



Not in Our Backyard: China's Emerging Anti-Access Strategy

BY MICHAEL S. CHASE

OCTOBER 2010

This is the second installment in a three-part series investigating the state of China's military.

Since the end of the Cold War, the United States has enjoyed an unparalleled ability to project military power around the globe, as the world's leading superpower.¹

But in recent years, potential U.S. rivals have invested in weapons systems and strategies that challenge America's ability to project such global power. It is part of an "anti-access and area denial" (AA/AD) approach based on operational concepts and military capabilities that deter, delay, or disrupt U.S. military power projection. An AA/AD strategy works not by threatening to best America in a direct contest, but by preventing U.S. military engagement in the first place.

China's strategists may not use the same terminology as their American counterparts, but there is ample evidence to suggest that Beijing is becoming AA/AD's leading proponent. Beijing

now has capabilities that could dramatically raise the costs of U.S. military intervention in areas vital to national interests, especially Taiwan and the South China Sea. As strategic analyst Andrew Krepinevich observes, "Since the Taiwan Strait crisis of 1996...China has moved to shift the military balance in the Western Pacific in its favor by fielding systems capable of driving up the cost of U.S. military access to the region to prohibitive levels."

While China might not have the capability to sink an American aircraft carrier (or want to because of the risk of escalation), it might cause enough damage to achieve a "mission kill," preventing air sorties from the ship and forcing it out of the conflict zone. In theory, the threat of this kind of attack would cordon U.S. aircraft carriers so far away from a Chinese theater that their operational and strategic effectiveness would be greatly diminished.

About the author

Michael S. Chase is an associate professor in the Warfare Analysis and Research Department at the U.S. Naval War College and a fellow with the Truman National Security Project. The opinions expressed in this article are the author's alone and they do not necessarily reflect the views of the Naval War College, Department of the Navy, or Department of Defense.



Lee Teng-hui a visa to speak at Cornell University, his alma mater. The move outraged Beijing, which claimed the visa was a reversal of longstanding U.S. policy and feared that Lee would use the visit as a platform to promote his pro-independence views. In protest, China conducted two missile tests in the Taiwan Strait to deter its neighbor from pro-independence tendencies.²

In response, the U.S. came to Taiwan's aid and deployed two aircraft carrier battle groups around the island. This action lit a fire under the Chinese military and civilian leadership. The PLA and the Communist Party realized China would likely have to deal with U.S. intervention in a cross-strait conflict, and sought urgently to counter America's global reach. As China scholar David M. Lampton observes:

The face-off between Washington and Beijing that resulted from Chinese missile 'tests' near Taiwan in 1995 and 1996 conclusively demonstrated to PRC President Jiang Zemin that two things were needed: 'deterrence' of Taiwan declaring independence and a stronger military force (in the air, naval, and missile arenas) to raise the risks and costs of intervention for the United States in the future.³

Beijing responded by increasing its defense budget, deploying conventional ballistic missiles across from Taiwan and working on a variety of capabilities intended to target American aircraft carriers. In short, Beijing embraced technologies designed to limit America's access to critical battlefield areas.⁴

China's Anti-Access Arsenal

China has bolstered its power with improved missile technology, a modernized navy, and enhanced cyber and space capabilities. We will now assess each of those developments in turn.

Missiles: China's rapid development of conventional missile power has contributed most to bolstering its anti-access and area denial capabilities. The transformation of the PLA's Second Artillery Corps—responsible for most

The growing threat to U.S. aircraft carriers—perhaps the greatest symbol of America's power projection capability—is but one example of China's military modernization and strategic pivot since the mid-1990s. The People's Liberation Army (PLA) is increasingly capable of posing a credible threat to Taiwan and raising the potential costs of U.S. military intervention in a regional conflict.

How and why did China's approach shift in this new direction? What are the most potent anti-access and area denial capabilities in Beijing's arsenal? And what are the implications for U.S. interests in the Asia-Pacific region?

The Evolution of Chinese Strategy

Two pivotal moments drove China's strategic turn to AA/AD.

First, the U.S. military's impressive performance in the first Gulf War underscored the importance of accelerating the PLA's modernization plan. If China were to close the wide military gap between it and the world's lone superpower, Beijing would have to adapt and innovate.

The second significant moment came in 1995. That year, the U.S. granted Taiwanese President

of China's conventional and nuclear ballistic and land-attack cruise missiles—is one of the centerpieces of the PRC's military modernization program. In a relatively short period of time, China has progressed from a limited and vulnerable capability consisting solely of nuclear ballistic missiles to a world-class program with an impressive array of nuclear and conventional ballistic missiles.

As a result, Chinese and American military publications concur that China's conventional missile force has a powerful ability to deter potential adversaries and to achieve China's military objectives in a regional conflict should deterrence fail.⁵

China's conventional ballistic missile force is one of the most impressive areas of development. These missiles could severely degrade the American military's ability to conduct air operations from bases in Japan and elsewhere in the region. The Department of Defense's annual reports on Chinese military power estimate the number of deployed short-range ballistic missiles has tripled over the past eight years. As of September 2008, China's arsenal consisted of roughly 1,100 missiles, all deployed in areas opposite Taiwan.⁶

Furthermore, the Pentagon believes the quality of China's short range ballistic missiles is improving. While China's first-generation short-range ballistic missiles are not true precision-strike weapons, today's generations feature "greater ranges, improved accuracy, and a wider variety of conventional payloads, including unitary and submunition warheads."⁷

China's longer-range conventional missile capabilities are improving as well. According to the National Air and Space Intelligence Center, Beijing "is also acquiring new conventionally-armed medium-range ballistic missiles to conduct precision strikes at longer ranges. These systems are likely intended to hold at risk, or strike, logistics nodes and regional military bases including airfields and ports."⁸ In addition to missiles designed to strike land targets, China is working on an anti-ship ballistic missile that would employ midcourse and

terminal guidance to target U.S. aircraft carriers.⁹ China's repertoire also includes air- and ground-launched land attack cruise missiles capable of striking regional bases. Military bombers carrying air-launched versions further extend the PLA's conventional reach.¹⁰ China is currently enhancing this capability with an upgraded bomber and new long-range air-launched cruise missile.¹¹

Navy: China has modernized its naval capabilities, with a special focus on a potential Taiwan conflict.¹² A 2009 Department of Defense report indicates that China's emerging sea-denial capabilities—mines, submarines, maritime strike aircraft, and modern surface combatants—provide a supporting layer of defense for its long-range anti-access systems.

China has bolstered its power with improved missile technology, a modernized navy, and enhanced cyber and space capabilities.

Beijing is emphasizing quality over quantity by moving from a large fleet of single-mission ships to a smaller fleet of more advanced multi-dimensional maritime platforms. Two of the most notable areas of improvement are the Chinese navy's ability to strike enemy surface ships and to execute naval air defense operations. Anti-ship cruise missiles launched from surface combatants, submarines, aircraft, and coastal defense sites vastly improve China's ability to attack surface vessels, while modern surface-to-air missiles deployed on ships enhance the PLA Navy's ability to protect itself from air attack. The PLA Navy also deploys several types of imported and domestically produced modern submarines capable of posing a serious threat to foreign surface ships.¹³

Cyber: Chinese analysts also view the struggle for information dominance as critical to the outcome of future wars. Indeed, Chinese texts on information warfare see computer network

operations as essential in gaining the initiative early in a conflict with a technologically superior adversary. Cyber attacks would be a part of an integrated approach that includes air, missile, or special operations attacks against key enemy C4ISR (command, control, communications, computers, intelligence, surveillance, and reconnaissance) nodes.

Space: Chinese military writers also argue that space operations are a critical aspect of the struggle for information dominance. They view the U.S.'s dependence on space for military communications, navigation, precision targeting, intelligence, surveillance, and reconnaissance as a critical vulnerability that China can exploit in the event of a conflict.

An AA/AD strategy has limits. Though AA/AD raises the barrier on a decision to use force, once a decision to use force is made, China could not count on prevailing quickly or at low cost.

It should come as little surprise that China is developing a variety of counter-space capabilities that could threaten U.S. satellites. China's growing anti-satellite warfare capabilities were most dramatically demonstrated in January 2007, when it successfully tested a kinetic-kill-vehicle anti-satellite weapon by destroying an aging Chinese meteorological satellite. (The test raised considerable international concerns about the potential damage to other satellites from debris created by the destruction of the target satellite.)

Beijing is developing other types of anti-satellite weapons, including lasers intended to blind or damage enemy satellites and satellite communications jammers. In addition, China is

enhancing its space situational awareness, which will improve its ability to track and identify enemy spacecraft.¹⁴ All of these capabilities demonstrate the importance China attaches to gaining and maintaining information superiority, which it views as a potentially decisive factor in future wars.

What It Means for the U.S.

China's embrace of AA/AD could have major consequences for the U.S.'s strategic position in the Asia-Pacific region. As Secretary of Defense Robert M. Gates recently observed:

Beijing's investments in cyber-warfare, anti-satellite warfare, anti-aircraft and anti-ship weaponry, submarines, and ballistic missiles could threaten the United States' primary means to project its power and help its allies in the Pacific: bases, air and sea assets, and the networks that support them.¹⁵

China has largely achieved its strategic aims with a doctrinal shift to AA/AD: it has complicated America's ability to project power in the Asia-Pacific region.

However, an AA/AD strategy has limits. Though AA/AD raises the barrier on a decision to use force, once a decision to use force is made, China could not count on prevailing quickly or at low cost. Without question, America will remain a vastly superior military power for the foreseeable future.

Moreover, employing some of its anti-access and area denial capabilities could be very risky for China. In many potential scenarios, Beijing would have to deal with the tension between the perceived advantages of striking early in a conflict with the U.S. and the desire to control escalation by limiting its geographic scope and intensity. Finally, and perhaps most importantly, the improvements in cross-strait relations over the past two years reduce the likelihood of confrontation over what has long been the most likely flashpoint in U.S.-China relations.

While the PLA is much more capable than it was a decade or two ago, it continues to face a variety of shortcomings:

- *Coordination.* China faces difficulties conducting joint operations with its different military branches;
- *Limitations in air and amphibious lift capacities.* China still has a long way to go in developing these key power projection capabilities that allow a military to move its troops and equipment by air and sea;
- *Constraints on critical at-sea replenishment and aerial refueling operations.* China still faces shortcomings in terms of sustaining its naval forces and conducting refueling to extend the reach of its military aircraft;
- *Lack of recent combat experience.* China's military was last involved in major combat operations during a border war with Vietnam in 1979.

The American response will play an important role in shaping relations with an increasingly powerful China and will have important implications for

alliances and the future security environment in the Asia-Pacific region.

Countering the AA/AD challenge requires four basic pillars:

1. *Developing new military capabilities* like long-range carrier-based unmanned aerial vehicles and new operational concepts like “Air Sea Battle”—an emerging concept that the military is studying to sustain power-projection in AA/AD environments.¹⁶
2. *Ongoing diplomatic attention* to decreasing tensions within the U.S.-Sino relationship over the Taiwan and South China Sea issues.
3. *Increased attention to the global commons of cyber and space.* America must continue to develop defensive and offensive capabilities to ensure network continuity in case of an information offensive, and practice operating without the full range of cyber and space assets.
4. *Sensitivity to China's sensitivities.* Perhaps most important, attempts to strengthen deterrence must be carefully calibrated so that they will not inadvertently fuel China's worst fears about U.S. intentions, which would only risk further exacerbating the mutual strategic suspicion that is already threatening to make one of the most important bilateral relationships in the world a rocky one.

While the U.S. and China surely prefer to avoid what would be a very damaging conflict, these steps are necessary to blunt the advantage that AA/AD allows Beijing. Furthermore, appropriate American deterrents hedge against the possibility that China could miscalculate when, where, and how to use its military. Any future war with China will be much more costly than it would have been during the Taiwan Strait Crisis in the mid-1990s—and the military, diplomatic, and economic ripple effects will be less certain as well.¹⁷



Endnotes

1. Barry R. Posen, "Command of the Commons: The Military Foundation of U.S. Hegemony," *International Security* 28:1 (Summer 2003), pp. 5-46.
2. See, for example, Zhao Zekuan, "New Development of Nuclear Deterrence Theory and Practice in the New Period," *China Military Science*, 1-2009, pp. 16-20. Zhao writes: "To knock down the arrogance of the Taiwan independence separatist forces, in the summer and autumn of 1995 and in the spring of 1996, the Second Artillery Force was twice assigned the exercise task of launching missiles to the East China Sea and the South China Sea. The exercises demonstrated the might of our nation and our armed forces, and also demonstrated the power of the Second Artillery Force, thus strongly deterring the Taiwan independence separatist forces and also making a far-reaching impact on the whole world."
3. David M. Lampton, "Power Constrained: Sources of Mutual Strategic Suspicion in U.S.-China Relations," NBR Analysis, The National Bureau of Asian Research, June 2010,[4] Roger Cliff, Mark Burles, Michael S. Chase, Derek Eaton, and Kevin L. Pollpeter, *Entering the Dragon's Lair: Chinese Antiaccess Strategies and Their Implications for the United States*, Santa Monica, CA: RAND Corporation, 2007, p. 18.
4. Second Artillery Corps of the People's Liberation Army (PLA), *The Science of Second Artillery Campaigns* (Beijing: PLA Press, 2004), p. 318.
5. Department of Defense, *Military Power of the People's Republic of China 2009*, Washington, DC, 2009, p. 66, http://www.defense.gov/pubs/pdfs/China_Military_Power_Report_2009.pdf.
6. *Military Power of the People's Republic of China 2009*, p. 34.
7. Ibid.
8. National Air and Space Intelligence Center, *Ballistic and Cruise Missile Threat*, NASIC-1031-0985-09, April 2009, p. 14, <http://www.fas.org/irp/threat/missile/naic/NASIC2009.pdf>.
9. On the development of the ASBM and its potential implications for the United States, see Andrew Erickson and David Yang, "On the Verge of a Game Changer?" *Proceedings*, May 2009, http://www.usni.org/magazines/proceedings/story.asp?STORY_ID=1856.
10. Office of Naval Intelligence, *The People's Liberation Army Navy: A Modern Navy with Chinese Characteristics*, August 2009, p. 26, <http://www.fas.org/irp/agency/oni/pla-navy.pdf>.
11. *Military Power of the People's Republic of China 2009*, p. 66.
12. *The People's Liberation Army Navy*, p. 8.
13. Ibid., pp. 16-18. Submarine developments are very impressive between the acquisition of the Kilos from Russia and domestic production of new classes like the Song, Yuan, and Shang.
14. *Military Power of the People's Republic of China 2009*, p. 27.
15. Robert M. Gates, "A Balanced Strategy: Reprogramming the Pentagon for a New Age," *Foreign Affairs*, Volume 88, Number 1, January/February 2009.
16. Andrew Krepinevich, *Why AirSea Battle?*, Center for Strategic and Budgetary Assessments, February 2010, p. 13. & Jan Van Tol, with Mark Gunzinger, Andrew Krepinevich, and Jim Thomas, "Air Sea Battle: A Point of Departure Operational Concept," Center for Strategic and Budgetary Assessments, May 2010. Submarine developments are very impressive between the acquisition of the Kilos from Russia and domestic production of new classes like the Song, Yuan, and Shang.
17. David A. Shlapak, David T. Orletsky, Toy I. Reid, Murray Scot Tanner, Barry Wilson, *A Question of Balance: Political Context and Military Aspects of the China-Taiwan Dispute*, Santa Monica, CA: RAND, 2009.

About the Progressive Policy Institute



The Progressive Policy Institute (PPI) is an independent research institution that seeks to define and promote a new progressive politics in the 21st century. Through research, policy analysis and dialogue, PPI challenges the status quo and advocates for radical policy solutions.

© 2010 Progressive Policy Institute
All rights reserved.

Progressive Policy Institute
1730 Rhode Island Ave. NW
Suite 308
Washington, DC 20036

Tel 202.525.3926
Fax 202.525.3941
Email info@ppionline.org
www.progressivefix.com