df 192aac153214c981801.pdf. More recently the Chinese have called it a "community of common destiny" and a "community of shared future." See also Nadege Rolland, "Beijing's Vision for a Reshaped International Order," *Jamestown China Brief* 18, no. 3, (26 Feb 2018), https://jamestown.org/program/beijings-vision-reshaped-international-order/?mc_cid=0a67f00ed9&mc_eid=bae1e8f0ef.

3. Oriana Skylar Mastro, "Why China Won't Rescue North Korea," *Foreign Affairs* 97, no. 1 (January/February 2018) 58-66, https://www.foreignaffairs.com/articles/asia/2017-12-12/why-china-wont-rescue-north-korea.

4. Graham Allison, Destined for War: Can America and China Escape Thucydides's Trap? (New York: Houghton Mif-flin Harcourt, 2017), 173-175.

5. See Chapter 1, "Why Invade Taiwan?" in Ian Easton, *The Chinese Invasion Threat: Taiwan's Defense and American Strategy in Asia* (Arlington, VA, the Project 2049 Institute, 2017); and see "70% of Taiwanese will Fight if China Invades, Survey Finds," *Asia Times*, 20 Apr 2018, http://www.atimes.com/article/70-taiwanese-will-fight-china-invades-survey-finds/?utm_source=Sailthru&utm_medium=email&utm_campaign=ebb%2023.04.18&utm_term=Editorial%20-%20Early%20Bird%20Brief.

6. Easton, The Chinese Invasion Threat, 22.

7. Daniel Lynch, "Playing the Taiwan Card," *Foreign Affairs*, 19 March 2018, https://www.foreignaffairs.com/articles/china/2018-03-19/playing-taiwan-card.

8. Allison, Destined for War, 167-173.

9. Andrew Chubb, "China's 'Blue Territory' and the Technosphere in Maritime East Asia," *Technosphere Magazine*, 15 Apr 2017, https://technosphere-magazine.hkw.de/p/Chinas-Blue-Territory-and-the-Technosphere-in-Maritime-East-Asia-gihSRWtV8AmPTof2traWnA.

10. Alina Polyakova and Torrey Taussig, "The Autocrat's Achilles' Heel," *Foreign Affairs*, 2 Feb 2018, https://www.foreignaffairs.com/articles/china/2018-02-02/autocrats-achilles-heel.

11. Allison, Destined for War, 176-178.

12. "Office of Trade and Manufacturing Policy Report: 'How China's Economic Aggression Threatens the Technologies and Intellectual Property of the United States and the World," White House, 19 June 2018, https://www.white-house.gov/wp-content/uploads/2018/06/FINAL-China-Technology-Report-6.18.18-PDF.pdf.

13. Global implications led the United States to decide not to sanction China at this time. *See* Christian Berthelsen, "U.S. Considered Blacklisting Two Chinese Banks Over North Korea Ties," *Bloomberg*, 12 April[2018], https://www. bloomberg.com/news/articles/2018-04-13/china-banks-aiding-north-korea-are-said-too-big-to-punish?utm_ source=newsletter&utm_medium=email&utm_campaign=newsletter_axioschina&stream=top-stories. Also see Allison, *Destined for War*, 181–84. Berthelsen has a much less plausible scenario: the United States starts out by adopting a hardline economic policy against China, and the situation escalates until the United States attempts a clandestine kinetic attack on Chinese hackers, resulting in a Chinese missile attack on Okinawa.

14. Long Guoqiang, "The People of the People's Daily Want to Talk About: Rationally Understand the Current Sino-US Trade Friction," *People's Daily Online*, 29 Aug 2018, https://translate.google.com/translate?sl=zh-CN&tl=en&j s=y&prev=_t&hl=en&ie=UTF-8&u=http://opinion.people.com.cn/n1/2018/0829/c1003-30257035.html&edit-text=&utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axioschina&stream=top-stories.

15. James Palmer, "China's Stability Myth Is Dead; With Xi Jinping's Great Power Comes Great Irresponsibility," *Foreign Policy*, 26 Feb 2018, https://foreignpolicy.com/2018/02/26/chinas-stability-myth-is-dead/.

16. Loyalty to the Party will undoubtedly be interpreted to mean loyalty to Xi. *See* Phila Siu and Jun Mai, "President Xi Jinping Appraises China's Top Leaders in Another First for All-powerful Party Chief," *South China Morning Post*, 22 Mar 2018, https://www.scmp.com/news/china/policies-politics/article/2138282/president-xi-jinping-appraises-chinas-top-leaders.

17. See Edward Luttwak, The Rise of China and the Logic of Strategy (Cambridge, MA: Belknap/Harvard University Press, 2012), especially chapter nine.

18. Allison, Destined for War, xiv-xvi.

19. See the theme of the book by Michael Pillsbury, *The Hundred-year Marathon: China's Secret Strategy* (New York: St. Martin's Griffin, 2015).

20. China currently has a very limited amphibious capability, which would be necessary to seize and occupy major overseas territories. Presumably they want to inherit Taiwan reasonably intact—an invasion would wreck the place. See Department of Defense, Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2018 (Washington, DC: Office of the Secretary of Defense, 16 Aug 2018), https://media.defense.gov/2018/Aug/16/2001955282/-1/-1/1/2018-CHINA-MILITARY-POWER-REPORT.PDF, 100–01.

21. Andrew F. Krepinevich, "Maritime Competition in a Mature Precision-Strike Regime" (Center for Strategic and Budgetary Analysis, 13 Apr 2015), https://csbaonline.org/research/publications/maritime-competition-in-a-mature-precision-strike-regime.

22. See Lt Col Thomas R. McCabe, "Keeping A2/AD at Bay: The Imperative for Base Defense in the Western Pacific" (Mitchell Institute for Aerospace Studies, Jan 2018), http://www.mitchellaerospacepower.org/a2ad-release.

23. Joseph Trevithick, "China Is Hard At Work Developing Swarms Of Small Drones With Big Military Applications," *The Drive*, 16 Jan 2018, http://www.thedrive.com/the-war-zone/17698/chinas-is-hard-at-work-developingswarms-of-small-drones-on-multiple-levels.

24. The assumed intent here will be for China to try to scatter junk, crash the UASs into aircraft or onto the runways, or both. Junk on the runways will close the runways until the junk is removed. A small piece of junk can ruin a very expensive engine.

25. It became the PLA Rocket Force on 1 Jan 2016, see "China Inaugurates PLA Rocket Force as Military Reform Deepens," *Xinhuanet*, 1 Jan 2016, http://news.xinhuanet.com/english/2016-01/01/c_134970564.htm.

26. The Chinese Navy has a large and growing mine-laying capability and may use Chinese civilian ships as covert mine layers, see Scott C. Truver, "Taking Mines Seriously: Mine Warfare in China's Near Seas," *Naval War College Review* 65, no. 2 (Spring 2012), http://digital-commons.usnwc.edu/cgi/viewcontent.cgi?article=1429&context=nwc-review.

27. See Daniel J. Kostecka, "Aerospace Power and China's Counterstrike Doctrine in the Near Seas," in *China's Near Seas Combat Capabilities*, US Naval War College China Maritime Studies #11, ed. Peter Dutton, Andrew Erickson, and Ryan Martinson (Newport, RI: China Maritime Studies Institute, Naval War College, 2014), 53, http://www.andrew-erickson.com/wp-content/uploads/2014/02/Chinas-Near-Seas-Combat-Capabilities_CMS11_201402.pdf.

28. Zi Yang, "Blinding the Enemy: How the PRC Prepares for Radar Countermeasures," *Jamestown China Brief*, 9 Apr 2018, https://jamestown.org/program/blinding-the-enemy-how-the-prc-prepares-for-radar-countermeasures/.

29. Patrick Tucker, "Spies Are Going after US Supply Chains, Intel Agencies Say," *Defense One*, 16 May 2018, https://www.defenseone.com/technology/2018/05/spies-are-going-after-us-supply-chains-intel-agencies-say/148264/.

30. Sydney Freedberg, "US Must Hustle on Hypersonics, EW, AI: VCJCS Selva & Work," *Breaking Defense*, 21 June 2018, https://breakingdefense.com/2018/06/us-must-hustle-on-hypersonics-ew-ai-vcjcs-selva-work.

31. See Li Yuxiao and Xu Lu, "China's Cybersecurity Situation and the Potential for International Cooperation," in *China and Cybersecurity: Espionage, Strategy, and Politics in the Digital Domain*, ed. John R. Lindsay, Tai Ming Cheung, and Derek S. Reveron (New York: Oxford University Press, 2015), 223–41.

32. David E. Sanger and William J. Broad, "Pentagon Suggests Countering Devastating Cyberattacks with Nuclear Arms," *New York Times*, 16 Jan 2018, https://www.nytimes.com/2018/01/16/us/politics/pentagon-nuclear-review-cyberattack-trump.html.

33. Aaron Mehta, "The US is Running Out of Bombs—and It May Soon Struggle to Make More," *Defense News*, 22 May 2018, https://www.defensenews.com/pentagon/2018/05/22/the-us-is-running-out-of-bombs-and-it-may-soon-strug-gle-to-make-more.

34. "Yaogan Programme," *SinoDefense.com*, 11 August 2011, https://web.archive.org/web/20110910013929/http:// sinodefence.com/space/military/yaogan.asp; and Eric Hagt and Mathew Durnin, "Space, China's Tactical Frontier," *Journal of Strategic Studies* 34, no. 5 (2011): 731–61, https://doi.org/10.1080/01402390.2011.610660; and Dwayne Day, "Staring Into the Eyes of the Dragon," 14 Nov 2011, http://thespacereview.com/article/1970/1.

35. Ian Easton and Mark Stokes, "China's Electronic Intelligence (ELINT) Satellite Developments: Implications for U.S. Air and Naval Operations," Project 2049 Institute, 23 Feb 2011, https://project2049.net/2011/02/23/chinas-electronic-intelligence-elint-satellite-developments-implications-for-u-s-air-and-naval-operations/.

36. Easton and Stokes, "China's Electronic Intelligence (ELINT) Satellite Developments;" and Rui C. Barbosa, "Surprise Chinese Launch of the Yaogan Weixing-31-01 Mission," *NASA Spaceflight.com*, 10 April 2018, https://www. nasaspaceflight.com/2018/04/surprise-chinese-launch-yaogan-weixing-31-01/.

37. Richard D. Fisher, "China Plans Giant Constellations of Tiny Satellites," *Aviation Week*, 2 Jan 2018, http://avia-tionweek.com/space/china-plans-giant-constellations-tiny-satellites.

38. For the Divine Eagle in production, see "Huge Unmanned Aerial Vehicle Spotted at Chinese Production Facility," *Defence Blog*, 5 Jan 2018, https://defence-blog.com/news/huge-unmanned-aerial-vehicle-spotted-at-chinese-production-facility.html; and for the Xianglong having been deployed, see Kristin Huang, "The Drones that have Become Part of China's Military Strategy," *South China Morning Post*, 26 Aug 2018, https://www.scmp.com/news/china/diplomacy-defence/article/2161354/drones-have-become-part-chinas-military-strategy.

39. Jeffrey Lin and PW Singer, "China Tests Its Largest Airship," *Popular Science*, 26 Oct 2015, http://www.popsci. com/china-tests-its-largest-airship.

40. For the Wing Loong, see "Wing Loong Unmanned Aerial Vehicle (UAV)," *Air Force Technology*, accessed 7 November 2018, https://www.airforce-technology.com/projects/wing-loong-unmanned-aerial-vehicle-uav/; and for the BZK-005, see "The Drone Index: Harbin BZK-005," *21st Century Asian Arms Race*, 16 May 2017, https://21stcentury asianarmsrace.com/2017/05/16/the-drone-index-harbin-bzk-005/.

41. Center for Strategic and International Studies, "Is China at the Forefront of Drone Technology?", *ChinaPower*, June 2018, https://chinapower.csis.org/china-drones-unmanned-technology.

42. For armament on the Yilong/Wing Loong, see "Wing Loong Unmanned Aerial Vehicle (UAV)"; and for armament on the CH-5, see Adam Rawnsley, "Meet China's Killer Drones," *Foreign Policy*, 14 Jan 2016, http://foreignpol-icy.com/2016/01/14/meet-chinas-killer-drones/.

43. Andrew Erickson, "Chinese Air-and Space-Based ISR," in *China's Near Seas Combat Capabilities*, US Naval War College China Maritime Studies #11, ed. Dutton, Erickson, and Martinson, 90–94, http://www.andrewerickson.com/wp-content/uploads/2014/02/China-Air-Space-Based-ISR_Chinas-Near-Seas-Combat-Capabilities_CMS11_201402.pdf.

44. Mike Yeo, "China Ramps up Production of New Airborne Early Warning Aircraft," *Defense News*, 5 Feb 2018, https:// www.defensenews.com/digital-show-dailies/singapore-airshow/2018/02/05/china-ramps-up-production-of-new-airborne-earlywarning-aircraft.

45. Nicknamed the "Corsair Fleet" by the Coast Guard and the "Hooligan Fleet" by participants. See Ladislas Farago, The Tenth Fleet: The True Story of the U.S. Navy's Phantom Fleet Battling U-Boats during World War II (New York: Paperback Library, 1962), 116.

Douglas Barrie, "It's Not Your Father's PLAAF: China's Push to Develop Domestic Air-to-Air Missiles," *War on the Rocks*, 21 Feb 2018, https://warontherocks.com/2018/02/not-fathers-plaaf-chinas-push-develop-domestic-air-air-missiles/.
47. Ibid.

 Ben Blanchard, "China May Be Developing New Long-Range Air-To-Air Missile," *Reuters*, 26 Jan 2017, https:// www.reuters.com/article/us-china-defence/china-may-be-developing-new-long-range-air-to-air-missile-idUSKBN15A0HI.

49. Dmitry Solovyov, "China Buys Air Defense Systems from Russia," *Reuters*, 2 April 2010, https://www.reuters. com/article/us-russia-china-arms/china-buys-air-defense-systems-from-russia-idUSTRE6310WG20100402.

50. Ibid.; and Dave Majumdar, "Russia's Dangerous S-400 Air Defense System Is Headed to China (and Maybe Turkey)," *National Interest*, 3 April 2018, http://nationalinterest.org/blog/the-buzz/russias-dangerous-s-400-air-defense-system-headed-china-25205.

51. Carlo Kopp, "CPMIEC HQ-9 / HHQ-9 / FD-2000 /FT-2000 Self Propelled Air Defence System," *Air Power Australia*, November 2009, http://www.ausairpower.net/APA-HQ-9-FD-FT-2000.html.

52. Ibid.

53. "HQ-15," *Missile Defense Advocacy Alliance*, 20 June 2018, http://missiledefenseadvocacy.org/missile-threat-and-proliferation/todays-missile-threat/china-anti-access-area-denial-coming-soon/hq-15/.

54. "HQ-18,", *Missile Defense Advocacy Alliance*, 20 June 2018. http://missiledefenseadvocacy.org/missile-threatand-proliferation/todays-missile-threat/china-anti-access-area-denial-coming-soon/hq-18/.

55. Richard Fisher and Carlo Kopp, "Game Changers; Chinese SAMs and Russian VHF Radar May Alter Air Tactics," *Defense Technology International*, December 2009, 32.

56. John Pike, "FT-2000," Global Security.Org, accessed 7 November 2018, https://www.globalsecurity.org/military/world/china/ft-2000.htm.

57. Rick Joe, "All You Need to Know About China's New Stealth Destroyer," *The Diplomat*, 8 June 2018, https://thediplomat.com/2018/06/all-you-need-to-know-about-chinas-new-stealth-destroyer/.

58. "Luyang II Class / Type 052C Destroyer, China," *Naval Technology*, accessed 7 November 2018, http://www. naval-technology.com/projects/luyangclassmissilede/.

59. Lyle J. Morris and Eric Heginbotham, *From Theory to Practice; People's Liberation Army Air Force Aviation Training at the Operational Unit,* (Santa Monica, CA: RAND, 2016), https://www.rand.org/content/dam/rand/pubs/research_reports/RR1400/RR1415/RAND_RR1415.pdf.

60. Freedberg, "US Must Hustle On Hypersonics, EW, AI: VCJCS Selva & Work."

61. Christopher J. Bowie, "The Lessons of Salty Demo," *Air Force Magazine* 92, no.3 (March 2009), http://www.airforcemag.com/MagazineArchive/Pages/2009/March%202009/0309salty.aspx.

62. 51st Tactical Fighter Wing, "Osan Air Base Is Less Than 10 Flying Minutes from the Demilitarized Zone" (brieing, Osan AB, Republic of Korea, November 1981).



Lt Col Thomas R. McCabe, USAFR, retired (BA, West Chester State College; MA, Georgetown University; MS, Defense Intelligence College) is a retired career analyst for the US Department of Defense. His active duty assignments included three years with tactical air forces, including a year with a fighter squadron in the Republic of Korea. His writings have appeared in *Air & Space Power Journal, Orbis, Strategic Review, Parameters, Air Chronicles,* and the RAF *Air Power Review* and his monograph, "The Imperative for Base Defense in the Western Pacific," was published by the Air Force Association's Mitchell Institute Forum in January 2018. Lt Col McCabe is a graduate of Squadron Officer School and Air Command and Staff College.