
China's Military Modernization

To strengthen national defense and the armed forces occupies an important place in the overall arrangements for the cause of socialism with Chinese characteristics. Bearing in mind the overall strategic interests of national security and development, we must take both economic and national defense development into consideration and make our country prosperous and our armed forces powerful while building a moderately prosperous society in all respects.

—Hu Jintao, October 15, 2007¹

In November 2006 a Chinese submarine breached the surface in the vicinity of a US Navy aircraft carrier battle group steaming in the East China Sea, underscoring that the naval service of the People's Liberation Army (PLA) is operating farther from China's shores than it has at any time in modern history. In January 2007, a Chinese ground-based missile destroyed a Chinese satellite in space, not only creating a major debris field but also dramatically illustrating the potential vulnerabilities of militaries that rely on outer space for operational communications and battle space awareness. In April 2007, the PLA conducted a much publicized combined exercise with the armed forces of Russia, demonstrating a nascent ability to move men and matériel across China's land borders. In December 2007, a front page article in the *Washington Post* described the PLA's efforts to recruit the best and brightest students from China's most prestigious universities to join its ranks.²

These developments indicate that year after year the PLA is making substantial strides in enhancing its operational capabilities and increasing its institutional capacities. These examples are but a few of the fruits of over 15 years of sustained and focused military modernization in China.

The military's budget has continued to increase at double-digit rates every year but one (officially) since 1993 (see box 9.1). At the same time, the need for a more capable military is a recurrent theme in the official rhetoric of China's leaders, as Hu's quote above indicates. Unlike the 1970s and

Box 9.1 China's defense budget

The question of China's defense budget is something of a parlor game among observers of China's military. China's declared 2008 defense budget was \$58.8 billion, an increase of 17.6 percent over 2007. However, China's actual defense-related expenditures are assumed to be much higher than this, with expenses related to research and development, strategic and paramilitary forces, and foreign arms procurement, among other items, all excluded from the formal budget. Organizations such as the Institute for International Strategic Studies (IISS), the RAND Corporation, the Stockholm International Peace Research Institute (SIPRI), and the US Department of Defense (DoD) have each offered estimates of China's actual annual defense expenditures based on various standards and models. DoD estimates are commonly the highest among them, although SIPRI and IISS also provide purchasing power parity (PPP)-based estimates that result in higher figures. Economists use PPP currency conversion rates to account for differences in price levels between countries, resulting in more meaningful international comparisons of consumption.

1980s, when military modernization was relegated to fourth place among Deng Xiaoping's "Four Modernizations," today's Chinese leaders talk of giving equal attention to economics, social issues, and national defense.³

It is not surprising that Beijing has refocused on modernizing its armed forces to keep pace with its overall development in recent years. Nonetheless a Chinese state increasingly capable of conducting military operations beyond its shores or over its land borders in the Asia-Pacific region is an unprecedented development.

Even assuming the most benign intentions on the part of Beijing, a more capable PLA that can sustain force in the Asia-Pacific region, coupled with China's economic traction, has the potential to significantly alter the geostrategic and geopolitical landscape in Asia for the first time since the end of the Second World War. The modernization of the PLA will clearly have as great an impact on other countries in the region as on the United States—India, Japan, South Korea, Southeast Asian nations, Russia (despite the public celebration of their strategic partnership), and, of course, Taiwan. While China so far has depended upon the political-diplomatic and economic elements of national power to pursue its national objectives in the region, Chinese strategists, civilian and military, see an enhanced PLA as an essential component of building its comprehensive national power.

China's Assessment of Its Military Needs

The operational capabilities the PLA is demonstrating today did not come about overnight. As is the case with any nation's armed forces, the weapons systems and technologies today's PLA is fielding, and the doctrines

and training regimens being developed to employ them, are the result of yesterday's decisions, plans, and programs.

The PLA, in fact, is reaping the rewards of fundamental decisions that were made some 15 years ago, with subsequent adjustments as needed. On January 13, 1993, Jiang Zemin, then Chinese Communist Party (CCP) secretary general and chairman of the Central Military Commission (CMC), delivered a speech to an expanded meeting of the CMC in which he promulgated a new national military strategy for the PLA to guide its future modernization efforts.⁴ The "Military Strategic Guidelines for the New Period" issued at that meeting launched the Chinese armed forces into a period of focused and sustained modernization that continues today.

At the time, Chinese leaders and military planners made two fundamental analytical judgments that led to the decision for a new period of military modernization: They (1) revised their assessment of China's security situation and (2) took account of the changing nature of modern warfare.

On the first account, Chinese analysts took stock of the collapse of the Soviet Union and the post-Cold War environment and concluded that, first, there were no prospects for a major war involving China and any other large power, and thus China's overall security situation was positive;⁵ second, there nonetheless existed many uncertainties and pockets of instability in the world and conflicts involving challenges to Chinese interests along its periphery, including Taiwan; and third, instead of the "multipolar world order" that Chinese analysts predicted would unfold in the post-Cold War era, the reality was a "unipolar world order" with the United States remaining the sole superpower for the foreseeable future. For these reasons, the timing for developing a more capable military was deemed positive, and the need for a more capable military to supplement other elements of Chinese national power was deemed essential.

Whereas this first assessment provided a strategic rationale for the need for a more capable military, the second Chinese assessment provided the impetus for the *type* of modern military that would be required. In particular, US capabilities demonstrated during the first Gulf War in 1991 shocked the PLA leadership into confronting the stark reality that the armed forces of China were incapable of late 20th century state-of-the-art warfare, let alone able to cope with the high-tech information-dominated "revolution in military affairs" unfolding in the early 21st century. New developments in military affairs demonstrated by the United States and others since the first Gulf War—Kosovo, Afghanistan, the second Iraq War—have caused the PLA to further adjust its modernization goals. China needed a military that would be able to cope with future conflicts that exhibited the following characteristics:

- fought for limited political objectives and limited in geographic scope;
- short in duration but decisive in strategic outcome—i.e., a single campaign may decide the entire war;

- high-intensity operations, characterized by mobility, speed, and force projection;
- high-technology weapons causing high levels of destruction;
- logistics-intensive with high resource consumption rates, with success dependant as much on combat sustainability as on the ability to inflict damage upon the enemy;
- information-intensive and dependent upon superior C4ISR (command, control, communications, computers, intelligence, surveillance, and reconnaissance) capabilities and near-total battle space awareness;
- simultaneous fighting in all battle space dimensions, to include outer space and the electro-magnetic spectrum; and
- carefully coordinated multiservice (army, navy, and air force), “joint” operations.

The PLA’s Taiwan contingency has served as a catalyst for its modernization program. However, even if there were no Taiwan issue to focus PLA attention, it is likely that the PLA would *still* be on the same reform and modernization path it is on today simply due to the basic requirements that this capabilities-based assessment demands.

Key Elements of China’s Military Modernization

China’s leadership has taken a holistic approach that cuts across every facet of activity within the armed forces.⁶ Beijing correctly understands that military modernization is not just about modern weapons and technologies but also about institutions, people, corporate culture, and a host of other issues that require time and attention. The PLA’s approach to modernization can be divided into three pillars of reform and modernization.

Pillar 1: Development, Procurement, Acquisition, and Fielding of New Weapons Systems, Technologies, and Combat Capabilities

The first pillar normally receives most of the attention in the media and in foreign-government assessments of the PLA. Chinese decisions on development, procurement, acquisition, and deployment of combat and combat-support capabilities provide the best window into the PLA’s assessment of future warfare and the type of conflict it is preparing to face in the future. The capabilities include:

- end-item purchases from Russia such as SU-27 and SU-30 aircraft, Kilo class diesel-electric submarines, Sovremenny class guided missile de-

stroyers with advanced antiship cruise missiles (SS-N-22 Sunburn), air defense systems, air-to-air missiles, and precision guided munitions;

- domestically produced conventional weapons systems, such as Chinese-made submarines and surface vessels, modern J-10 aircraft, armor, and communications equipment;
- production of conventional missiles and upgrading the quality and survivability of China's nuclear arsenal from silo-based to road-mobile and from liquid-fueled to solid-fueled;
- basic research and development to indigenously produce state-of-the-art military technologies, especially in information technology, to enhance operational C4ISR⁷;
- upgrading of its strategic nuclear forces to become more survivable and hence a more credible deterrent. China's December 2006 defense white paper highlighted the role of the PLA Navy—meaning its nuclear capable submarines—in conducting “nuclear counterattacks”;
- advancement of its space capabilities, including communications, navigation, reconnaissance, satellites, and antisatellite (ASAT) weapons.⁸ The 2006 white paper on China's space activities makes clear the strategic importance of space exploration and capabilities to China's national defense⁹; and
- research into cyber and information warfare as technological force multipliers.¹⁰

Pillar 2: Institutional and Systemic Reform

This pillar includes the vast array of organizational changes, procedural adjustments, and other critical changes to the PLA's corporate culture that are focused on raising the levels of professionalism of the officer corps and enlisted force. The objective is to make the force adept at employing and maintaining new battlefield technologies. Under this pillar, one could list:

- improvements to the quality of the PLA's officer professional military education system;
- more stringent requirements for officer commissioning, standardization of criteria for promotion, and stricter adherence to mandatory retirements;
- diversification of the sources of commissioned officers beyond the PLA's rather insular military academies to include some of the most prestigious universities in China such as Tsinghua University and Peking University;

- creation—for the first time—of a corps of professional noncommissioned officers who will serve full 30-year careers and be afforded career-long access to professional development;
- force structure adjustments that include a significant new emphasis on the navy, air force, and strategic missile forces, downsizing of staffs, consolidation of ground force units at the division and brigade levels, and new battlefield logistics paradigms; and
- outsourcing common-use goods to commercial suppliers in order to strip the PLA of unnecessary production units.

At the same time, China has not abandoned its traditional “people’s war” concept that put a premium on mobilizing civilians at home for military purposes. China has reenergized its attention to its 800,000-strong reserve force and militia units and reanimated civilian-military exercises in recent years to coordinate rear area defense functions in case of a crisis. Medical, engineering, and logistical support in particular are starting to be “outsourced” to the civilian sector, enabling the PLA to focus more on its forward activities. The PLA has also established programs to pay for the schooling of the nation’s best and brightest engineering students at prestigious universities such as Qinghua in return for several years of postgraduate service in developing the nation’s weapons and information technology.

Pillar 3: Development of New War-Fighting Doctrines

To be able to fight future “high-technology” conflicts, the PLA is making significant changes to the doctrine used to guide commanders and their staffs in planning and operations.¹¹ China is making the following doctrinal adjustments:

- from wars of attrition to quick decisive campaigns;
- from single-service operations to joint multi-service operations;
- from concentration of units and personnel to concentration of capabilities;
- from emphasis on defense to the primacy of offense;
- from the need to absorb operational blows to the need to be able to execute operational-level preemption;
- from historic focus on land warfare to a holistic view of simultaneous operations in land, maritime, aerospace, electro-magnetic, and cyber battle space dimensions; and
- from focusing on the enemy’s weakest geographic sectors to focusing on the enemy’s most critical capabilities.

Overall, these concepts, among others, engender a major paradigm shift whereby the PLA is now fixed on being able to prosecute short campaigns to paralyze and deny access to opposing forces rather than long wars of attrition, and to level the technological playing field at the inception of hostilities by concentrating its best capabilities against the enemy's most important assets, particularly high-tech communications and information technologies (e.g., computers and satellites).

Remaining Questions about China's Military Modernization

Having been relegated to the lowest rung of Deng Xiaoping's "Four Modernizations" for many years, China's military started from a low base.

China says it has as many uncertainties about the future global security environment as any nation and that its "Taiwan problem" remains an important consideration. China finally has the technological base to improve the PLA's equipment with indigenous production in some key areas such as information technology and aerospace. And of course, the Chinese economy can now afford to underwrite a sustained modernization program that includes buying from Russia and other supplier nations the systems it cannot produce itself, as well as increasing pay and allowances for its personnel.

Beijing claims that suspicions and concerns about its military modernization are without foundation and that it is merely developing a responsible and proportional defensive capability. Nonetheless, China's military modernization is taking place at a time when China is increasingly confident about its growing power and role in the world and inclined to be proactive in shaping the international system, not just react to it as in the past. In addition, many unresolved regional disputes involving China remain, such as in the East China Sea (with Japan), South China Sea (with several Southeast Asian states), India, and, of course, Taiwan. A good deal of wariness abroad about PLA modernization stems from uncertainty about how Beijing intends to use this increasing capability to pursue its larger national interests.

A second source of uncertainty is the transformative nature of what the PLA leaders are trying to accomplish, and in fact they use the term "transformation" (*zhuangbian*) to impart just how ambitious their plans are. Overall, there is simply no roadmap or precedent in the PLA's past for what China's military leaders are seeking to achieve for its future.

The trajectory of the current modernization program seems to be one that will eventually result in a PLA that can project force in the Asia-Pacific region beyond China's borders, has incipient expeditionary capabilities, will get better at sustaining operations along exterior lines of communications, and will develop selective but effective pockets of tech-

Box 9.2 Aircraft carriers

In recent years, rumors have abounded about Chinese interest in developing or acquiring aircraft carriers. China today does not possess any operational carriers. However, there is reason to question how long this will remain the case. Reports have surfaced of “heated debates” on the issue within the Chinese system and there is no question that China is actively studying if not working toward a carrier option in the future.¹

Analysts have surmised that China’s leadership is hesitant to pursue an aircraft capability due to several concerns. Some note that deploying such an inherently offensive, power projection capability would undermine China’s claims to a “purely defensive” military. Others contend that China does not have the “escort fleet” necessary for carrier support and protection and that limited resources may be applied better to other needed capabilities. Others assert that the People’s Liberation Army (PLA) simply does not yet have the know-how to produce them.

Nonetheless, given China’s growing global economic footprint, the increasing numbers of Chinese citizens abroad who may need emergency rescue, and China’s increasing dependence on sea lanes for oil and trade more broadly, the debate continues in China over the necessity of developing and deploying carriers.

China has purchased four decommissioned carriers from Australia, Russia, and Ukraine for study and commercial entertainment (the carriers *Minsk* and the *Kiev* became centerpieces of military-themed amusement parks in Shenzhen and Tianjin, respectively).² Only one, the *Varyag*—originally reported to become a floating casino—seems a candidate for refurbishment to operational status after reports surfaced that it had been docked at the PLA Navy’s Dalian Shipyard. Only time will tell whether, and if so when, aircraft carriers will enter China’s operational future.

1. See Andrew S. Erickson and Andrew R. Wilson, “China’s Aircraft Carrier Dilemma,” *Naval War College Review* 59, no. 4 (Autumn 2006): 12–45.

2. *Ibid.*, 18–19.

nological capacity. Assuming all goes well, this trajectory puts the PLA on a path to becoming for the first time one of the most operationally capable military forces in the Asia-Pacific region, yet one whose ultimate strategic goals remain uncertain or at best a work in progress (see box 9.2 on aircraft carriers).

A third source of concern is that, in their aggregate, the types of new combat capabilities and supporting technologies that the PLA has been fielding over the past few years have the potential to pose direct challenges to the US military’s previously uncontested technological and operational advantages. While the PLA is not likely to become a “peer competitor” or overtake the US armed forces in operational capability—let alone in battle-

tested war-fighting experience—any time soon, the PLA will become a regional force to be taken very seriously. China's military will develop key pockets of capacity that will be potentially problematic for the US armed forces, such as cyber warfare and counterspace operations. The PLA's modernization adds a new and complicating factor in the US strategic calculus, raising the stakes, for instance, in any potential Taiwan Strait crisis as the PLA develops more options for the use of military force.

Beyond Taiwan, the PLA and the US armed forces, whether entirely intended or not, appear to be pursuing competitive military strategies and approaches to force building and force posture in the region. While the United States remains committed to its traditional objective of maintaining access to the region, the PLA is building a force that is apparently geared toward impeding or denying that access.¹² And as the PLA seeks to increase China's strategic depth off its coast, with its aircraft flying further out at sea, and its surface and subsurface vessels operating increasingly in blue waters, the US military and the PLA are going to have more maritime and aerospace encounters in common areas, some planned and some—like the collision between a US EP-3 surveillance aircraft and a PLA fighter in April 2001—unplanned, raising new dangers of tension and potential conflict.

The modernization of the PLA adds a new and uncertain element to the overall strategic dynamic of the Asia-Pacific region as well. To the degree that the PLA is actually able to enhance and sustain its military development as an effective operational force, the geopolitical instincts and defense policies of other nations in the region may also shift as they detect and accommodate perceived new regional trends. Some nations might tilt toward China, while others might deepen their ties to the United States and/or strengthen their own military capabilities as a hedge against China. Either way, the result is a challenge to the traditional calculations of the regional balance of power in which the United States has a great stake and the maintenance of which the United States has been committed to on behalf of regional allies and friends for decades.

A fourth complicating factor revolves around transparency. Different views about and approaches to transparency in military affairs between the United States and China continue to be a source of mutual frustration and sometimes strain military relations even during the best periods of military-to-military interactions in past years.

Because the PLA considers itself the weaker party vis-à-vis the US military, the standard PLA approach is to show relatively little because, as the PLA often says, "the weak do not expose themselves to the strong." PLA officials are usually quick to point out that the PLA is the least open sector of the Chinese government. It is closed not only to foreigners but also to the average Chinese citizen and even to many within Chinese officialdom. Therefore, they would argue, the US concept of transparency in the military relationship cannot be transferred to the Chinese system. More-

Table 9.1 Competing statistics on China's military expenditure, 2006
(billions of US dollars)

Source	Expenditure
Official budget ^a	35.0
SIPRI estimate ^b	51.9
DoD low estimate ^c	80.0
DoD high estimate ^c	115.0
IISS estimate (PPP) ^d	122.0
SIPRI estimate (PPP) ^e	188.2

PPP = purchasing power parity

a. US Department of Defense (DoD), *Military Power of the People's Republic of China 2006*, Annual Report to Congress (Washington), www.defenselink.mil, 7.

b. Stockholm International Peace Research Institute, SIPRI Military Expenditure Database, <http://milexdata.sipri.org>.

c. M. D. Maples, "Current and Projected National Security Threats to the United States" (statement for the Record, US Senate Armed Services Committee, Washington, February 27, 2007).

d. International Institute for Strategic Studies (IISS), *The Military Balance 2007* (London), 346.

e. Stockholm International Peace Research Institute, *SIPRI Yearbook 2007* (Oxford University Press, 2007), 270.

over, PLA officials point to China's now-biennial publication of defense white papers explaining Chinese defense policies and wonder why US officials are still asking about the purpose and intentions behind Chinese military modernization if Beijing has already explained this in public.

Indeed, China has made some progress over the past decade in its military transparency, including its release of increasingly detailed white papers and greater engagement with foreign militaries.¹³ Chinese defense officials and specialists are more available than ever to discuss Chinese defense affairs with foreign visitors, and Chinese media dedicated to defense issues reveal some of the ongoing internal PLA debates and developments. China has also been increasingly responsive to US requests for access to Chinese military sites and hardware.

Nonetheless, overall, the PLA remains an opaque institution. US officials (and others) question why some of the most fundamental issues about the PLA, such as the number of personnel in each service or the true aggregate of China's defense expenditures, are still not deemed fit by Beijing to be placed in the public domain (see table 9.1 for various estimates of China's defense expenditures). They reveal frustration at the never-ending negotiations with the PLA to visit Chinese military installations beyond show units, to see new equipment, and to receive the level of access to the Chinese armed forces that US officials assert the Chinese are

afforded when they visit the United States in the course of military exchanges. US military officials also note that transparency is not simply a favor one does for another: The more transparent a nation is about itself, the less other nations' militaries have to assume the worst and respond accordingly, leading to potential misunderstanding, miscalculation, and an action-reaction cycle of military preparations to the detriment of all sides.

Finally, when addressing China's transparency, US observers often note uncertainty about the state and nature of China's civil-military dynamic. While few doubt that the Chinese Communist Party remains firmly in control of the PLA, recent Chinese actions—such as the January 2007 anti-satellite test and the decision to refuse US Navy port calls to Hong Kong in November 2007—continue to raise fundamental questions about how national security issues are coordinated in Beijing and the degree of authority the PLA may or may not have to take unilateral action that affects larger Chinese national security or foreign relations.

Questions also persist about the nature and type of military advice senior PLA leaders offer its senior civilian leadership. There remains a near-total lack of public transparency on this issue even as, unlike in years past, the PLA now has near-total monopoly on military expertise upon which the civilian Party leaders must depend.

Future of PLA Modernization

The exact size, organization, and—most importantly—actual operational capabilities of the PLA in the next decade are impossible to detail at this point with precision. This is, after all, a military that has not engaged in significant observable combat for almost 30 years (since 1979 in Vietnam). Consequently, analysts and scholars studying the Chinese armed forces from publicly available data are forced to accept a certain dearth of empiricism.

Nevertheless, looking out over the next decade, one may detect six general observable trends in China's evolving defense establishment.

The PLA will continue to increase in professionalism, in the corporate and institutional sense, and enhance its operational capabilities. The PLA will be increasingly capable of sustainable *regional* force projection, although not yet capable of *global* conventional force projection.¹⁴

The PLA in the next decade will remain large in terms of numbers—today at 2.3 million—and in fact larger than China's leadership would prefer it to be.¹⁵ While units will be of uneven quality in terms of equipment and trained personnel, the PLA is expected to maintain a core of highly trained and well equipped units that will make China's military one of the premier regional military forces in Asia.

The PLA is only in the early stage of becoming a “joint” organization that gives equal emphasis to the various branches of service. However,

given another decade the PLA will likely become much more adept at orchestrating complex campaigns that involve land, sea, and air forces as well as cyber and outer space. Indeed, the PLA will almost certainly have enhanced space-based C4ISR capabilities that include architectures to enable new command-and-control relationships and for enhanced battle space awareness.

It is certainly not inevitable that the PLA will be successful in achieving all of its aspirations, however. A host of formidable systemic problems endemic to the PLA, challenges from within greater Chinese society, and wild card events in the international environment could preclude this massive defense establishment from achieving its objectives.¹⁶ Systemic impediments include:

- low level of education of most of the PLA's enlisted members and training and readiness problems inherent in a conscript force in which draftees serve only two years;
- competition with the private sector to recruit the best and brightest to fill the ranks of the officer corps and then retain them;
- concerns in the PLA about the trainability of rural recruits, service evasion by educated urban youth, and issues with the military socialization of a generation of soldiers from one-child families;
- uncertainty whether the PLA has "adaptive capacity," i.e., the ability to adapt quickly to events on the ground when faced with rapidly evolving emergency or conflict situations;
- deeply entrenched bureaucratic interests in the PLA that resist systemic change;
- a professional culture, including a rigidly hierarchical system, that is uncomfortable with the decentralization of decision-making that high-tech war demands; and
- economic and political barriers at the local level that preclude the PLA from downsizing and economizing even further.

In the end, however, the PLA has proven that it is an organization that learns and evolves effectively—i.e., it understands what is broken and what must be fixed and changed. This in itself is impressive. Today there is no greater critic of the PLA than the leadership of the PLA.

US Response to China's Military Modernization

Given the modernization of the Chinese armed forces and the uncertainties of China's growing military capabilities, the United States needs to consider four issues.

First, the United States must continue to modernize and transform its own forces. The United States needs to do so, however, not only because of China but also because of the uncertain global security landscape that is unfolding on various fronts, including the Middle East as the Iraq War draws down and in South Asia. As defense planners make their case for building the “military after next,” it will be tempting but shortsighted to use China and the PLA as the “poster child” for justifying what will certainly be a long-term and very expensive reconstitution and modernization effort of the US military in coming years. By considering its interests more broadly, the United States may still ensure that the gap between the military capabilities of the United States and the PLA remain wide and formidable, while providing a sense of balance and reassurance in Asia and beyond.

In particular, however, the United States will need to pay attention to safeguarding its critical C4ISR assets to ensure their survivability during hostilities. Given China’s attention to antisatellite capabilities, computer network warfare, and ballistic missiles, redundancy and hardening of US high-tech capabilities will be essential to reduce US vulnerabilities and maintain military predominance during a crisis.

Second, the United States must continue to reach out to the PLA on as many levels as the two respective systems in Washington and Beijing can bear. The United States should do this for several reasons:

- *to ensure that the PLA understands the capabilities of the US armed forces.* Left isolated and insular, the PLA will slip into an alternative reality that could lead to miscalculation on its part.
- *to reduce risk and avoid miscalculation.* Any US military officer can likely do little to dissuade Chinese counterparts from their most deeply felt suspicions about US motives. The same is likely true for Chinese officers dealing with US counterparts. But winning “hearts and minds” should not be the objective of exposing each military to the other. A more realistic and necessary rationale is to ensure that when Chinese or US military officers have to make critical judgments or decisions—or advise their senior leadership—about how to deal with the other, they will decide based on knowledge, observations, and personal experiences, not ideological biases or politically correct shibboleths. They also should develop working relationships that allow development and implementation of bilateral confidence-building measures and crisis management regimes to prevent the possibility of accident and miscalculation from occurring and potentially escalating to something worse.
- *to find areas of cooperation when cooperation is in the national interest of both parties.* It is important to remember that while the United States and China are not allies, and complex issues divide the two, neither are they enemies nor predestined to become so. The two armed forces could

very well find themselves working *with* each other under certain circumstances even as they both hedge against each other in other areas. Maritime security, humanitarian assistance/disaster relief, search and rescue operations, peace operations, and environmental safety are some of the areas where the United States and China have common interest, and given time and commitment between the two sides, they may provide a roadmap for greater joint efforts toward common security, in coordination with other nations, in coming years.

At the same time, the United States should also be careful not to engage with China's military to the point of assisting with the operational effectiveness of the PLA. The United States should remember that while it desires greater cooperation and wants to avoid an adversarial relationship, the two countries remain suspicious of one another given different strategic visions, values, and interests. China remains uncomfortable with US preeminence in East Asia, and both sides realize they may find themselves in a confrontation over Taiwan. US military engagement of China in fact is constrained by US law.¹⁷ The close connection between the private and military sectors in China also requires care among those in the US private sector about the types of cooperation, including technology transfer, offered to China; this too has been prescribed by law.¹⁸

Third, the United States must continue to maintain a credible forward military presence in the Asia-Pacific region. Traditionally, US forces in the Asia-Pacific region have labored under "the tyranny of distance," the natural constraint placed on the US military's operations in the region due to the region's vast area. The ability to move forces through the region as quickly as possible will not only enhance deterrence but also, more critically, facilitate real operations. The ability to base forces in Japan and South Korea; increase US presence and capabilities in Guam; maintain high-frequency deployments at sea to ensure freedom of navigation and maritime safety; and gain greater access to key regional locations for US forces for training, exercises, and logistical support will remain keys to maintaining peace and stability in the region, related but not limited to China.

Fourth, US defense officials, and others, must continue to devote time, effort, and resources to military diplomacy and operational cooperation in the Asia-Pacific region more broadly. The United States should welcome the opportunity to participate in multilateral venues and forums as a member of the Asia-Pacific community of nations. At the same time, the United States must not remain stagnant in its regional alliances and bilateral relationships, but rather redefine and reorient them to fit the traditional and nontraditional security requirements that are priorities for the region. Traditional requirements relate to hard deterrence, sea lane security, and balance of power considerations noted above. Nontraditional elements would include training, equipping, and participating in joint efforts to provide

rapid humanitarian assistance and disaster relief to affected areas; ensuring adequate and secure supplies of energy; addressing climate change and other elements of environmental protection; combating drug and human trafficking; and staunching emerging health hazards, particularly infectious disease.

Both the PLA and the Pentagon are considering the other in their military planning. Some on both sides in fact argue that military conflict between the United States and China sometime in the future is inevitable. This, of course, is not true. However, both sides need to act with great care and develop vehicles for and habits of communication to prevent tensions or disputes from escalating unnecessarily, to the detriment of East Asia's peace and stability. This is especially critical as both militaries begin to operate more in common sea and air space. Given undeniable strides in PLA modernization, and remaining uncertainties in Chinese strategic intentions, however, the emergence of an increasingly capable and credible Chinese military ensures that the military factor will remain an important variable in the US-China relationship in years to come.

Notes

1. Xinhua News Agency, "Hu Jintao zai Zhongguo gongchandang di shiqi ci quanguo daibiao dahui shang de baogao" ["Hu Jintao's Report to the 17th Party Congress"], October 15, 2007, <http://news.xinhuanet.com>.
2. Maureen Fan, "China Scouts Colleges to Fill Ranks of Modern Army," *Washington Post*, December 17, 2007, A01.
3. Premier Zhou Enlai originally introduced the Four Modernizations in 1975. The Four Modernizations, in order of importance, are agriculture, industry, science and technology, and national defense.
4. Excerpts from the speech Jiang Zemin delivered, entitled "The International Situation and the Military Strategic Guidelines," can be found in *Selected Works of Jiang Zemin*, volume 1 (Beijing: People's Publishing House, August 2006), 278–94.
5. China originally reassessed its security situation in 1985, as the Soviet threat receded. In May that year, Deng Xiaoping, serving as chairman of the Central Military Commission, announced in a speech that China no longer faced a near-term military threat and that China ought to focus on development in a peaceful era. The 1993 review did not alter this fundamental assessment, although it took additional international trends into account to reach its conclusions.
6. For an official, unclassified US Department of Defense (DoD) assessment of China's military strategy, organization, and operational concepts, see *Military Power of the People's Republic of China 2008: A Report to Congress*, www.defense.gov. The Office of the Secretary of Defense is required by law—Section 1202 of the FY2000 National Defense Authorization Act—to submit a report annually "on the current and future military strategy of the People's Republic of China."

7. In 1998 the PLA created a fourth general department, the General Equipment Department, in yet another rectification of the PLA research and development system. The other PLA general departments are the General Staff Department, General Political Department, and General Logistics Department.

8. For instance, in January 2007, China tested its offensive antisatellite capability with the successful interception of a defunct Chinese weather satellite by a ground-based vehicle. In October 2007, China launched its first robotic lunar exploration mission, demonstrating an array of sensor, control, communications, and spaceflight technologies with broad military applications. The planned October 2008 launch of China's third manned space mission, Shenzhou VII, which will include China's first spacewalk, continues to highlight the Chinese human spaceflight program, with corresponding implications for systems integration and other critical technological capabilities.

9. Information Office of the State Council of the People's Republic of China, *China's Space Activities in 2006* (Beijing, October 2006), www.cnsa.gov.cn.

10. In the past few years some Western governments have alleged, and the Chinese have vociferously denied, that Beijing is actively probing, and attempting to hack into, government information systems, especially defense information technology systems. There is indeed increasing concern—and evidence—that the PLA is developing and testing cyber warfare capabilities.

11. For a detailed look at the PLA's new operational level doctrine, see David M. Finkelstein, "Thinking About the PLA's 'Revolution in Doctrinal Affairs,'" in *China's Revolution in Doctrinal Affairs: Emerging Trends in the Operational Art of the Chinese People's Liberation Army*, eds. David M. Finkelstein and James Mulvenon (Alexandria, VA: The CNA Corporation, December 2005), 1–27.

12. See Michael A. McDevitt, *Asian Military Modernization: Key Areas of Concern* (unpublished paper prepared for the Institute of International Strategic Studies and the Japan Institute of International Affairs, June 5, 2008). McDevitt argues that, "Specifically, China is putting in place a credible way to deny access to US forces by knitting together broad area ocean surveillance systems, a large number of submarines, land based aircraft with cruise missiles, and ballistic missile systems that can target ships on the high seas. The operational objective is to keep US naval power as far away from China as possible in case of conflict."

13. According to China's 2006 defense white paper, "Since 2002, China has held 16 joint (sic) military exercises with 11 countries." An article in early January 2008 asserted that "China's armed forces conducted more joint (sic) exercises and joint (sic) training with foreign armed forces in 2007 than in any other recent year"; Xinhua News Agency, "Chinese Armed Forces Step Up Joint Exercises and Training with Foreign Armed Forces, Strengthen Mutual Trust and Cooperation," January 7, 2008. This increasing commitment to combined exercises with other nations, including most notably the August 2007 exercise with Russia and Central Asia—dubbed "Peace Mission 2007" and which involved the movement of 1,600 Chinese ground, air force, and logistics troops across the PRC border into central Russia—is indeed a major change from past Chinese policy, which explicitly rejected such activities. For numbers of Chinese troops deployed in Peace Mission 2007, see *Bei-*

jing Review, August 7–15, 2007, and Xinhua News Agency, “All Chinese Exercise Troops Return Home From Russia,” August 26, 2007.

14. Some Chinese security analysts now talk about the need to develop capabilities to project conventional forces for what US military planners used to refer to as “Operations Other Than War” such as noncombatant evacuations. With over 670,000 Chinese citizens working and studying abroad in 2006 (see *People’s Daily Online*, “Government to Protect Workers Abroad,” May 16, 2007) and Chinese businesses operating in some of the world’s worst neighborhoods, Chinese citizens are in harm’s way as never before. See also David M. Finkelstein, “China’s Quest for Energy and the ‘Contradictions’ of Beijing’s ‘Go Out Strategy’” (lecture, World Affairs Council, September 11, 2007). According to Finkelstein’s data, between 2004 and 2007, nearly a thousand Chinese citizens had to be evacuated from war zones, disaster areas, and riots around the world, and Beijing still largely depends on other nations for assistance when its nationals must be evacuated from crisis zones. The expanding interests of a globalizing China are stressing security planners and gaining the attention of the PLA. As one Chinese Navy admiral wrote in 2006, “The present level of military force can hardly meet demand. China’s military forces lag far behind . . . in its ability to tackle traditional security threats, fight terrorism, deliver humanitarian aid in case of natural disaster, undertake UN peace-keeping operations, and help overseas Chinese evacuate in an international crisis”; Yang Yi, “Peaceful Development Strategy and Strategic Opportunity,” *Contemporary International Relations* 16 (September 2006).

15. The demobilization of massive numbers of soldiers is a regime stability issue for China that is handled with great care. Since 1985, the PLA has cut more than 1.5 million troops. Another 200,000-person reduction was recently completed. The economic burdens on local governments of integrating demobilized troops and their families back into the civilian sector is likely the greatest factor inhibiting the PLA from scaling down to a much leaner force—one that can be evenly trained and equipped for excellence across the board.

16. See David M. Finkelstein and Kristen Gunness, eds., *Civil-Military Trends in Today’s China: Swimming in a New Sea* (Armonk, NY: M.E. Sharpe Publishers, 2007).

17. Section 1201 of the National Defense Authorization Act for FY2000 (Public Law 106-65) disallows “inappropriate exposure” of operational matters to the PLA and outlines specific areas of military-to-military engagement that are proscribed. A decade earlier, following the violent crackdown on Tiananmen Square protesters in 1989, the United States imposed legal prohibitions—first by presidential order in June 1989, then by Public Law 101-246 in 1990—on the government sale or commercial export to China of any military equipment or relevant technology, conduct in which the United States had been actively engaged during much of the 1980s. These sanctions remain in effect, albeit subject to presidential waiver.

18. An assortment of US Commerce Department regulations restricts sensitive commercial equipment and technology transfers to China, among other countries. In June 2007, the Commerce Department’s Bureau of Industry and Security issued regulations that imposed new controls on the export of certain high-technology

items that could contribute to China's military build-up specifically, even while reducing barriers for prescreened customers in China. The US Congress established the China Economic and Security Review Commission to provide additional oversight in this regard. The commission's mandate is to "monitor, investigate, and submit to Congress an annual report on the national security implications of the bilateral trade and economic relationship between the United States and the People's Republic of China, and to provide recommendations, where appropriate, to Congress for legislative and administrative action."