

China's Military Modernization on Land and Sea and in the Air and Space: Relevance to U.S. Policy

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Historical Context

China's military modernization is recent, dating from the middle of the 1990s. The People's Liberation Army (PLA) had been a large infantry force, supported by a small navy and obsolete air force, with a small arsenal of nuclear weapons. The Deng Xiaoping reforms of 1978 relegated military modernization to fourth place, behind agriculture, industry and science and technology. As late as 1999, when I met with Chi Haotian, the long-serving Minister of Defense, he bemoaned the lack of priority and resources for the PLA.

Initial PLA Modernization Program

However General Chi was being somewhat disingenuous. Even without funding increases, the PLA had begun fundamental structural changes in the mid-1990s. While defense was the fourth of four modernizations, at least it was on the list, so PLA leadership was obligated to do what they could with their own resources. The results of the First Gulf War in 1991 had been an unpleasant jolt. Chinese military experts had confidently predicted heavy going for the American-led coalition against the battle-tested, Soviet equipped Iraqi armed forces. It was clear that the People's Liberation Army was falling behind world military standards.

The PLA started with the actions it could undertake on its own, without additional funding, or modernization of its "software:" force

structure, doctrine, funding, logistics, education and training. Its new vision became "local wars under modern high technology conditions." This awkward phrase means the PLA would be smaller in numbers, but better trained, more mobile and balanced, equipped with precision weapons, space surveillance and communications, information networks, and other high technology military systems. The Chinese defense strategy would shift from defeating invaders through sheer numbers and China's strategic depth to winning confrontations or conflicts quickly on its periphery—its land borders with India, Russia and Vietnam, and its maritime borders with Taiwan and Japan. As it was described several years later in the first Chinese military white paper, published in 2002: "...the Chinese military persists in taking the road of fewer but better troops with Chinese characteristics, pushes forward the various reforms in response to the trend in military changes in the world, and strives to accomplish the historical tasks of mechanization and IT application, thereby bringing about leapfrog development in the modernization of the military."

One of the early programs was the elimination of PLA businesses. Serving officers had run farms, factories, concessions, hospitals and even night clubs. The products and profits went to pay military expenses, with a portion lining the pockets of many officers. As the PLA relinquished control of businesses, the Chinese

government increased its central budget to offset the lost revenue.

Another generally successful program has been the reduction of PLA end strength. In the last decade, manpower has been reduced by almost half. The paid off soldiers are treated somewhat better than are the millions of employees of state-owned industries (SOEs) with pink slips. The PLA is responsible for providing these officers housing and jobs, and the soldiers jobs. Often the PLA has discharged this responsibility simply by shifting it to local governments. Nonetheless it has been a large and continuing administrative and financial burden. Although the military finance mechanisms are complex, the result of its personnel reductions has been to free up resources for the PLA to spend on the training and equipping the smaller remaining force.

Another key initial focus area has been training. In the past the PLA training program, like that in most authoritarian countries, featured set-piece exercises with simple objectives, heavily rehearsed, with predictable and well rewarded high scores. This type of training was also useful to show high-level visitors. In 2000 I was treated to the largest combat demonstration shown to an American military visitor to that point. It was a performance, not a training exercise, obviously following a practiced time-based script. PLA training is heavily reported in the military press, and now includes sophisticated critiques of tactical training that point to shortcomings, emphasize the importance of realism, of free-play, of honest evaluation by observers, and continual improvement.

However, other aspects of these “software” modernization programs undertaken by the PLA have had more mixed success. While realistic training has increased at the unit level, it is less clear if these principals of realistic training have been applied to the training of higher-level staffs, and have been paired with models and simulations to drive realistic staff exercises and a system for capturing the lessons learned, and applying them widely throughout the forces.

This is an important shortcoming, as the PLA has had no combat experience since 1979, and its senior leadership has never commanded under the stress of actual conflict.

Another clear deficiency in PLA modernization is in the area of joint operations. My discussions with Chinese military leaders in 2001 made it clear to me that PLA units from different services are given their own areas of the battlefield, and do not operate together at the same time in the same space. This is a severe limitation on the effectiveness of modern military forces, especially in air and maritime operations.

Funded Modernization Program

Around 2000 the PLA began to receive budget increases. The size of the increases, how they have been spent, and their purchasing power are all matters of debate and uncertainty. It is clear from the results that there is more spending on equipment, including a complete replacement of nuclear forces, an expansion of most missile systems, and many increased navy and air force programs. There has been a roughly 50% increase in pay for PLA officers, to attempt to keep them from leaving the service for better paying civilian jobs. Training budgets have also increased. The result has been a better-equipped, higher quality and better-trained PLA.

What is uncertain, and of most concern, both to the United States and to China’s neighbors, are China’s motivation, purpose and final objective. Are these military budget increases the initial down payments on a secret Chinese plan to develop the military force to challenge the United States, first in Asia, and eventually worldwide? Alternatively, are they, as the Chinese claim, the long overdue payments for an appropriate defense capability of a country that will soon have the second largest economy in the world, a country that has been invaded and administered by outside powers within the past century?

My own judgment is that the Chinese military budget increases are primarily driven by short-

term considerations, by a collective government decision to allow military modernization to keep pace with the overall economic development of the country. Whether they continue to develop at the current rate for a prolonged period, making the resources available to the PLA to build and maintain a modern expensive force structure that can challenge the United States, is unknowable. It will depend both on developments within China, and on developments in the international political scene.

There is no doubt that the PLA leadership itself is continually pushing for more resources, both for the missions it has been currently assigned, and for the more expansive missions it would like to have.

Missions of the People's Liberation Army

China has published authoritative white papers about its military forces, every two years since 1998. The 2002 White Paper established five "goals and tasks" for the PLA:

- To consolidate national defense, prevent and resist aggression.
- To stop separation and realize complete reunification of the motherland.
- To stop armed subversion and safeguard social stability.
- To accelerate national defense development and achieve national defense and military modernization.
- To safeguard world peace and oppose aggression and expansion.

The first and third are of little concern to the United States; it is the second and interpretation of the final two that matter to Americans—do they imply a future modernized PLA that will "safeguard world peace" on Chinese terms?

The 2006 edition of the White Paper assigns the individual PLA services goals that seem more aggressive than the 2002 version: "The Army aims at moving from regional defense

to trans-regional mobility, and improving its capabilities in air-ground integrated operations, *long-distance maneuvers*, *rapid assaults* and special operations. The Navy aims at *gradual extension of the strategic depth for offshore defensive operations* and enhancing its capabilities in integrated maritime operations and nuclear counterattacks. The Air Force aims at speeding up its transition from territorial air defense to both offensive and defensive operations, and *increasing its capabilities in the areas of air strike*, air and missile defense, early warning and reconnaissance, and strategic projection. The Second Artillery Force aims at progressively improving its force structure of having both nuclear and conventional missiles, and raising its capabilities in strategic deterrence and *conventional strike* under conditions of informationization."

These phrases can be interpreted as the logical elements of a robust defensive capability and a joint force that can threaten Taiwan. Alternatively, it is easy to interpret them as elements of long-range projection capability for China in the future to coerce its neighbors, support its positions in regional or more distant crises, and even fight wars well outside its borders. To understand what is real and what is aspirational, it is necessary to look at the actual military capabilities of the PLA, especially for missions that affect American interests.

Nuclear Deterrence

China is modernizing its relatively small and increasingly obsolete strategic nuclear forces. The modernization program overcomes the increasing vulnerability of its fixed, liquid-fuelled arsenal. The two primary development programs are road-mobile solid-state intercontinental missiles and a second-generation submarine-launched missile system. Both missiles will have maneuverability and penetration aids to overcome missile defenses. After an internal debate that occasionally leaked out into public, China has decided to continue its doctrine of "no first use" of nuclear weapons.

Overall, China's nuclear forces in the future will play the same role they have in the past, a limited retaliatory force to deter attacks by other countries.

Homeland Defense

China takes its own defense seriously. Within the memory of its current leaders, it has fought major engagements with the Soviet Union, India and Vietnam. Their immediate predecessors fought full-scale wars with Japan and an American-South Korean army. The PLA has traditionally been a regionally based defensive force, with most of its officers and soldiers serving their entire careers in a single region. The PLA is developing greater mobility for its ground forces, but it retains strong local forces in its border military regions. As it has reduced personnel and modernized its weapons systems, the PLA has spread the modern equipment and best units around the military regions. It appears that China intends to keep modernized forces at home throughout the country for strong border defense.

These developments in its defensive capability are of little concern to the United States.

Coercion and Conquest of Taiwan

China openly threatens Taiwan with attack if it asserts independence. The PLA has been given the missions of punishing Taiwan if it asserts independence and developing the capability to take Taiwan by force, completing the historic mission of unifying all of China. Since the Taiwan crises of 1996, China has become more concerned about Taiwan moving toward independence. PLA leaders have successfully played on this concern to argue for greater funding. A large part of the PLA budget increase has been to increase its capability to subdue Taiwan and to raise the cost of U.S. intervention to support Taiwan.

China has concentrated its Taiwan-focused modernization in three areas: surface-to-surface missiles, submarines and air defenses. These forces increase its ability to punish Taiwan,

and to damage U.S. maritime and air forces supporting Taiwan, but do not constitute a capability to conquer Taiwan. In fact, there are major deficiencies in China's amphibious and air assault capabilities, most notably in amphibious lift. While China could land relative small numbers of forces on Taiwan if it were lucky or achieved surprise, it has not developed the capability to overcome mobilized Taiwanese defenses. It appears that China is pursuing the capability to prevent Taiwan from asserting its independence, and to coerce it into political accommodation by the threat of punishment, but is not developing the capability to reunite Taiwan to China by a forceful invasion.

Taiwan itself has finally begun to increase its defense spending. The United States is focusing its substantial maritime and air capabilities to intervene in a Taiwan contingency, and has the capacity to outpace any Chinese developments.

Long-Range Power Projection

It is this mission area that is of most concern to the United States over the long term. China's army-dominated leadership has a strong tradition and defensive mindset of keeping its forces at home. China's air force, although it is building advanced Russian and indigenous advanced fighters, still concentrates on air defense and support of ground forces. In contrast, like Navy leaders everywhere, China's admirals desire a bluewater, global capability, both to defend their maritime frontiers at greater distances, to show the flag in support of their country's global interests, and to provide a means for fighting distant military actions that support China's interests. They also play to the patriotic desire of Chinese for the prestige value of aircraft carriers, the ultimate symbol of advanced military capability.

The actions of the Chinese government, which has to pay the bills for the PLA, have fallen short of Chinese naval aspirations. The primary overseas deployments of Chinese forces have been in UN peacekeeping forces, which have increased from negligible numbers in 2000

to several thousand now. Chinese naval deployments have been largely symbolic—goodwill voyages of small numbers of surface ships, and probing missions by Chinese submarines in the East China Sea.

China has yet to undertake the programs and actions to project and sustain significant military forces at a distance—naval battlegroups that can defend and sustain themselves away from land support; amphibious shipping; underway replenishment shipping; overseas bases or access rights for logistics resupply; worldwide surveillance and reconnaissance capabilities. While China could cobble together a task force to intervene in, for example, a confrontation in Africa, if there were no opposition, it seems to have no current plans for a serious intervention capability. It takes years to develop a power projection capability, giving the United States and China's neighbors ample warning to react.

Space Operations

China is developing serious space capabilities, both civilian and military. It seems to be following exactly the path blazed by the United States and the Soviet Union half-a-century ago: manned civilian space exploration; manned and unmanned scientific research in space; civilian and military use of space for communications and geolocation, military use of space for intelligence and surveillance, and counter-space research and development to deny potential adversaries the use of space.

The Chinese anti-satellite (ASAT) test in January 2007 raised major questions about China's intentions for space, especially against the backdrop of its long-time and strongly expressed positions in the Geneva talks against extending military operations to space. The technological reality is that interfering with or destroying another country's satellites is easily within the capability of a country that can launch and operate its own satellite constellations, as does China. The real question for China is whether it would benefit in the long-term in a military competition with the United States in

space. Right now, the United States uses satellites far more than China for both commercial and military purposes. In the future, China will become increasingly dependent on satellite systems both for its economic development and military capability, and will have the same vulnerabilities as the United States. Clearly surprised by the international reaction to its ASAT test, China has declared a moratorium on future tests, and is reconsidering its policies and programs. There are strong arguments to be made that it is in China's interests for space to be a region open to use by all countries, rather than an area of military competition, and China may come to that decision. If China takes a different course, then the United States will need to undertake a strong program of its own to harden our satellite systems and put back into service systems to degrade China's.

Summary

The challenge for American leadership in dealing with China is complex and sophisticated. While expecting good relations with China and working with Chinese leaders on areas of mutual interest and advantage, Americans need to call China on its actions that violate international norms and undercut American interests, and periodically evaluate the overall balance in the relationship to ensure it is positive. Finally, the United States needs to maintain and enhance its own national strengths in case antagonistic relations develop with China.

In evaluating China's military actions, it is most important to make judgments based on real military capabilities, not on blue-sky projections of individual Chinese actions. The Chinese listen carefully to what American leaders say and watch what the United States does, and my experience has been that they take seriously actions that are explained in reasoned terms.

China is pursuing a substantial and complex military modernization program. It has already improved its ability to prevail in any disputes with its neighbors; it has substantially raised the costs to Taiwan of pursuing independence,

and the costs to the United States of supporting Taiwan if we were to intervene in any Taiwan crisis. For the foreseeable future the United States would prevail in an intervention; China's ambiguous words, secrecy and some actions have raised suspicions it may be developing military force for use in the East Asia region and further, although the PLA has not developed nor demonstrated even the rudiments of the actual capabilities to do so.

Chinese military developments so far could provide the basis for a cooperative relationship with the United States in the many areas

in which the two country's interests run parallel: the free flow of oil from the Middle East; a peaceful transition in North Korea; the suppression of global terrorism; suppression of nuclear proliferation, drug trafficking and other smuggling activities. On the other hand, these same developments could form the basis for military confrontations in East Asia or elsewhere. It is in the American interest to work with the Chinese on common interests, while maintaining its alliances and partnerships in Asia, and ensuring that its maritime and air forces remain powerful, modernized and forward deployed in the Western Pacific.