

AIR WAR COLLEGE

AIR UNIVERSITY

THE WINGS OF THE DRAGON

PLA AIR FORCE RAPID CONVENTIONAL FORCE PROJECTION: BEYOND
TAIWAN?

By

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Abstract

This analysis assesses the state of capability within the PLA Air Force, both at present and also based on a projection for 2020, in order to determine the range of options for China's leadership to rapidly project conventional force in terms of coercive, assertive or constructive actions. It is clear from the analysis that the PLAAF retains only a limited capability at present, and somewhat predictably, will possess a better capability in 2020. However, neither case presents a challenge for US and allied supremacy in the air. As far as conventional force projection capabilities in terms of airpower are concerned, any "near-peer" threat which China might represent lies well into the future, after a certain set of decisions which would need to be made by Chinese leaders with respect to developing additional capabilities beyond those currently planned. In response, the United States should focus less on countering and more on engaging China to support its growth into a responsible regional military power—while carefully watching for any sign that China is pursuing conventional airpower capabilities to act with force beyond China's near periphery.

As a large developing country, China has before it an arduous task for modernization, which calls for prolonged and persistent hard work. China will mainly rely on its own strength for development, and therefore poses no obstacle or threat to any one. China needs a peaceful international environment for its own development, which in turn will enhance peace and development in the world...

We will never allow anyone to split Taiwan from China through whatever means. Should the Taiwan authorities go and make a reckless attempt that constitutes a major incident of “Taiwan independence,” the Chinese people and armed forces will resolutely and thoroughly crush it at any cost.

Government of the People’s Republic of China
White Paper on China’s National Defense, 2004¹

China does not now face a direct threat from another nation. Yet, it continues to invest heavily in its military, particularly programs designed to improve power projection. The pace and scope of China’s military build-up are, already, such as to put regional military balances at risk. Current trends in China’s military modernization could provide China with a force capable of prosecuting a range of military operations in Asia—well beyond Taiwan—potentially posing a credible threat to modern militaries in the region...In the future, as China’s military power grows, China’s leaders may be tempted to resort to force or coercion more quickly to press diplomatic advantage, advance security interests, or resolve disputes.

United States Department of Defense
Annual Report to Congress on the Military Power of the People’s
Republic of China, 2005²

Chapter 1

Introduction

As China continues to modernize its military, it is clear that the capabilities of the People’s Liberation Army (PLA) are being built to fight and win in a struggle over Taiwan. However, despite China’s stated intent, this build-up has raised alarm in other Asia-Pacific states, including the United States. In essence, they ask of the PLA’s modernization: What does this mean beyond Taiwan? What kind of force projection capabilities does the PLA currently possess, and

¹ Government of the People’s Republic of China. *China’s National Defense in 2004* (Defense White Paper 2004). <http://english.people.com.cn/whitepaper/defense2004/defense2004.html> (accessed 16 February 2006), foreword.

what can be expected in the future? And what are the implications for US national security if and when China is able to rapidly project conventional force beyond Taiwan?

This paper attempts to answer these questions through an assessment of the PLA's rapid conventional force projection capabilities. While the Taiwan scenario has been the subject of intense analysis and debate, the larger questions of how a PLA built to win in Taiwan can be used elsewhere have been considered but have not been the subject of detailed review. This analysis attempts to provide a starting point for that discussion. By design, the focus here is more on capability rather than intent. While it is certainly important to understand and assess China's intent should it ever feel compelled to use military force, it is worth noting that a state's intent can often change rapidly due to its changing domestic circumstances or by virtue of outside pressures induced by international events. A significant conventional military force capability, however, cannot be built overnight; rather, such a force takes years to develop, and when the time for action comes, the size and capability of that force serves as one of the principal determinants of the range of options a state has for action. In an era of uncertainty as to which path China will take in the future, a review of capability provides, as a minimum, a quantifiable look into the potential range of actions China may take, and to a further extent, can help reveal the path via which China seeks to follow as it continues to evolve into a major military power in its own right.

In addition, this analysis focuses almost exclusively on conventional force capabilities resident in the PLA Air Force (PLAAF). If history is any guide, despite China's desire for

² Office of the Secretary of Defense, *Annual Report to Congress: The Military Power of the People's Republic of China 2005*. <http://www.defenselink.mil/news/Jul2005/d20050719china.pdf> (accessed 16 February 2006), 13.

“peaceful development,”³ it is likely that during the course of the next 15-20 years China may very well find itself in a position where its strategic interests beyond Taiwan are threatened and the use of military force must be a viable option. Airpower, to include an airborne land component, is likely to be a key element of this option as it represents the PLA’s primary “rapid” means of conventional force projection. Does the PLAAF have the capability to successfully engage in a brief but rapid military action to demonstrate resolve or coerce an opponent into acceding to Chinese demands? Could China employ air mobility to quickly insert military forces to temporarily occupy strategic ground? What is China’s ability to polish its regional credentials by actively participating in a major humanitarian relief effort such as the Asian Tsunami relief of 2004? If China has a “limited” capability to act, just what are those limitations? Will these limitations change in the mid-term future, for example in 2020?

As this analysis will show, the answers to these questions indicate China still has a long way to go before it possesses a comprehensive rapid conventional force projection capability beyond Taiwan—but does possess some limited capabilities which under the right circumstances could be employed to support China’s strategic interests. Three main conclusions are evident in this assessment. First, although the PLAAF does possess at present a capability to execute rapid conventional operations in China’s near periphery— it is significantly limited in terms of scale, range, targets, and duration. Second, current training status and employment concepts within the PLAAF have only just begun to produce an ability to support such operations. Third, assuming current procurement and training trends continue, the PLAAF will make progress by 2020 and should be capable of longer range conventional force projection operations, but with the exception of airborne forces will still be limited to small-scale operations and nowhere near the

³ Dr. Zheng Bijian, Chair of the China Economic Reform Forum, makes the case for peaceful development in “China’s ‘Peaceful Rise’ to Great-Power Status,” *Foreign Affairs* (September/October 2005), 18-24.

capabilities of the joint US military and allied forces. In response, the United States should focus less on countering and more on engaging China to support its growth into a responsible regional military power—while carefully watching for any sign that China is pursuing conventional airpower capabilities to go in force beyond China’s near periphery.

Analytical Method

To draw a visual analogy, this paper takes an “hourglass shaped” approach to the problem. In other words, the discussion starts with a broad review of Chinese strategic behavior in reference to the use of force, relates this to potential security “hot spots” outside China’s borders, and then narrows in to the specific details of the PLAAF’s rapid conventional force capabilities in terms of “hardware” elements such as aircraft weapon systems as well as the “software” of doctrine, training, maintenance, and logistics to support the employment of those weapon systems. These capabilities are then applied against a representative set of scenarios to critically evaluate PLAAF capability both at present and in 2020 to rapidly project conventional force beyond the Taiwan straits region. The discussion then broadens again with a review of the implications of this analysis for US national security, with an eye toward determining the best course of action to respond to a growing Chinese rapid conventional force projection capability in the Asian region.

Holding high the banner of peaceful development and cooperation, China adheres to an independent foreign policy of peace and a national defense policy of the defensive nature and will never go for expansion, nor will it ever seek hegemony.

Government of the People's Republic of China
White Paper on China's National Defense, 2004⁴

Chapter 2

Beyond Taiwan: Potential Conventional Force Scenarios

Before going too far into this analysis, a key question must be answered. If China has made clear that it has no desire for regional dominance nor territorial acquisition, and is dedicated to the peaceful resolution of disputes when conflicts arise, why is it even necessary to consider the question of power projection? The answer to this question lies in two parts. First, despite arguments that China possesses a strategic culture that prefers to avoid the use of force, history has shown that when significant strategic interests are at stake, China can and will use force to achieve its objectives. Second, beyond the Taiwan scenario, there are a set of current issues, both related to geography and resources, in which China has significant strategic interests at stake. The logical conclusion which follows is that, should China fail in its attempts to support these strategic interests through peaceful means, it would be willing to use force to resolve the issue—and as a result the question of Chinese power projection capability becomes an important discussion.

Strategic Culture and China's Use of Force

A thorough discussion about the relationship between Chinese strategic culture and its relationship to the actual use of force is far beyond the scope of this paper and has already been

⁴ *China's National Defense in 2004*, foreword.

addressed in numerous thoughtful analyses by respected China scholars. In brief, the traditional view is that Chinese preferences with respect to the use of force are heavily influenced by Confucian-Mencian principles which are averse to the use of force. Rather, the preference for resolving disputes tends to favor defensive and accommodationist strategies; offensive means are largely rejected as aggressive and hegemonistic.⁵ This approach can be seen in comments by PLA Lieutenant General Li Jijun, then Vice President (and later, in 1998, President) of the PLA Academy of Military Sciences, during comments to the US Army War College in 1997. According to Li, Chinese military thought is based on three principle elements: “the pursuit of peace, the high priority accorded national unity, and the emphasis on defense rather than offense.”⁶ Reaching into history, Li quotes the classic Chinese military literature of Mo Zi (c. 470 BC – 391 BC) as an example of how the Chinese prefer a “concept of non-offense (*fei gong*) advocating responsive rather than provocative actions.”⁷ Whether there truly is an operative passive and defensive Chinese strategic culture, and what impact such a culture may have on Chinese conduct of foreign affairs, has been a subject of considerable review.

One of the most notable works on this subject is Harvard scholar Alastair Iain Johnston’s *Cultural Realism*. In a very detailed and analytical review of the Chinese *Seven Military Classics*, Johnston seeks to determine whether there is a strategic Chinese preference based solely on Confucian-Mencian principles to avoid the use of force or if there is a more realist-based “parabellum” paradigm. The bottom line to which Johnston arrives is that

⁵ For example, see Tiejun Zhang, “Chinese Strategic Culture: Traditional and Present Features,” *Comparative Strategy*, 21: 73-90, 2002, specifically pages 74-78 for the traditional viewpoint on Chinese strategic culture.

⁶ Lt Gen Li Jijun, “Traditional Military Thinking and the Defensive Strategy of China,” (Lecture to the Army War College, Carlisle Barracks, PA, 29 August 1997), 2.

⁷ *Ibid.*, 3.

“...the deep structure of the *Seven Military Classics* reflects the parabellum strategic culture. But overlying this deep culture, clothing it, is a different set of languages, logics, and decision rules that are consistent with the Confucian-Mencian strategic culture.”⁸

He then reviews the historical evidence of the Ming Dynasty period (1368-1644 AD) to determine if Chinese decisions to use force are consistent with either paradigm, coming to the conclusion that Chinese strategy as demonstrated in the Ming period was largely driven by the “parabellum” approach with Chinese leaders showing no hesitation “...to prefer offensive uses of violence to deal with a perceived zero-sum threat from the Mongols.”⁹ In essence, Johnston finds that despite the appearance of diplomatic language to the contrary, Chinese strategic culture operates in practice with no *a priori* moral constraints on the use of force.¹⁰

The concept of a China dominated by a strategic culture largely unwilling to use force in pursuit of its strategic interests is also dismissed in a seminal work by Allen S. Whiting, *The Chinese Calculus of Deterrence*. In a detailed study of Chinese foreign policy and military actions from 1949 to 1975, with particular emphasis on the 1962 Sino-Indian War and Chinese support to communist North Vietnam in the late 1960’s, Whiting concludes that China’s foreign policy is driven by a rational model of conduct,¹¹ and that China’s “...recourse to force has not been reckless or adventuristic but rather has remained subordinate to foreign policy principles which frequently violate military considerations in pursuit of political goals.”¹² Writing in 1975, Whiting describes a consistent pattern in Chinese use of force, with particular emphasis on how domestic instability amplifies Chinese sensitivity to foreign threats as well as to the principle that “...any situation involving China’s territorial integrity is certain to arouse concern

⁸ Alastair Iain Johnston, *Cultural Realism* (Princeton, NJ: Princeton University Press, 1995), 153.

⁹ Ibid, 217 and 242.

¹⁰ Ibid, 249.

¹¹ Allen S. Whiting, *The Chinese Calculus of Deterrence* (Ann Arbor, MI: University of Michigan Press, 1975), 202.

¹² Ibid, 233.

in Peking.”¹³ Such a conclusion, also reached by Johnston in his analysis,¹⁴ appears particularly prophetic considering the sequence of events within China as well as along its southern border which led just four years later to the Chinese “defensive counter-attack” of Vietnam in 1979.

A recent study of China’s use of force by Andrew Scobell comes to a related but slightly different assessment. While Scobell does not dismiss the effect of strategic culture in Chinese political-military actions, he argues that there is a collective “Cult of Defense” in which “...realist behavior dominates but is justified as defensive on the basis of pacifist self-perception.”¹⁵ According to Scobell, China’s Confucian tradition requires that the use of force be justified and legitimate; the various reasons for legitimacy can be categorized under several different criteria¹⁶ but the bottom line is that before force can be used, it must be considered a “righteous cause” (*yi*). However, once the cause has been identified as just, there is no hesitation to use force, even if it is offensive and pre-emptive in nature.¹⁷

So what are some examples of such behavior in recent Chinese history? Offensive Chinese actions in Korea in 1950-53, India in 1962, and Vietnam in 1979 are the first which come to mind. In each case, China committed military forces on a large scale (to a greater extent in Korea, to a lesser extent in India) in an offensive action on the territory of another sovereign state.¹⁸ While the details of each conflict are different, the relevant and consistent factors from each are that China used military force after determining that it had a legitimate cause and then

¹³ Ibid, 245.

¹⁴ Johnston, *Cultural Realism*, 256.

¹⁵ Andrew Scobell, *China’s Use of Force: Beyond the Great Wall and the Long March* (Cambridge, UK: Cambridge University Press, 2003), 38.

¹⁶ Ibid, 28.

¹⁷ Ibid, 35.

¹⁸ Detailed discussions of each conflict can be found in Mark A. Ryan, David M. Finkelstein, and Michael A. McDevitt, *Chinese Warfighting: The PLA Experience Since 1949* (Armonk, NY: M.E. Sharpe Publishing, 2003). Articles by Shu Guang Zhang on “Command, Control, and the PLA’s Offensive Campaigns in Korea 1950-51,” pages 91-122, Cheng Feng and Larry M. Wortzel on “PLA Operational Principles and Limited War: The Sino

employed that force as required and without hesitation to achieve its strategic objectives. In essence, the actions were wholly consistent with the Chinese doctrine of “active defense”, a concept initiated in 1936 by Mao Zedong and still serves as the PLA’s strategic guidelines today.¹⁹ The doctrine of “active defense” is essential to understanding China’s use of force in the modern era, as it explains how China can use force offensively while still considering it a “righteous” act of defense consistent with traditional Confucian concepts. Any force threatening China, whether it is US/UN forces approaching the Yalu river, Indian border incursions, or intransigent Vietnamese leadership which refuses to respect Chinese leadership and invades neighboring Cambodia, is viewed as the instigator of hostilities...and China’s response, even if offensive, is considered rightfully “defensive.” More recent historical examples of “active defense” can be seen in China’s conduct across the Taiwan Strait in 1995-96. In this case, Taiwan was the aggressor via the pro-independence actions of President Lee, ostensibly aided and abetted by tacit American approval.²⁰ In the Chinese view, Taiwan was perceived as offensively attempting to change the status quo; as a result, the introduction of force in terms of missile test launches and live-fire exercises was, according to the Chinese, defensive in nature.²¹

Current Issues of Strategic Interest to China

If China thus has demonstrated a willingness to use force in support of its strategic interests, then where could this happen in the future? While Taiwan clearly remains the most likely scenario, there are several other regions and issues which, if not handled carefully by the parties

Indian War of 1962,” pages 173-197, and Henry J. Kenny on “Vietnamese Perceptions of the 1979 War with China,” pages 217-240, provide valuable insight on China’s decision-making leading to each conflict.

¹⁹ See Mao Zedong, “Problems of Strategy in Revolutionary War,” in *Selected Military Writings of Mao Tse-Tung* (Beijing: Foreign Language Press, 1967), 103. For a current articulation of active defense as China’s military strategy, see *China’s National Defense in 2004*, chapter 2.

²⁰ Robert S. Ross, “The 1995-96 Taiwan Strait Confrontation,” *International Security*, vol. 25 no. 2 (Fall 2000), 91.

²¹ *Ibid*, 95.

concerned, could lead to Chinese intervention with military force. To simplify the discussion, three categories can be considered: geography, resources, and humanitarian interventions.

Geographic Hot Spots

With respect to geography, China has made considerable diplomatic efforts to solve the territorial problems on its periphery, with the most notable being the settlement of disputes with the Soviet Union (now Russia) in 1991²² and Vietnam in 2000.²³ While there are still some unresolved border issues with India,²⁴ China's most pressing territorial disputes now center on islands within the South and East China Seas. In the South China Sea, China addressed a dispute with Vietnam over the Paracel (Xisha) Islands by seizing them through force in 1974.²⁵ However, an outstanding dispute remains with several Southeast Asian states with respect to the Spratly (Nansha) Islands, a chain of roughly 100 islands or reefs spread over a 410,000 square kilometer area straddling the main shipping route from the Malacca strait to Northeast Asia—and also is purported to contain vast petroleum reserves below the sea bed.²⁶ Recognizing the potential for conflict in the area, the Association of Southeast Asian Nations (ASEAN) produced a “Declaration on the Conduct of Parties in the South China Sea” which China, as an observer

²² The May 1991 “Agreement on Guiding Principles for the Mutual Reduction of Military Forces Along the Sino-Soviet Boundary and the Strengthening of Confidences in the Military” resolved the border issues. See John Pike, ed., “Sino-Soviet Border Clashes,” at <http://www.globalsecurity.org/military/world/war/prc-soviet.htm>.

²³ Owen Bennett Jones, “China-Vietnam Pact Signed,” *BBC News Online*, 25 December 2000, <http://news.bbc.co.uk/1/hi/world/asia-pacific/1086867.stm>.

²⁴ China and India recently signed an agreement on how to address their outstanding border issues, but have not yet actually settled the actual borders. See “China-India Sign Accord on Border Dispute,” *China Daily* (online), 11 April 2005, http://www.chinadaily.com.cn/english/doc/2005-04/11/content_433170.htm.

²⁵ For a discussion of this operation, see Alexander C. Huang, “The PLA Navy at War, 1949-1999: From Coastal Defense to Distant Operations,” in Ryan, et al. *Chinese Warfighting*, 261-263.

²⁶ Exploration of oil and gas reserves in the region has been limited due to the multiple conflicting claims to the region. However, according to the US Central Intelligence Agency (CIA) 2005 World Fact Book, in March 2005 the national oil companies of China, the Philippines, and Vietnam signed a joint accord to conduct seismic marine activities in the Spratlys. See <http://www.cia.gov/cia/publications/factbook/geos/pg.html>.

nation, signed in 2002.²⁷ While conflict in the area has never risen above low-level engagements of individual ships and aircraft, no parties have yet to relinquish any of their claims to the region.

A territorial dispute with Japan over the Senkaku (Diaoyutai) Island group in the East China Sea has even greater potential to become another flashpoint, not only because of the historical enmity between China and Japan, but also because natural gas reserves at stake in the contested areas are estimated at up to 1.9 trillion cubic feet.²⁸ A series of diplomatic confrontations supplemented by military posturing over 2004-2005 between the two states have kept the conflict in this area at a slow boil,²⁹ and at present no side appears to be willing to yield on the matter and negotiations have made little to no progress.³⁰ In fact, in February 2005, Japan declared formal possession of the island group and put the Japanese coast guard in charge of security.³¹ As reported in Beijing's *Qingnian Cankao*, the Chinese position regarding the islands remains firm and Japan has essentially two options: internationalize the dispute or escalate to a military confrontation.³² The 2005 draft constitution released by Japan's ruling Liberal Democratic Party, which would remove limitations on the 240,000 member Self-Defense Forces and recognize the country's armed forces as a fully functioning military, does little to indicate Japan may back down.³³ While passage of such a controversial measure is certainly not assured, the timing of the draft release cannot be seen as unrelated to the dispute over these islands.

²⁷ For the text of the 2002 ASEAN Declaration, see <http://www.aseansec.org/13163.htm>.

²⁸ John Pike, ed. "Senkaku/Diaoyutai Islands," <http://www.globalsecurity.org/militray/world/war/senkaku.htm>, 6 Dec 05.

²⁹ For a current account of Sino-Japanese confrontations over the Senkaku/Diaoyutai Islands, see the US-China Economic and Security Review Commission (USCC), *2005 Report to Congress* (Washington, DC: Government Printing Office, 2005), 119.

³⁰ See Brian Bremner, et al, "The Great Oil Hunt," *Business Week*, Issue 3908 (15 Nov 2004), 60-62.

³¹ Robert Marquand, "Japan-China Tensions Rise Over Tiny Islands," *Christian Science Monitor*, 11 February 2005.

³² Zhi Linfei, "China and Japan Will Resume Talks in the East China Sea: Can Military Confrontation Be Avoided?" Beijing *Qingnian Cankao*, 28 September 2005, in FBIS (Foreign Broadcast Information Service) CPP20050928510005, 28 September 2005. It is interesting to note that the same article quoted a Kyodo news report outlining what military actions Japan would take in such a contingency, to include deploying naval and air assets, plus a ground force of some 55,000 troops to the islands.

³³ Anthony Faiola, "Japan's Draft Charter Redefines Military," *Washington Post*, 23 November 2005.

Resources—and How They Get to China

Twenty years ago, China was East Asia’s largest oil exporter; at present, it is the world’s second largest oil importer generating some 40% of total growth in global oil demand in 2004.³⁴ By 2025, China’s demand for oil is expected to more than double to 14.9 million barrels per day, and despite a respectable domestic production capability and numerous programs to encourage more efficient energy consumption practices, over 2/3 that amount will imported.³⁵

Region and Top Three Suppliers	Percentage of Total Supply				
	1994	1999	2001	2003	2004
Middle East				50.9	45.4
<i>Saudi Arabia</i>	*	6.8	14.6	16.7	14.0
<i>Oman</i>	27.3	13.7	13.5	10.2	13.3
<i>Iran</i>	*	10.8	18.0	13.6	10.8
Africa				24.3	28.7
<i>Angola</i>	3.0	7.9	6.3	11.1	13.2
<i>Sudan</i>	—	—	8.3	6.9	4.7
<i>Congo</i>	—	—	*	3.7	3.9
Europe				9.6	12.9
<i>Russia</i>	—	*	2.9	5.8	8.8
<i>Norway</i>	—	5.5	*	1.0	1.6
<i>United Kingdom</i>	—	6.0	*	*	*
Americas				*	1.5
<i>Brazil</i>	—	—	—	*	1.3
<i>Venezuela</i>	—	—	—	*	*
<i>Canada</i>	—	—	—	—	*
Asia-Pacific				15.2	11.5
<i>Vietnam</i>	4.9	4.1	5.6	3.8	4.4
<i>Indonesia</i>	38.3	10.8	4.4	3.7	2.8
<i>Malaysia</i>	*	*	*	2.2	1.4

Legend: “—” no imports; “*” imports of less than one percent

Figure 1. China’s Oil Imports by Country of Origin³⁶

³⁴ United States Energy Information Agency (EIA), “Country Analysis Brief: China,”

<http://www.eia.doe.gov/emeu/cabs.china.html>.

³⁵ *ibid.*

³⁶ Data in Table 1 compiled from USCC, *2005 Report to Congress*, 157, and David Zweig and Bi Jianhai, “China’s Global Hunt for Energy,” *Foreign Affairs*, vol. 84 issue 5 (September/October 2005), 33-34. The author is grateful for the work of Lt Col Chris Pehrson who assembled this chart.

China's heavy dependence on oil imports from the Middle East and Africa is depicted in Table 1. Obviously, these oil imports must come to China through at least one, and depending on the supplier, perhaps two maritime chokepoints...the straits of Malacca and Hormuz. This vulnerable dependence, particularly upon the straits of Malacca, is not lost upon China's most senior leadership.³⁷ While China at present is committed to working with the coastal states of Indonesia, Malaysia, and Singapore to ensure free passage, China has no guarantees and any actor that chose to deny these routes to Chinese imports could very easily find itself labeled an aggressor in the classic Chinese sense—and thus subject to the use of force by China.

In response to this over-dependence upon over-water oil imports, China has turned its eyes westward. Russia is perceived as a reliable supplier, and a 2,400 kilometer pipeline deal to move a half-million barrels of oil per day from the Siberian fields of Angarsk to Chinese facilities at Daqing seemed ensured—until a key Russian sponsor was jailed in 2003 and Japan swooped in to ensure the pipeline terminated at a Russian port on the Pacific.³⁸ Unfazed, China kept searching, and in 2005 inked a \$4.2 billion deal to purchase PetroKazakhstan, a firm with control of massive reserves in central Kazakhstan.³⁹ China and Kazakhstan moved quickly in a 50/50 joint venture to develop a pipeline from the Kazakhstani oil fields near Atasu to Alanshankou in China's Xinjiang Uighur Autonomous Region, with the first oil flowing from Atasu in December 2005.⁴⁰ Plans for an even longer pipeline to exploit the petroleum resources of Turkmenistan, which would have to transit Uzbekistan and Kazakhstan via the shortest route, are also under

³⁷ Zweig and Jianhai, "China's Global Hunt for Energy," 33-34.

³⁸ Melinda Liu, et al, "Hungry for Power," *Newsweek*, vol 143 issue 18 (3 May 2004), 38-42.

³⁹ Isabel Gorst, "China Takes a Great Leap Forward into its Neighbours Oil Business," *Financial Times* (London), 23 August 2005.

⁴⁰ Wang Ying and Cao Desheng, "Oil Piped Across Border," Beijing *China Daily*, 16 December 2005, in FBIS CPP20051216057029, 16 December 2005. In a signal of the importance of this pipeline, it is worth noting that Kazakhstan President Nursultan Nazarbayev personally attended the opening ceremony and pushed the "start" button to initiate the flow of oil.

consideration.⁴¹ By providing a ready alternative to imports from the Middle East and Africa, these pipelines may rapidly become a critical element of China's energy strategy.

However, as much as this development provides a welcome safety valve for dependence on oil transiting vulnerable maritime chokepoints, it also creates a new scenario in which China may find its strategic interests at stake. As the US has seen in Iraq, pipelines are vulnerable. The autocratic nature of most central Asian regimes also does not rule out the possibility of a sudden change in government, as recently occurred in Kyrgyzstan, and there are no guarantees the new governments would be disposed to honor previous agreements. Even should present governments remain intact, stability in central Asia is certainly not a given and the area is home to insurgent groups which are not necessarily friendly to China. Separatist groups such as Uighur Muslims could view these pipelines as an opportunity to strike at the government, and recent anti-terrorism exercises under the guise of the Shanghai Cooperation Organization (SCO) in Kazakhstan underline the seriousness with which China considers the security of this region.⁴²

Humanitarian Relief

While of an entirely different magnitude than the scenarios described above, as China continues to rise in terms of wealth and capability, it is not unreasonable to expect that in order to build increased credibility, China will need to play a more active role in supporting other states who have suffered from major calamities. The US has done so for decades, and in the process garnered praise and gratitude from governments across the globe. Recent activities in

⁴¹ V. Obramenko, "Turkmenistan Seeks to Boost Oil, Gas Extraction," Ashgabat *Neytralnyy Turkmenistan*, 6 January 2006, in FBIS CEP20060108027004, 8 January 2006.

⁴² Su Ruzhou and Li Fengming, "Exercises Crack Down on Terrorists," *PLA Daily*, 3 September 2003, <http://english.pladaily.com.cn/special/5army/txt/65.htm>, and Liang Yongli and Du Xianzhou, "Coalition 2003: A Successful Joint Anti-terrorism Maneuver," *PLA Daily*, 14 August 2003, <http://english.pladaily.com.cn/special/5army/txt/61.htm>.

Southeast Asia to provide relief after the devastating tsunami and in response to a massive earthquake in Pakistan are two such examples. China's military response to both, while helpful, has paled in comparison.⁴³ While participating in such events is certainly elective, China's ability to generate the "soft power" created by these efforts is important to the overall image of China as a benevolent nation.

⁴³ For Asian tsunami relief, initial Chinese aid shipments were made using commercial airlift instead of military airlift. Military airlift did eventually participate, providing 500 tons of supplies as of January 5, 2005. See "China's First Batch of Relief Materials Leaves for Sri Lanka," Xinhua News Service, 29 December 2004, and "PLA Troops Active in Tsunami Relief Work," Xinhua News Service, January 5, 2005, both at http://www.china.org.cn/english/features/tsunami_relief. Regarding Pakistan, as of 15 October 2005, the PLA AF IL-76 transports had made four shipments to Pakistan. See "China Sends 4th Batch of Relief Materials to Pakistan," People's Daily, 13 October 2005, http://service.china.org.cn/link/wcm/Show_Text?info_id=145115&p_qry=pakistan%20and%20earthquake%20and%20relief. In comparison, the US sent for tsunami relief an aircraft carrier battle group with navy and marine helicopters, USAF helicopter units, C-130 and C-17 transports, as well as deployed command and control teams and logistics units to perform aerial port operations at frontline airfields such as Bandah Aceh in Indonesia. See <http://www.defenselink.mil/home/features/tsunami/index.html>. For Pakistani earthquake relief, the US responded with CH-47 heavy lift helicopters from Afghanistan, followed shortly thereafter by C-130 and C-17 transports moving relief supplies, logistics units, and medical teams into the area within days. See http://www.defenselink.mil/home/features/2005/Pakistan/index_flash.html.

China continues to invest heavily in its military, particularly in its strategic arsenal and capabilities designed to improve its ability to project power beyond its borders...The pace and scope of China's military build-up already puts regional military balances at risk.

US Office of the Secretary of Defense
Quadrennial Defense Review Report, 2006⁴⁴

Chapter 3

Elements of Chinese Military Power

If China were compelled to use force to support its strategic interests in one of the three scenarios above, how might it do so? Before going further, a very brief review of the China's overall military power is in order. One simple classification of China's military power is to break it up into four elements: nuclear warfare, space warfare, information warfare, and conventional warfare. Using this classification, it is plain to see that for the scenarios discussed above, in which limited goals are at stake, immediately moving to employ nuclear weapons is not a likely strategy. Space warfare, although helpful in terms of communication and intelligence support, would probably also be a step too far if China were to attack another state's space assets in response to a limited regional scenario. Information warfare would likely have a role in any scenario, large or small; however, if considering information warfare as a principal weapon along the lines envisioned in the controversial book *Unrestricted Warfare*⁴⁵, the amount of instability created, and the uncertainty of how to control it, makes a sole reliance on

⁴⁴ Office of the Secretary of Defense, *Quadrennial Defense Review Report 2006*, <http://www.defenselink.mil/qdr/report/Report20060203.pdf>, 29.

⁴⁵ Qiao Liang and Wang Xiangsui, *Unrestricted Warfare: Assumptions on War and Tactics in the Age of Globalization* (Beijing: PLA Literature Arts Publishing House, February 1999), 45-47, in FBIS FTS19990823001254, 24 August 1999. Chapter 2 discusses using information networks to cause major catastrophes.

information warfare an unlikely proposition. What is left are China's conventional forces, primarily resident in the PLA Army, Navy, and Air Force and the Second Artillery.⁴⁶

While all three Services and the Second Artillery could be employed to provide a measured capability commensurate with the situation, it is most likely the Air Force (to include PLAAF airborne forces) and Navy would be employed in the scenarios described above. For the maritime scenarios, the PLA Navy (PLAN) would probably have the lead, supported by the air force. However, for the central Asian scenario, the navy would have no role—the PLAAF, with potentially the support of the Army or the Second Artillery, would have to support China's interests. The common denominator, then, is the Air Force. In addition, as the service with the capability to most rapidly respond when called upon, the PLAAF is central to China's ability to quickly project conventional force. As a result, while PLAN capabilities cannot be ignored as part of China's ability to project force, this analysis focuses on the PLAAF as the primary means as to how China could rapidly project conventional force in scenarios beyond Taiwan.

China's Conventional Airpower: Combat Platforms

As is depicted in figure 2, China possesses at present a large conventional force. Conventional strike capability is centered around the Sukhoi fleet of multi-role aircraft (Su-27/Su-30/J-11) with a present fleet size of approximately 300 aircraft and plans to exceed 400

⁴⁶ In the PLA, there are three services (*junzhong*)—Army, Navy, and Air Force. The Second Artillery is an independent branch (*bingzhong*), which is treated as a service. Each of the three services has subordinate branches (*bingzhong*). In particular, the PLAAF has four branches—aviation, SAM, AAA, and airborne. For further detail, see *China's National Defense in 2002*, available at <http://www.china.org.cn/e-white/20021209/III.htm#1>.

Type	Aircraft	Number in Inventory -- 2005				Unrefueled Combat Radius (km) (note 6)	Aerial Refueling Capable?	Known Procurement by 2020	Estimated Inventory by 2020 (note 11)	Remarks
		Jane's (note A)	Periscope (Note B)	Global Security (Note C)	Other (see notes)					
Attack	Su-30	76+24	76+24	200	80 (Note D)	1500 (notes E and 12)	Yes	24 (Note F)	124	24 Su-30 in Naval Aviation; additional 24 for PLAN
	JH-7A	n/a	n/a	25	15-20 (Note F)	1650 (note E)	No	150 (Note F)	200	
	Q-5	300	300	300	n/a	400-600 (notes E and 8)	No	nil	~300	
Fighter	Su-27SK/J-11	115	78	180	100 (Note D)	1560	No	100 (Note F)	200	Co-production contract with Russia specified 200 total
	Su-27UBK	35	n/a	40	42 (Note F)	1560	No	nil	40	Russian built training variant
	J-10	48	50	10	n/a	555	No	300-1200 (note 1)	300-1200	
	J-8	164	300	200	240 (Note F)	800 (note 7)	Yes*	nil	300	*One regiment capable of refueling with H-6U
	J-7	686	400	500	n/a	550-850 (note 8)	No	nil	~500	Some older models likely to be retired
	J-6	350	350	350	n/a	685 (note E)	No	nil	none	Obsolete and likely already retired
Bomber	H-6	120+	180	80	120+ (Note E)	1800 (note E)	No	TBD	120+	Some H-6 in PLAN; production line reopened at undetermined rate
	Tu-22M3	nil	nil	nil	nil	2170 (note F)	Yes	??	??	Potential future procurement
	Su-32/34	nil	nil	nil	nil	4000 (note F)	Yes	??	??	Potential future procurement
Tanker	H-6U	10	n/a	14	12-20 (Note E)	6000 (note E)	No	nil	10	Capable of refueling J-8 only not Su-30
	IL-78	nil	nil	nil	nil	3650 (note 9)	No	8	8	
Airlift	IL-76	20	20	20	14 (Note E)	7200/4200 (note 3)	No	30 (Note A)	50	
	Y-8	48	45	48	n/a	1200/3400 (note 5)	No	TBD (note 2)	48+	Y-8X/Y-9 procurement pending
	Y-7	100	93	93	60-80 (Note E)	750/2400 (note 5)	No	nil	100	
	An-124	nil	nil	nil	nil	8000+ (note F)	No	??	??	Potential future procurement
	An-70	nil	nil	nil	nil	3800 (note F)	No	??	??	Potential future procurement
C2/ISR	IL-76 AEW	2	n/a	~4	2-4 (Note F)	(note 4)	Yes	2	4-8	
	Y-8 AEW	2	n/a	n/a	2 (Note F)	Note (10)	No	nil	2	
	Tu-154 ISR	1	4	4	n/a	3700/5500 (note 5)	No	nil	1	

Figure 2. Current 2005 PLAAF Order of Battle for Selected Systems and Projections for 2020

aircraft by the end of the decade. Fleet size by 2020 will approach 400 and most likely will be higher assuming indigenous J-11 production resumes after successful development of the WS-10A turbofan engine and radar/avionics programs—the only items that the Chinese have yet to master in terms of indigenous production.

The capability of the Sukhoi fleet is augmented by two other major fighter production programs: the indigenous J-10 and JH-7A programs. The J-10 program, which has been underway for over two decades, has made considerable progress since it appeared to be in trouble during the late 1990s. While some small initial batches have been delivered, recent orders for Russian AI-31 turbofan engines may indicate China is ready to begin major production infusion of technology from Israel (as used in the Lavi fighter program, a model that itself borrowed heavily from the US-made F-16),⁴⁷ the J-10 represents the “low-end” of a potential high low mix of fighter for the PLAAF—similar to the concept employed by the US in the current F-15/F-16 mix and to be employed with the F-22/F-35 mix.

The JH-7A represents the dedicated attack element of PLAAF tactical aviation. An indigenous program as well, the JH-7A is intended to provide a capable, low-cost ground attack capability for PLAAF and PLAN aviation branches. *Jane's* reporting indicates that up to 150 JH-7A aircraft will be built, although recent indications from other sources state the production run may not be that large.⁴⁸ In any case, the first batch of PLAAF JH-7As have replaced the Q-5s of the 28th Attack Division in Hangzhou, Nanjing Military Region, and additional elements of

⁴⁷ Richard D. Fisher, Jr., “Impact of Foreign Weapons Systems and Technology on the Modernization of the People’s Liberation Army,” (Air Force Systems: Foreign Assistance for the Chengdu J-10), *Report for the US-China Economic and Security Review Commission*, http://www.uscc.gov/researchpapers/2004/04fisher_report/04_01_01fisherreport.htm.

⁴⁸ Richard Fisher, Jr., “Report on the 5th Airshow China,” report for the International Assessment and Strategy Center, http://www.strategycenter.net/printVersion/print_pub.asp?pubID=54.

the production run will continue to displace the older, less capable Q-5 which currently comprises the bulk of the PLAAF's attack capability.⁴⁹ Legacy systems such as the J-8 and J-7 (an indigenous MiG-21 type) represent a large part of the current inventory and will likely remain in the force, albeit to a smaller extent, even through 2020. Open source reporting indicates that J-8II aircraft continue to receive upgrades to ensure modern capability, and it appears that J-7 aircraft are still in limited production with modern avionics and weapons capabilities.⁵⁰ The J-6 fighter (MiG-19) is an obsolete day-VFR only fighter used for territorial air defense only and, according to a December 2005 report from the Hong Kong *Wen Wei Po*, has been completely phased out of the PLAAF order of battle.⁵¹

At present, PLAAF strategic bomber capability resides only in the H-6 fleet. An indigenous version of the venerable Tu-16 Badger, China's H-6 fleet has undergone upgrades to enable them to perform a stand-off role by launching air launched anti-ship cruise missiles. A recent decision by China to re-open the H-6 production line highlights the continuing role this platform will have in the PLAAF's line-up⁵², and while production numbers are uncertain at this point, it is likely that the future aircraft to come off the line will have the capability to employ modern weapon systems, and the total number in the inventory will likely exceed 120 aircraft.⁵³ For several years, there has been considerable speculation that China is preparing to procure long-range strategic bombers from Russia; in fact, much of the reporting on the Peace Mission 2005 exercise noted that the inclusion of Russian Tu-95 and Tu-22M3 bombers was as much of a sales pitch as

⁴⁹ "Chinese Air Force Equipped with New Fighter-Bombers," Hong Kong *Kanwa Defense Review*, 1 August 2005, in FBIS CPP20050803000045, 30 August 2005.

⁵⁰ "China Continues Upgrading J8," Toronto *Kanwa Defense Review*, 1 Nov 05, in FBIS CPP20051104500001, 4 November 2005.

⁵¹ Chen Ch'eng, "Chinese Air Force Jian-6 Fighters Are Fully Decommissioned," Hong Kong *Wen Wei Po*, 3 December 2005, in FBIS CPP20051203506007, 3 December 2005.

⁵² "Sentinel Security Assessment – China and Northeast Asia: China, Air Force," *Jane's Online*, bombers section, <http://www8.janes.com/Search/documentView.do?docId=/content1/janesdata/sent/cnasu/chins120.htm>, accessed 7 December 2005.

it was to support the combined training objectives.⁵⁴ The fact that Russia recently made a decision to mothball a regiment of relatively new Tu-22M3 bombers only fuelled the speculation; however, other reports have indicated that China is either uninterested or non-committal in acquiring a strategic bomber at present, primarily because of the signal it might send to other countries in the region as to China's intentions.⁵⁵ It is worth considering that the Taiwan scenario, for which the PLA is ostensibly preparing, does not require long-range penetrating bombers such as the Tu-22M3.

China's Conventional Airpower: Combat Enablers

At present, the large combat aircraft fleet described above is not matched by a corresponding capability in the "enabler" fleet of airlift, tanker, and C2/ISR platforms which create a "force multiplier effect" and provide extended reach for power projection. This is not to say, however, that the PLAAF does not understand the importance of such systems; rather, this current force structure represents a conscious decision by China to first build up combat systems capable of employment in the Taiwan scenario, and then to follow with enabler forces which increase the lethality of combat assets when used against Taiwan and which also (presumably) provide a force projection capability to address other scenarios.

At present, the PLAAF's tanker fleet consists of just 10-12 converted H-6U aircraft. The H-6U possesses only a modest offload capability and the ability to refuel only a small segment of

⁵³ Richard D. Fisher, Jr., "Report on the 5th Airshow China."

⁵⁴ "Russia Promotes Sale of Strategic Bombers to China," Hong Kong *Wen Wei Po*, 20 August 2005, in FBIS CPP20050820000072, 20 August 2005.

⁵⁵ Richard Fisher reports from the 2005 Moscow Airshow that although two regiments of Russian Tu-22M3 will be retired, Tupolev would not answer questions regarding a pending Tu-22M3 sale to China, indicating Chinese hesitancy on the proposal. See "Chinese Dimensions of the 2005 Moscow Aerospace Show," report for the International Assessment and Strategy Center, http://www.strategycenter.net/printVersion/print_pub.asp?pubID=78. The Hong Kong Kanwa Intelligence Review posits that Chinese hesitancy on a Tu-22M3 buy is in part due to the

the J-8 fleet which has been modified with aerial refueling (AR) capability.⁵⁶ As a result, the H-6U fleet does very little to increase the capability and range of existing PLAAF combat systems. It is important to note that the Sukhoi types (particularly the multi-role Su-30) cannot refuel with H-6U—they are capable of refueling only with systems employed by the Russian-built IL-78 Midas tanker. However, a September 2005 decision by China to procure eight IL-78 tankers highlights the decision by the PLAAF to begin to build upon the inherent advantages of an AR capable fleet,⁵⁷ and Chinese pilots are already reportedly receiving AR training as part of the Su-30 checkout programs at Russian training bases.⁵⁸

The PLAAF currently has relatively better capability in its airlift fleet than the tanker fleet mentioned above. However, this is not to say that China's dedicated military airlift fleet can be considered robust in comparison with Western, and particularly US, standards. The core of China's strategic-capable airlift fleet are the 20 IL-76 transports procured from Russia in the 1990s. Similar in capability to the US C-141B, the IL-76 provides a significant payload and range combination which can be used to support airland cargo operations across China—or beyond. However, the principle mission of the existing IL-76 fleet is to support airborne operations by the PLAAF's 15th Airborne Army. As discussed in subsequent sections, IL-76 units have been engaged in numerous airdrop training events with the 15th Airborne Army and continue to improve their capabilities. As part of the same agreement which detailed the procurement of the eight IL-78 tankers, China and Russia also announced that the PLAAF would procure an additional 30 IL-76 transports.⁵⁹ This development represents a major increase in

political repercussion such a move would cause in Japan and the US. See “Russia's Promotion of Tu22M3 to China,” *Hong Kong Kanwa Intelligence Review*, 20 Oct 2005, in FBIS CPP20051026500004, 26 October 2005.

⁵⁶ *Jane's*, “Sentinel Security Assessment – China and Northeast Asia: China, Air Force,” training section.

⁵⁷ “China to Buy Russian Jets for \$1.5 Billion,” *Associated Press*, 9 September 2005.

⁵⁸ *Jane's*, “Sentinel Security Assessment – China and Northeast Asia: China, Air Force,” tankers section.

⁵⁹ “China to Buy Russian Jets for \$1.5 Bln,” *Associated Press*, 9 September 2005.

capability for the PLAAF. Force structure in 2020 should see at least these 50 airlifters in the inventory, and perhaps more should China see the need for more dedicated military airlift.

Augmenting the long-range IL-76 fleet is the shorter-range fleet of Y-8 and Y-7 transports. Based on the An-12 and An-24/26, respectively, these aircraft provide a “tactical” capability to include the ability to land on short unimproved runways in support of contingency operations. At the same time, the Y-8 is also employed in support of airborne operations, typically dropping paratroopers while the larger IL-78 is employed to drop heavy equipment—an approach similar to the C-130/C-17 mix currently resident in the USAF. Future procurement for this tactical airlift fleet is less clear than the IL-76 program. A Y-8X has already been offered to the PLAAF by Shaanxi Aircraft Corporation and a Y-9 version is current under development with capability reportedly similar to the US C-130J, and Xian aircraft corporation has also offered its own version of a modern small airlifter for consideration by the PLAAF.⁶⁰

In the event of a major conflict, China can also be expected to rely upon a large fleet of commercial airliners currently in use by state-controlled airlines. These 500-600 aircraft, while unable to perform any of the militarily unique missions such as airdrop or airland operations into unimproved airfields, represent a significant capability to move either personnel or palletized freight rapidly and over long distances. While the PLAAF does employ commercial airlift in peacetime to move personnel on a limited basis, a formal mobilization of civil aircraft in support of a major military contingency would require a decision by senior Party leadership.⁶¹ While no track record yet exists for doing so, the availability of these aircraft to support PLAAF operations as part of an effort to project conventional force beyond China’s near periphery must be considered a viable option.

⁶⁰ Jane’s, “Sentinel Security Assessment – China and Northeast Asia: China, Air Force,” transport section.

⁶¹ *China’s National Defense in 2004* (White Paper), chapter 6.

At present, China possesses a very limited AEW capability but continues to aggressively pursue this important force multiplying capability. The July 2000 withdrawal of Israeli support to install the Phalcon AEW system in PLAAF IL-76 aircraft delayed progress in this effort and forced the Chinese to turn to Russian systems and indigenous programs to provide an AEW capability.⁶² Reporting on progress appears mixed; however, at present it appears that the PLAAF possesses two test article “Xin Kong Jing” (KJ-2000) AEW aircraft based on the IL-76 platform, and is poised to run another two aircraft through production shortly.⁶³ Further production appears likely between now and 2020, but numbers are likely to be determined by the success of indigenous radar programs as it appears the PLAAF has broken off plans to buy from Russia.⁶⁴ Augmenting the IL-76 AEW program is a similar effort based on the Y-8; reportedly, two such aircraft are in operation and are capable of providing not only battlespace awareness but also targeting information for aircraft involved in maritime attack operations.⁶⁵ Again, procurement plans for additional Y-8 AEW aircraft are uncertain, but it is likely that the fervent Chinese interest in this program reflects a desire to procure additional systems in the timeframe between now and 2020.

The PLAAF currently suffers from a similar lack of intelligence, surveillance, and reconnaissance (ISR) aircraft. PLAAF efforts to develop a capability similar to the US E-8 JSTARS is centered on a version of the Tu-154M. According to reporting in 2005, at least one

⁶² Fisher, “Impact of Foreign Weapons Systems and Technology,” (Air Force Systems: Beriev A-50E Mainstay AWACS).

⁶³ “China Assembling AWACS,” *Toronto Kanwa Defense Review*, 1 November 05, in FBIS CPP20051104517001, 4 November 05, and “More Chinese AWACS Under Flight Test,” *Toronto Kanwa Defense Review*, 1 July 05, in FBIS CPP20050706000087, 6 July 2005. Both Kanwa reports discuss indigenous efforts; Fisher also mentions 4 IL-76 based AEW platforms as part of the PLAAF plan, but mentions Russia’s Beriev as the source of the radar.

⁶⁴ Reporting in December 2005 indicated the PLAAF may procure up to 8 KJ-2000 aircraft. See Wang Ch’ing, “China’s Self-Built Early Warning Aircraft Expected to Enter Service Very Soon; Performance a Generation Ahead of US,” *Hong Kong Zhongguo Tongxun She*, 9 December 2005, in FBIS CPP20051209045003, 9 December 2005.

⁶⁵ Fisher, “Impact of Foreign Weapons Systems and Technology on the Modernization of the People’s Liberation Army,” (Air Force Systems: European and Israeli AWACS Systems and Technology).

aircraft has been modified with a synthetic aperture radar (SAR), and unconfirmed reports indicate the PLAAF may be attempting to expand its fleet to 4-6 aircraft.⁶⁶ However, China has been working on a SAR capability since the 1980's, and it is unlikely that the one Tu-154M ISR aircraft possessed by the PLAAF has moved from testing into operational service.

PLAAF Airborne Capability

Unlike the US military, the airborne component of the PLA resides within the PLAAF instead of the PLA Army proper. The 15th Airborne Army represents the PLA's primary rapid reaction capability, and while it has had a consistent focus on maintaining internal security in the past (a mission which it still retains today), the 15th Airborne Army falls within the focus of this analysis since it provides a unique capability for China's armed forces to reach out, seize an objective, and either hold it until either additional conventional forces can be brought in, or withdraw once the immediate objective is achieved. The fact that the Airborne forces are considered to be one of the most highly trained in the PLA adds to the importance of their role in any rapid projection of conventional force by China.⁶⁷

The 15th Airborne Army is composed of three divisions, the 43rd, 44th, and 45th, each with roughly 10,000 soldiers each. Total strength of 30,000 is rounded out by a headquarters element. As discussed in the following sections, airborne forces play a key role in how China would fight in Taiwan, and could be expected to do the same in other scenarios in which their unique capabilities can be used advantageously. Recent exercises in 2004 and 2005 (discussed in detail

⁶⁶ Fisher, "Impact of Foreign Weapons Systems and Technology on the Modernization of the People's Liberation Army," (Air Force Systems: Foreign Assistance for SAR and ELINT Aircraft), and "Tu-154M/D Surveillance and Electronic Intelligence Aircraft," *China Defence Today*, <http://www.sinodefence.com/airforce/specialaircraft/tu154md.asp>, accessed 4 December 2005..

⁶⁷ This is a widely held viewpoint. For example, see Dennis J. Blasko, Written Testimony to the US-China Economic and Security Review Commission, 15 September 2005, http://www.uscc.gov/hearings/2005hearings/written_testimonies/05_09_15wrts/blasko_dennis_wrts.htm.

below) have highlighted the improving capabilities of this unit, as well as new equipment such as the ZLC-2000 airborne tank which are being brought on-line to improve combat effectiveness.⁶⁸ Nevertheless, while a formidable force, the primary handicap the 15th Airborne faces is a lack of strategic mobility. Present IL-76 capability is barely sufficient to move two battalions at once; with the addition of another thirty IL-76 transports, a brigade sized force could be moved—but hardly anything close to the full capability resident within the three divisions.

⁶⁸ Richard D. Fisher, Jr., “Chinese Notes from AeroIndia and IDEX,” report for the International Assessment and Strategy Center, http://www.strategycenter.net/printVersion/print_pub.asp?pubID=63. According to a report from the Jamestown Foundation, the ZLC-2000 was used in the August 2005 Peace Mission exercise with Russia. See Martin Andrew, “Power Politics: China, Russia, and Peace Mission 2005,” *China Brief*, vol. 5 issue 20 (27 September 2005), http://www.jamestown.org/publications_details.php?volume_id=408&issue_id=3474&article_id=2370274

The Air Force has gradually shifted from one of territorial air defense to one of both offensive and defensive operations... Combined arms and multi-type aircraft combat training is intensified to improve the capabilities in operational air strikes, air defense, information counter measures, early warning and reconnaissance, strategic mobility, and integrated support.

Government of the People's Republic of China
White Paper on China's National Defense, 2004⁶⁹

Chapter 4

Doctrine and Readiness For Power Projection

PLAAF Doctrine

As previously discussed, official Chinese statements in the 2004 Defense White paper and elsewhere continually emphasize China's defensive approach and absence of any desire for territorial expansion or hegemony. Such policies strongly suggest that China would be hesitant to establish a robust doctrine for an offensive power projection capability; however, a further reading of the White Paper shows exactly the opposite to be true. While continuing to mention the traditional PLA concepts of "active defense" and "people's war," the focus is on further development of a modern, professional force capable of winning a high intensity local conflict: "The PLA takes as its objective to win local wars under the conditions of informationalization and gives priority to developing weaponry and equipment, to building joint operational capabilities, and to making full preparations in the battlefields."⁷⁰ In applying this guidance directly to the PLAAF, the White Paper acknowledges the traditional role of territorial air defense while emphasizing the on-going transition to a set of simultaneous offensive and defensive operations. As quoted above, specific emphasis is placed upon "combined arms and multi-type aircraft combat training...to improve the capabilities in operations like air strikes, air

⁶⁹ *China's National Defense in 2004*, chapter 3.

defense, information counter-measures, early warning and reconnaissance, strategic mobility and integrated support.”⁷¹

While the current focus of any such “local war” is likely to be Taiwan, it is worth reviewing that the concept of “active defense” has historically involved the application of offensive expeditionary forces in order to pre-empt perceived threats. In fact, the PLA’s *Science of Campaigns* specifically lists “offensive” operations as one of three air force campaigns as well as one “joint” campaign (airborne operations) which could easily fit into the realm of offensive power projection.⁷² It is also worth noting that in 2004, the Central Military Commission (CMC) finally approved a specific PLAAF component of the overall PLA Strategic Guidance, encapsulated in the terms “Integrated Air and Space” and “Simultaneous Offense and Defense.”⁷³ In other words, nothing in Chinese doctrine or historical tradition rules out the use of offensive power projection, and it is clear based on the current White Paper and PLA documents that the PLAAF is expected to maintain such a capability.

In a 2005 interview, PLAAF Commander Qiao Qingchen and Political Commissar Deng Changyou echoed these statements and further elaborated on their plans for training the force to succeed in local wars under conditions of informationalization: “We should continue to perfect the training mechanism, conduct training under battle conditions, hold maneuvers as a method of training, and institutionalize the red force vs. blue force maneuvers...”⁷⁴ The emphasis on red force versus blue force maneuvers, a training method long used by western militaries but only

⁷⁰ Ibid, chapter 2.

⁷¹ Ibid, chapter 3.

⁷² The other Air Force campaigns are “defensive” and “air blockade” campaigns. See Wang Houqing and Zhang Xinye, ed., *Science of Campaigns* [Zhanyi Xue] (Beijing: National Defense University Publishers, May 2000), 350-351.

⁷³ “China Plans To Build Strategic Air Force, Acquire Long-Range Bombers,” Hong Kong *Feng Huang Wang*, 28 June 2004, quoted in Kenneth Allen, “The PLA Air Force 2006-2010,” unpublished working paper, 30 January 2006.

recently employed in the PLA, is notable in that it demonstrates a commitment to realistic training and a maturing willingness to allow commanders “free play” in the employment of their forces. However, it is worth noting that the interview contained no mention of the PLAAF conducting independent strategic operations along the lines of the air campaigns conducted by the US and allied air forces during conflicts in the Middle East, Kosovo, and to a more limited extent, Afghanistan. While campaign planning staff guidance does contain some reference to strategic targets,⁷⁵ at present there appears to be no fully-defined concept for independent air campaigns by the PLAAF.

PLAAF Readiness

So what is the current state of readiness of the PLAAF to execute offensive power projection operations? This is obviously a difficult topic, with the ability to assess readiness proscribed in large part by the limited availability of detailed information on the subject. For simplicity, three areas will be addressed: basic indicators of readiness, complex indicators of readiness, and a brief discussion of recent large-scale training exercises involving the PLAAF.

Basic Indicators: Flight Hours and Night/Adverse Weather Training

One of the principle basic indicators of aircrew readiness is simple flying time. The 2004/2005 edition of the International Institute of Strategic Studies (IISS) *The Military Balance* indicates that PLAAF aircrews accumulate the following flight hour totals on an annual basis:

⁷⁴ “PLA Air Force Commander, Political Commissar Discuss Air Force Development,” Beijing *Xinhua Domestic Service*, 11 November 2005, in FBIS CPP20051111042037, 11 November 2005.

⁷⁵ In a PLA publication on joint campaign planning, elements such as the enemy headquarters, industrial base, scientific institutions, and nuclear facilities are mentioned as targets in a discussion separate from more operational and tactical targets such as infrastructure and fielded forces. However, there is no further reference about whether such strategic targets would be part of an independent air campaign to achieve strategic objectives. Jiao Cheng and Gao Yubiao, *A Course in Joint Campaign Study* (Beijing: Military Science Press, 2002), 449.

H-6 bomber (80), J-7/J-8 fighters (130), Su-27/30 (180).⁷⁶ This data matches information presented in *Jane's* reporting,⁷⁷ and the low number of annual hours for bomber crews is also consistent with a 2003 PLA Daily report on a Lanzhou aviation unit that experienced "...many difficulties including shortage of flying hours" and "...as a whole lacks flying training time while there are much training contents."⁷⁸ These numbers are likely augmented by some simulator training, although the availability of advanced simulators for the Sukhoi series of aircraft has been limited.⁷⁹ In comparison, USAF fighter, attack and bomber crews average 215 hours per year while USAF airlift and tanker crews average over 300 hours per year.⁸⁰

The "quality" of the flying time discussed above is a function of the type and volume of night and all-weather training conducted by PLAAF crews. The PLAAF continues to make progress in conducting more thorough night and over water flight training. In a mission that was until the late 1990's solely performed by PLA Naval Aviation, some PLAAF units appear to have become proficient;⁸¹ however, reporting as recent as late 2004 indicates that other PLAAF units are still just becoming comfortable with night maritime operations. For example, one PLA Daily reported the following about an aviation division equipped with "new type of fighters":

"It is learned that since this year, the division has organized various trainings for its pilots, such as flying under the hooded cockpit and flying through clouds and instrument

⁷⁶ *The Military Balance 2005/2005*, The Institute for Strategic Studies (London: Oxford University Press, October 2004), 172.

⁷⁷ *Jane's*, "Sentinel Security Assessment – China and Northeast Asia: China, Air Force," training section.

⁷⁸ Lai Wenping, "Air Force Bombers Exercise More Tasks," *PLA Daily* (English), 2 September 2003, http://english.pladaily.com.cn/english/pladaily/2003/09/02/20030902001015_MilitaryNews.html.

⁷⁹ Reports indicate Sukhoi has transferred one or two Su-27 simulators to the PLAAF, and there are also Su-30 cockpit simulators available using personal computer based applications. See Richard Fisher, Jr., "PLA Air Force Equipment Trends," in Stephen J. Flanagan and Michael E. Marti, eds., *The People's Liberation Army and China in Transition* (Washington, D.C.: National Defense University Press, 2003), 139-175. See also *Jane's*, "Sentinel Security Assessment – China and Northeast Asia: China, Air Force," training section.

⁸⁰ These numbers are based on author's personal experience as a USAF pilot.

⁸¹ In May 2004, one report on a Nanjing area aviation regiment indicated a high level of proficiency while training for "...simultaneously attacking multiple warship targets on the sea during complex weather conditions at night." See Jin Congqiang and Hong Liangjun, "Aviation Regiment Tempers Night Operation Capability," *PLA Daily* (English), 12 May 2004, http://english.pladaily.com.cn/english/pladaily/2004/05/12/20040512001042_MilitaryNews.html

flight, and it proceeded step by step the shallower to the deeper and succeeded in breaking through difficult points of training one by one....Through the trainings with a clear aim, the division has greatly upgraded the tactical skills of its pilots, and all its pilots, except some new ones, have acquired the capacity to carry out night maritime flight missions.”⁸²

In addition, although night training has been expanded, it remains to be seen whether and how the PLAAF is using night vision devices (NVD’s). As western air forces have learned, flight using NVDs is difficult, but imparts a huge advantage which the Chinese will likely pursue if not doing so already.

Complex Indicators: Air Refueling and Airborne Training

The PLAAF did not possess an aerial refueling capability until the first H-6U tanker and J-8 fighter successfully connected in the 1990’s. Recent *Jiefangjun Bao* reporting highlighted this capability by describing in detail a recent training sortie in which several formations of fighters “took a few minutes for the aircraft to meet, link up, refuel and disengage.”⁸³ While the article made the refueling appear routine, in reality only a small segment of PLAAF J-8 pilots conduct this training. The recently announced plan to procure the more capable IL-78 demonstrates the PLAAF’s commitment to further developing this capability on a larger scale. According to analyst Richard Fisher, PLAAF Su-30 pilots have been conducting air refueling training with Russian Air Force IL-78s, but without compatible tankers of their own, currency of training is a function of Russian cooperation.⁸⁴ Until China obtains its own capability, air refueling training in the PLAAF will continue to be very limited.

⁸²Dong Jie and Zeng Baoyu, “Breakthroughs Made in Night Maritime Flight Training,” *PLA Daily* (English), 6 September 2004, http://english.pladaily.com.cn/english/pladaily/2004/09/06/20040906001032_MilitaryNews.html

⁸³ Tan Jie and Yan Guoyou, “Breakthrough in ‘Transfusion’ Bottleneck for Fighters in the Air,” *Jiefangjun Bao*, 15 September 2005, in FBIS CPP20050914000216, 14 September 2005.

⁸⁴ Fisher, “Chinese Dimensions of the 2005 Moscow Aerospace Show.”

With respect to training of airborne forces, the PLAAF has made significant strides with an aggressive program. An October 2005 report in *Jiefangjun Bao* describes the development of the airborne forces from their initial efforts in 1995 to the present. Starting with attempts to airdrop basic personnel and equipment, in which problems such as “parachutes not opening properly, the parachute separating from the load prematurely, or parachute cords wrapping around the aircraft,” Chinese sources claim the PLAAF has reached the point in 2005 where it could perform multiple drops of heavy equipment in both single and multi-item passes across the drop zone.⁸⁵ On a similar note, March 2005 reporting on a Guangzhou Military Region unit highlighted all weather airdrop capability to “deliver accurate airdrops in the cloud and above cloud” by describing training to

“...deliver airdrop in an unfamiliar region with no ground guidance, no weather data and no artificial marker (three no’s) during daylight hours, and with no ground guidance and no weather data (two no’s) at night.”⁸⁶

In April 2005, the PLAAF further developed its over-water and adverse weather airdrop operations, with the training ultimately culminating in

“...two consecutive days of highly intense, multiple sortie, nighttime high seas long-range follow-up airdrop training in a tactical setting, testing its abilities for long-range nighttime raids, penetrating defenses over the high seas, and on-time airdrops at night under “two no’s” conditions.”⁸⁷

Ostensibly, the unit conducting this advanced training is the 13th Air Division operating IL-76 aircraft from Wuhan Airbase, Hubei province. While the reporting indicates these training missions were most likely flown by leading-edge crews, assuming these capabilities are soon

⁸⁵ Zhao Qihong and Tan Jie, “Crack Troops and Sharp Weapons Enhance the Might of China’s Airborne Troops,” *Jiefangjun Bao*, 26 October 2005, in FBIS CPP20051026510017, 26 October 2005.

⁸⁶ Fan Haisong and Ding Yanli, “Long Range Airdrop Exercise by Guangzhou MR Air Force,” *Kongjun Bao*, 26 March 2005, in FBIS CPP20050512000275, 12 May 2005.

⁸⁷ Duan Guohua and Si Hexin, “Guangzhou Military Region Air Force Regiment Conducts First Nighttime High Seas Long-range Follow-up Airdrop,” *Kongjun Bao*, 23 April 2005, in FBIS CPP20050524000238, 24 May 2005.

resident throughout the rest of the PLAAF IL-76 and Y-8 crew forces, China's aerial delivery systems soon could be approaching the technical capabilities of Russian and western air forces.

As discussed below, however, reporting from observers at recent major exercises involving PLAAF airborne forces has been mixed in terms of performance and in-terms of integration into joint operations. While great progress has been made compared to the capabilities of just 5 years ago, even in the words of a front-line PLAAF airborne regiment commander, much work remains to be done to "...achieve the integration of information, the integration of equipment, the integration of capabilities, and the integration of training."⁸⁸

A Review of Recent Major Exercises

During the course of 2005, the PLA and PLAAF conducted a series of relatively high-visibility exercises which provide some insight into their current state of readiness to conduct conventional force projection. The following section reviews recent regional level exercises as well as the more highly publicized Peace Mission 2005 and North Sword 2005 exercises.

Regional Exercises

A recent exercise in Guangdong Province provides an example of the type of training conducted at the regional level. According to a Hong Kong source, the 3-day exercise involved all Services of the PLA in training to conduct "...air defense, seizure of command of the air, and sea blockade." Notable in the report is that this was the area's largest live ammunition exercise in recent years.⁸⁹ A more widespread exercise organized by the Beijing Military Region

⁸⁸ "Paratroops are a Strategic Arm for Future Warfare," interview with airborne regiment commander Li Youyou, *Kongjun Bao*, 16 April 2005, in FBIS CPP20050517000206, 17 May 2005.

⁸⁹ Yang Hui, "PLA is Carrying Out Large-Scale Sea-Land-Air Live Ammunition Exercise in Guangdong," *Zhongguo Tongxun She*, 22 Sep 2005, in FBIS CPP20050923052029, 23 September 2005.

employed army and air assets in a joint operation lasting over 10 days in October 2005. In a red force versus blue force format, the exercise focused on ground-air coordination, countering information attack, long-range precision strikes, and anti-air warfare. According to the *Jiefangjun Bao* report, the exercise area covered a vast space from desert regions beyond the Great Wall to the coastline of the Bohai Sea.⁹⁰

Peace Mission 2005

This combined Sino-Russian exercise held over the course of 18-25 August was billed as an “anti-terrorism” exercise but consisted of a command post exercise, a naval blockade, and an amphibious and airborne assault on the Shandong Peninsula of northeastern China. The first ever large-scale joint military exercise between the two countries, official statements following the Peace Mission ’05 (PM ’05) from the Chinese and Russian Defense Ministers termed the exercise a “success.”⁹¹ However, critical analysis from western observers indicated that PM ’05 was highly scripted with very little “live play.”⁹² While J-8 fighters provided air cover and formations of Su-30 aircraft delivered some air-to-ground ordnance,⁹³ the majority of strike assets used were from Russia.⁹⁴ Also notable was the marked absence of any PLAAF AEW or C2/ISR assets; according to reports, one Naval Aviation Y-8 AEW aircraft participated,⁹⁵ but the one A-50 aircraft which participated was provided by Russia.⁹⁶

⁹⁰ Liang Jintang and Zhu Min, “Conducting Joint Operation in Desert and by Sea,” *Jiefangjun Bao*, 10 November 2005, in FBIS CPP20051114502008, 14 November 2005.

⁹¹ “Chinese, Russian Defense Ministers Hail Success of Joint Exercise,” *Xinhua News Service*, 26 Aug 05, in BBC Monitoring Asia Pacific, 26 August 2005.

⁹² Andrew, “Power Politics: China, Russia, and Peace Mission 2005”.

⁹³ Aleksey Ventslovskiy, “Bad Guys Dislodged from Weibei,” *Krasnaya Zvezda*, 26 August 2005, in FBIS CEP20051020330001, 20 October 2005. In addition, reports indicate one H-6 bomber dropped a single long-range air-to-ground weapon. See Martin Andrew, “Power Politics: China, Russia, and Peace Mission 2005”.

⁹⁴ “Peace Mission ’05 Ends in Blaze of Glory,” *China Daily*, 26 August 2005

⁹⁵ Fisher, “Chinese Dimensions of the 2005 Moscow Aerospace Show.”

⁹⁶ “Peace Mission ’05 Ends in Blaze of Glory,” *China Daily*.

Besides a look at combat aviation, PM '05 provided a view into the preparedness of the PLAAF's airborne forces. While the overall airfield seizure part of the operation went well, according to some reports, comparisons between the Russian paratroops and PLAAF airborne forces left the Chinese lacking. For example, the Hong Kong *Wen Wei Po* noted the difference in jump altitude (660 meters for the Russians, 800 meters for the Chinese) as well as the fact that Russian soldiers jumped with full equipment and live armament, whereas the Chinese troops received weapons and equipment after landing.⁹⁷ For the heavy equipment airdrop, China dropped between six and twelve new ZSL-2000 armored vehicles, with one of the vehicles flipping on its side after the main chutes failed to release after landing.⁹⁸ The chute malfunction during the airdrop is only notable in that it happened during such a high-visibility exercise; such malfunctions can and do occur during the course operations of even the best airborne units. However, the differences in personnel altitude and equipment carried raise questions about capability; in such a high visibility exercise, it is somewhat surprising that the PLAAF would intentionally demonstrate a capability inferior to their Russian counterparts unless they were either truly incapable of doing so or did not want to show it at the time.⁹⁹

Also notably lacking from the PM '05 scenario was any real opposition force capable of realistic resistance. As a hypothetical operation against terrorists, it would have been unrealistic to introduce a robust enemy air defense network or air-to-air threat. As a result, PM '05 gave no

⁹⁷ "Inferior Paratroops: the PLA to Learn from the Russians," *Wen Wei Po*, 23 August 2005, in FBIS CPP20050823000074, 23 August 2005.

⁹⁸ The report of six vehicles is based on a transcript of Russian television reporting by *Moscow Zvezda Television*, 19 September 2005, in FBIS CEP20050919027182, 19 September 2005. Official Chinese reporting, however, claimed 12 vehicles had been dropped during the exercise. This report also noted the use of a "rocket buffer engine" to reduce the rate of the vehicle's fall at the time of ground impact, which, if accurate, is a notable advance in PLAAF capability. See "Observing the New Development of China's Airborne Force Through the Sino-Russian Military Exercise," Xian *Binggong Keji*, 1 October 2005, in FBIS CPP20051122318022, 22 November 2005.

⁹⁹ Russian frustration with China's lack of openness during PM '05 was evident on several occasions. The *Zvezda* broadcast referenced above contains several cases; see also *Moscow Ren TV*, 1930 GMT 17 August 2005, as reported in BBC Worldwide Monitoring, 18 August 2005.

indications as to the capability of the PLAAF to locate, suppress and/or destroy enemy air defenses in advance of offensive attack operations, nor of the ability of strike and airlift aircraft to avoid and/or defeat enemy air defenses once engaged. As has been so clearly learned by the US today, force projection operations into even relatively low threat environments can still pose the risk of engagement by widely available small arms and man-portable surface-to-air missiles. PM '05 gave no indications as to the PLAAF's capability to respond to these threats.

North Sword 2005

Exercise North Sword 2005 (NS '05) followed closely on the heels of PM '05 and was opened to observers from 24 countries including the United States.¹⁰⁰ As an annual live-fire force on force PLA exercise involving over 10,000 troops and conducted in the PLA's Inner Mongolia training area, the emphasis at NS'05 was on ground operations, but the PLAAF did play a significant role in terms of supporting and executing an airborne assault. In addition, NS '05 was notable for the red force versus blue force arrangement intended to allow free play to the maximum extent possible. While *Jiefangjun Bao* reporting claimed that the exercise had "no advance plan, no scenario, and no rehearsal,"¹⁰¹ it is more likely that the overall structure and pacing of the exercise was laid out in advance but that actions by individual units within this overall structure were unscripted to a limited degree.¹⁰²

¹⁰⁰ "PRC FM Spokesman on Military Drills with Foreign Observers in Inner Mongolia," *Agency France Press* (Hong Kong Service), 27 September 2005, in FBIS CPP20050927055020, 27 September 2005. The report quoted one western observer who noted that it appeared only 14 countries were actually represented.

¹⁰¹ Zhao Qihong and Zhang Jinyu, "Focus on 'North Sword 2005' Military Exercise," *Jiefangjun Bao*, 29 September 2005, in FBIS CPP20050929510009, 29 September 2005.

¹⁰² For example, see Chen Hui, Zhang Kunping, and Li Xuanliang, "PLA Conducts Largest Ever Field Maneuver Exercise Involving Actual Troops From Armored Divisions," *Xinhua Domestic Service*, 27 September 2005, in FBIS CPP20050927055066, 27 September 2005. Based on this report, it appears the overall exercise sequence of events was briefed to the Xinhua reporters in advance of covering the exercise

Regardless, in comparison to PM '05, NS '05 was a more complete attempt at PLA/PLAAF joint operations. According to *Jiefangjun Bao*, "...several sorties of fighter and assault aircraft executed continuous attacks, quickly opening up several drop zones" although Western observers present at the exercise did not observe such attacks.¹⁰³ Employed in support of the blue force, three "large" (likely IL-76) transports then dropped heavy equipment, to include 12 assault vehicles resembling "dune buggies", followed by a formation of four "medium" (likely Y-8) transports which dropped approximately 40 paratroopers each.¹⁰⁴ Interestingly, the airborne operations then continued with two unique twists; later on, two large aircraft were used to drop over 100 dummies onto a different drop zone as a deception tactic against the red force, and another Y-8 was used to drop a large number of anti-tank mines in order to block an armored movement by the red force.¹⁰⁵ As reported in *Jiefangjun Bao*, winds on the drop zone that day were 7 meters per second (approximately 13.9 knots), which is quite close to the limits for many western aerial delivery operations.¹⁰⁶ Also notable is the reported use of "remote control winged parachutes" to position the anti-tank mines as well as "a new type of powered parachute."¹⁰⁷ By these accounts, the airborne operation of NS '05 represented a multitude of "firsts" for the PLAAF in terms of the size of the force delivered, the distance across which the force was

¹⁰³ Interview with USAF Colonel Steven Ruehl, who was one of two US observers for NS '05. For the PLA perspective on drop zone preparatory attacks, see Zhao Qihong and Zhang Jinyu, "Focus on 'North Sword 2005' Military Exercise."

¹⁰⁴ Tan Zhaoping, Xu Shuangxi, Zou Weirong, and Tian Yuan, "Sword Whistles in the Desert: An Account of live forces Battle in Military Exercise North Sword 2005," *Jiefangjun Bao*, 28 September 2005, in FBIS CPP2005092906005, 29 September 2005.

¹⁰⁵ Zhao Qihong and Zhang Jinyu, "Focus on 'North Sword 2005' Military Exercise." According to Colonel Ruehl, Western observers saw the minelaying operation but were unable to verify the airdrop of dummies.

¹⁰⁶ Ibid. Typical limits for USAF airdrop operations are 13 knots for personnel drops and 17 knots for heavy equipment.

¹⁰⁷ Zhao Qihong, Duan Xanming, and Xu Yunpeng, "Largest Force in Chinese Airborne History Participates in Exercise North Sword 2005," *Kongjun Bao*, 29 September 2005, in FBIS CPP20051108318001, 8 November 2005.

moved, the combinations of equipment, material, and personnel, dropped, and the types of tactics employed.¹⁰⁸

Reporting from the *Kanwa Intelligence Review* noted the events above and tended to concur that NS '05 represented a significant step forward for China's airborne forces, although they still consider the PLAAF airborne forces to be inferior to former Soviet Union forces.¹⁰⁹ In addition, summaries of the exercise mentioned that red force units were equipped with surface-to-air missile (SAM) defenses; however, other than electronic jamming by supporting aircraft, no indication was given as to the success of PLAAF strike aircraft in neutralizing these units since the SAMs were considered "destroyed" by blue force special operations teams in advance.¹¹⁰ Even given the destruction of the red force SAM batteries been destroyed, the question still remains as to the logic of dragging a large formation of big, slow, vulnerable aircraft across a high intensity battle between two mechanized forces...in broad daylight. The daylight aspect may have partially been a function of making sure the exercise was visible to the foreign observers present; however, since the *Jiefangjun Bao* reporting mentioned so many "first evers" for this exercise, it is likely that the PLAAF has not yet attempted such a large operation at night or in the weather (both factors which would mitigate, to an extent, the threat to airlift aircraft). If the PLAAF wants its airlifters to survive in such a scenario, it will have to start training for such operations in conditions other than broad daylight.

Airborne insertion tactics used at NS '05 also exposed other deficiencies. As innovative as the use of "dummies" may appear as a means of tactical battlefield deception, one has to question the basic tactic in terms of effectiveness and risk. The time it takes for a paratrooper to

¹⁰⁸ Ibid.

¹⁰⁹ "Latest Trends of Chinese Military Exercises – Deep Offensive/Defensive Operations," *Kanwa Intelligence Review*, 20 October 2005, in FBIS CPP20051026500005, 26 October 2005.

¹¹⁰ Tan Zhaoping, Xu Shuangxi, Zou Weirong, and Tian Yuan, "Sword Whistles in the Desert."

descend from the aircraft to the ground at nominal drop altitudes is somewhere between 30 seconds and one minute—which is about the amount of time the enemy will be deceived until he notices the jumpers do not get up after touching down. Unless the “dummies” are dropped into an area unable to be seen by the enemy, the tactic is essentially useless and puts the aircraft into the same amount of risk as those which drop actual personnel and equipment—for much less gain. The same can be said of the use of slow, vulnerable airlift aircraft to drop airborne mines. Airborne mine laying is not a new concept, as other air forces have used bombers to drop mines for years—either on high speed penetration passes or from higher altitudes much less vulnerable to small arms and man portable missiles. Finally, the relatively small size of the airdrop operation (three IL-76 and four Y-8 aircraft dropping approximately 160 jumpers; the remaining elements of the airborne battalion used in the exercise were already in-place at the start of the scenario—presumably after a simulated airdrop operation)¹¹¹ highlighted the continuing challenge the PLAAF faces in terms of available lift to move the 15th Airborne Army.

Nevertheless, compared to PM '05, this years North Sword exercise shows a higher state of training and capability for the PLAAF in terms of airborne force integration with ground force operations. While the ability to detect, engage, and defeat enemy air defenses remains to be seen, and AEW and ISR aircraft were again notably absent, the use of electronic jamming and the presence of unmanned aerial vehicles loitering near the battlefield¹¹² indicates the PLAAF is serious about integrating some form of intelligence, surveillance, and reconnaissance (ISR) assets into joint operations. However, one question definitely left unanswered by the relatively brief NS '05 exercise is the question of sustainability of forces once engaged in a conflict—a

¹¹¹ Interview with Colonel Ruehl.

¹¹² Ibid.

subject at which the PLAAF is attempting to make progress in but still has a way to go to meet western standards of performance.

What You Typically Don't See: Logistics and Supply of Expeditionary Operations

Seizing an objective area is just one element of an airborne operation; without a successful follow on sustainment operation, the effort is likely to “die on the vine” for lack of support. By the same token, deployment of combat forces to forward airfields (for example, to airfields in southeastern China to support an operation in the Taiwan Strait, or to other bases elsewhere in China to support an operation along the periphery) requires the ability to rapidly shift resources and personnel to unfamiliar locations and then initiate combat operations. A 2003 study by former assistant air attaché in Beijing Kenneth Allen on logistics support for PLAAF campaigns provides excellent insight as to the ability of the PLAAF to support such operations. In response to the need to conduct mobile operations, the PLAAF required field stations (essentially, the logistics support functions associated with each flying regiment) to prepare for three situations: (1) to support their own aircraft when deployed to other PLAAF airfields, (2) to organize themselves to support multiple types of aircraft that deploy to their airfield, and (3) to prepare to support operations from dispersal airfields or highway landing strips.¹¹³ To support this concept, the PLAAF established rapid-reaction logistics units to provide mobile capabilities for aircraft flight operations (maintenance of aircraft and special equipment), transportation and supply, fuels, medical support, and airfield repair. By 2000, the PLAAF had expanded these concepts from a few “test” units to an air force-wide approach and began evaluating success in

¹¹³ Kenneth W. Allen, “Logistics Support for PLA Air Force Campaigns,” in Andrew Scobell and Larry M. Wortzel, eds., *China's Growing Military Power: Perspectives on Security, Ballistic Missiles, and Conventional Capabilities* (Carlisle, PA: UA Army war College Strategic Studies Institute, 2002), 273. Allen is now a full-time PLAAF analyst at the CNA Corporation.

deployment exercises in various military regions.¹¹⁴ Allen's conclusion after reviewing the results of these exercises is that "...the logistics forces have made adjustments in their organizational structure and operational methods to support the PLAAF's shift toward joint mobile, offensive operations, but they are not there yet."¹¹⁵

PLAAF efforts to improve logistics support for mobile operations continue. For example, recent reporting on Nanjing Military Region units focused on the transition from "service logistics" to "combat logistics" and described exercises using new field petroleum pipelines as well as "cross-border" airfield changes in which aircraft landed at unfamiliar airfields and launched again with little to no ground support.¹¹⁶ However, what remains to be seen based on recent exercises is how the PLAAF combines mobile logistics with rapid air transport.

Historically, nearly all of the PLAAF's logistics requirements move by surface transport—road or rail. In a rapid force projection scenario, China should be able to rely on its commercial airlift fleet to a certain extent, especially to move personnel...but for large equipment and supplies, the burden will largely fall upon the PLAAF's limited airlift fleet.

¹¹⁴ Ibid, 275.

¹¹⁵ Ibid, 291.

¹¹⁶ Song Fang, Zhang Jiantao, Chen Zhiming, and Chen Peng, "Building Up for Combat: Nanjing Air Force Units' Three In-depth Preparations for Military Battle," *Kongjun Bao*, 14 June 2005, in FBIS CPP20050727000242, 27 July 2005.

While the near-term focus unquestionably is Taiwan, it is noteworthy that many of China's new weapons are applicable to a wide range of potential operations beyond the Taiwan strait. The rapid growth in China's military power not only threatens Taiwan—and by implication the United States—but also poses threats to U.S. friends and allies throughout the western Pacific and Southeast Asia.

U.S.-China Economic and Security Review Commission
Annual Report to Congress, 2005¹¹⁷

Chapter 5

Assessment of PLAAF Rapid Conventional Force Projection

With this review of the PLAAF's platforms and training status in mind, the next step is to analyze the potential results should such forces be used in support of China's strategic interests. As discussed above, the possible scenarios in which China might use force are quite varied; however, for simplicity, this assessment will focus on three basic types of the use of force: *coercive*, *assertive*, and *constructive*. In brief, for the purposes of this analysis the "coercive" application of airpower is that which involves the actual or implied application of destructive force to compel an opponent to take a desired action...or to stop taking undesirable actions. While coercion can also include the concept of deterring an opponent from taking an action to begin with, it is difficult to prove the negative when deterrence actually works. Thus the focus is on the compellent form of coercion as used in air campaigns such as the 1999 NATO action against Serbia in Kosovo. The "assertive" use of airpower is similar but distinct from the coercive case in that it may also result in the application of destructive force—but indirectly and through a different means. Assertive uses of airpower put ground forces into a position (which they could not have otherwise achieved in a timely manner from which they can move on to apply a decisive effect. While Chinese historical examples are difficult to find, the insertion of

¹¹⁷ Richard C. D'Amato and Roger W. Robinson, chairmen, US-China Economic and Security Review Commission. *2005 Report to Congress* (Washington, DC: Government Printing Office) 2005, 133. http://www.uscc.gov/annual_report/05_annual_report.php.

the US Army's 173d Airborne Brigade to open a northern front during the 2003 Iraq war is an illustrative case. The third category is "constructive" use of airpower. The term constructive is used specifically as a counterpoint to the principle compellent form of coercive airpower—destructive—and describes the unique use of airpower to assist, build up, relieve, or otherwise help those in need. While the Berlin Airlift stands out as an unusually clear example of where constructive air power had an immediate strategic effect, the fact that constructive air power is more often associated with "soft" effects like engendering goodwill and positive public diplomacy should not be used to discount its value as a key element of air power.

Analysis of the Scenarios: What Can the PLAAF Do Now

In response to the above question, there are really six different assessments which must be made. This first section addresses PLAAF capabilities in the three representative scenarios by evaluating not only what the PLAAF can do as of 2005, but also the factors which currently limit the PLAAF's ability to execute a given application of force. A subsequent section follows which projects capability into 2020 based on a set of overall assumptions regarding events between the present and 2020, and considers how the limitations noted in the three scenarios in 2005 may change based on projected improvements made in the intervening 15 years.

2005: Coercive Scenario

Not surprisingly, of the three scenarios discussed, the coercive application of force is the one for which China is best prepared at present. The PLAAF's preparations for a military struggle over Taiwan have led to the development of a current capability to engage targets with modern combat aircraft and precision-capable weapons. Although not up to western standards, training programs appear to support a credible capability to effectively apply destructive force in a

coercive scenario along China's near periphery. However, several limitations exist at present which limit the PLAAF's capability to reach out beyond its borders to apply coercive force:

(1) Dealing with enemy air defenses. Without the assistance of a surface to surface missile force numbering in the hundreds, the PLAAF's capability to engage and take down an opponent's air defenses is missing a key element. In the Taiwan scenario, it is expected that initial air strikes will occur only after a massive wave of Second Artillery missile attacks to blind and disable ROC air defenses.¹¹⁸ The range of most of these DF-11 and DF-15 missiles is limited to approximately 500-600 kilometers,¹¹⁹ so in a rapid force projection scenario to a location distant from where these missiles are currently based in Southeast China, the PLAAF has two options to deal with any potential air defenses: wait for supporting missiles to be redeployed within range of the threat, or go it alone and hope for the best. If the scenario demands a rapid response to regions distant from South China, waiting for missile redeployments is probably not a viable option.

(2) Aircraft availability. Even though China possesses some 230+ Sukhois at present, only 100 are long-range precision-strike capable Su-30 variants—and caution dictates that some of those will have to be held back for a possible concurrent engagement over Taiwan. In addition, as in all air forces, a certain percentage of aircraft at a given time are unavailable due to maintenance. While the specific numbers can be debated, the fact is that only a fraction of the Su-30 force will be available for a coercive action. H-6 bombers, capable of launching accurate cruise missiles,

¹¹⁸ The 2005 US DoD Report represents the consensus view. See the DoD Report, 40-41. This view is consistent with PLA joint campaign staff planning. See Jiao Cheng, and Gao Yubiao, *Science of Joint Campaigns*, 160-161. For a perspective from Taiwan, see also Tyan, Dong-Jing, "Analysis of a Potential Cross-Straits War, of PLA Air Force Strategy, and Improvements for Taiwanese Self Defense," *Taipei Taiwan Defense Affairs*, 1 Oct 2003, in FBIS CPP20050830000264, 30 August 2005.

¹¹⁹ Jane's, "Sentinel Security Assessment – China and Northeast Asia: China, Ballistic Missiles," SRBM section, <http://www8.janes.com/Search/documentView.do?docId=/content1/janesdata/sent/cnasu/chins100.htm>, accessed 7 December 2005.

are an option but in considering their use, air defenses become an even more critical player as the H-6 is even more vulnerable than the Sukhoi.

(3) Absence of air refueling assets. Until the IL-78s ordered by the PLAAF are delivered from Russia and PLAAF crews are trained to operate the tankers, China has no way of extending the range of its strike force other than through repositioning (see discussion below). As a result, China's options are limited to the combat radius of its existing fleet as depicted in Figure 3, with



Figure 3. Unrefueled Su-30 Combat Radius

a caveat made for the fact that the PLAAF airfield at Lhasa is heavily affected by winter weather and is unavailable for operations the majority of the year. In any case, current capability is limited to China's near periphery, and while the H-6 remains a longer range option, vulnerability as discussed above is an issue for that older aircraft.

(4) Relative absence of C2 and ISR assets. While the PLAAF does possess a limited AEW capability at present, the small fleet size and imperative to remain available to handle a Taiwan conflict make it likely that an overall "air picture" will not be available to a strike package sent to apply coercive force elsewhere along China's periphery. In the absence of an enemy air-to-air threat, the absence of AEW may not be much of a factor, but the PLAAF is also very limited in any capability to sense moving targets similar to the US-made JSTARS system. As a result, precision weapons employed by the PLAAF will likely be limited to targets of a known, fixed location such as infrastructure, airfields, and military forces in garrison.

(5) Deployability of PLAAF aviation units is both a strength and a weakness. As discussed above, the PLAAF has focused aggressively in developing a capability for units to deploy and operate, and for locations to support aircraft which are normally not based at their location. While this capability is primarily intended to be a response to expected airfield damage from US attacks in the Taiwan scenario, the same capability could also be used to position aircraft closer to China's periphery (see figure 4 for the location of PLAAF bases) in order to extend the geographic area which can be influenced. However, it remains to be seen how far the PLAAF has gone in terms of establishing this capability as a universal readiness item for PLAAF units.

(6) Sortie rates. Logistics is a limitation in terms of ability to support high sortie rates for an extended period, and as Allen argues in his assessment of PLAAF logistics support, the PLAAF

has yet to demonstrate an ability to sustain sortie generation capabilities equivalent to those shown by NATO forces in the 1990s.¹²⁰ This does not mean, however, that the PLAAF does not have a credible strike capability—it just means that if the scenario called for a sustained high-tempo effort, the PLAAF may not be able to pull it off.



Figure 4. PLAAF Airbases¹²¹

Taking all these factors into consideration, the best way to characterize the PLAAF’s existing capability to conduct coercive action in scenarios around China’s near periphery is “limited in terms of size, range, targets, and duration.” If the scenario is to demonstrate resolve by hitting a small set of fixed targets in a low to medium threat environment within unrefueled combat range, the PLAAF can do it today. If the task is to engage multiple mobile enemy targets at extended

¹²⁰ Allen, “Logistics Support for PLA Air Force Campaigns,” 281.

¹²¹ This chart is reproduced from the Dutch Aviation Society website, <http://www.scramble.nl/cn.htm>, accessed 11 January 2006.

distances defended by sophisticated air defenses, in a campaign which could last for days or weeks, the PLAAF is not yet up to the task.

A final point in addressing this question is doctrine. As discussed previously, the PLAAF has historically been focused on territorial air defense, and has only recently shifted to a doctrine of balanced offense and defense. At the same time, strike operations remain largely focused on operations in support of ground maneuver elements. Embedded in the scenario above is the principle of independent air operations. Despite the elevation in June 2004 of the commanders of the PLAAF, PLAN, and Second Artillery to membership on the Central Military Commission, the Chinese military continues to be dominated by the PLA ground element. In such an environment, it is not clear that the PLAAF has thoroughly considered how it would conduct an independent air campaign.

2005: Assertive Scenario

Recent exercises such as North Sword 2005 indicate that the PLAAF has a fairly sophisticated capability for small unit insertions (company and perhaps battalion size) of airborne forces. Despite the impression of a sub-par performance at PM '05, readiness and training of PLAAF airborne units appears to be quite good. Developments in terms of multiple heavy equipment airdrops, mixed formations of IL-76 and Y-8 aircraft, and night/adverse weather operations indicate a level behind but approaching that of western air forces. Should the scenario demand only a small force in order to achieve the objective, the PLAAF is in pretty good shape in 2005. However, the PLAAF's 15th Airborne Army is composed of three divisions totaling over 30,000 soldiers, and should the situation demand insertion of a force larger than battalion size, the situation changes dramatically for several reasons:

(1) Shortage of airlift. This one is pretty obvious... a fleet of 20 IL-76s and 48 Y-8s can only move so much at one time (the Y-7, which can only carry 38 jumpers, is not included in this analysis based on its limited one-way range of just 750 kilometers when fully loaded).

Assuming a maintenance reliability of approximately 80%,¹²² that would leave 16 IL-76 and 38 Y-8 available to support an airborne operation. Considering some of those would likely be held back for other potential high priority missions, an assumption of half the available fleet, or 8 IL-76 and 19 Y-8, is probably reasonable. As demonstrated at NS '05, the IL-76 would likely be used to drop the heavy equipment, while the Y-8 would drop personnel. At 96 fully-equipped paratroopers per aircraft,¹²³ the maximum that could be dropped in a single pass using the Y-8 is 1,824 jumpers—approximately two battalions. Not an insignificant force, but nothing approaching brigade size either.¹²⁴ Any increase above this number would require use of the IL-76 to drop personnel, with a corresponding drop in the amount of equipment to be delivered, or the use of a larger proportion of the total PLAAF IL-76 and Y-8 fleet. In the event the assertive operation were for some reason be able to land and offload troops (an “airland” operation versus and “airdrop” operation), the numbers and tradeoff between personnel and equipment remain the same and the only difference is that there would be no initial losses incurred by damage associated with the inherent hazards of airdropping men and equipment.

¹²² Due to lack of specific information, this number is a subjective assessment for the purposes of analysis. However, in comparison to the equivalent figure of 85% for USAF units, 80% is probably a reasonable estimate for PLAAF units.

¹²³ “Y-8 Transport Aircraft,” <http://www.sinodefence.com/airforce/airlift/y8.asp>.

¹²⁴ In comparison, Dennis Blasko estimates 11,000 as the maximum number of jumpers the PLAAF could drop on a single pass. However, it is important to note that his analysis assumes that (1) all PLAAF transports are operational (100% maintenance reliability), (2) all PLAAF transports are used in the operation—to include the short-range Y-7, and (3) no provision is made for airdrop of supporting equipment which would correspondingly reduce the number of jumpers. Blasko notes these assumptions and states the “...number of paratroopers likely to be transported at any one time is probably less than 10,000.” See “Chinese Airborne Forces: Changing Times, Changing Missions,” RUSI Chinese Military Update, June 2004, vol. 2, no. 1.

(2) Follow-on sustainment. While the PLAAF appears to actively exercise insertion operations under combat conditions, it is not clear how much they practice follow-on operations to sustain a force inserted, for example, to seize an airfield. The intricacies of a follow-on airland operation to bring in logistics personnel, supplies, and equipment, as well as a communications support element to keep in contact with command elements, is not an inconsequential task. The limited size of the airlift fleet (see discussion above) presents one primary limitation, although, if the surface-to air threat environment were permissive, China's civil aviation fleet could be called upon to provide support. In addition, a review of the PLA's *Science of Joint Campaigns* indicates that airfield seizure is an important mission for the airborne forces—but no discussion exists in the same document regarding follow-on sustainment once the initial success is achieved.¹²⁵ It is worth considering that this viewpoint is probably a by-product of the fact that PLAAF airborne forces are focused on (1) internal security and (2) Taiwan—both scenarios in which logistic sustainment is already present (internal) or is expected to rapidly follow with ground forces (Taiwan). However, if deploying airborne forces to distant austere environments beyond China's borders, such assumptions cannot be made, and thus follow-on sustainment presents a significant limitation on the PLAAF's ability to succeed in an assertive scenario.

(3) Minimal enemy air defenses. Unless the PLAAF is willing to suffer high losses within its limited airlift fleet, a low surface-to-air threat environment is a pre-requisite for any PLAAF assertive operation. While combined training with combat aviation to degrade air defenses prior to airborne operations was reported at NS '05, the ability of those assets to degrade an opponent's air defenses is suspect without support from surface-to-surface missiles. In addition, while the effort to integrate combined arms operations is laudable, such exercises appear to assume away the real, and persistent, threat of small arms and man-portable SAMs. Even with

¹²⁵ Jiao Cheng, and Gao Yubiao, *Science of Joint Campaigns*, 170.

combat aviation support, the USAF experience in Afghanistan and Iraq demonstrates that these threats remain and must be addressed in terms of defensive tactics.

With current capabilities and limitations, perhaps the best way to describe the PLAAF's ability to act in an assertive scenario is "ready on a small scale for a short time." There is no question they have trained and ready forces capable of accomplishing their mission should they be called upon to do so. The problems are the size of the airlift fleet and the ability to sustain the force once employed.

2005: Constructive Scenario

Unlike the coercive and assertive scenarios, a rapid constructive operation is likely to be almost entirely airlift centric. In addition, such a constructive scenario would very likely only occur at the invitation of a host government and thus would result in a permissive environment in which vulnerability to air defenses is not a consideration. The IL-76 and Y-8 fleets, as the PLAAF's most capable airlifters, would likely be involved in any humanitarian airlift operation. However, the limited numbers available represent the first challenge for China in such an operation. Assuming that the humanitarian airlift were to flow into major hard-surface airports capable of supporting commercial aircraft, it is likely that China's civil aviation fleet would be put into use in this scenario. Composed of passenger aircraft as well as numerous wide-body freighter aircraft, these assets could be used on a scale commensurate to the operation—from a few aircraft on a charter basis to a massive mobilization if Chinese leaders considered the situation dire enough.¹²⁶ So, assuming the commitment from China's leaders is present, and the

¹²⁶ As previously noted, China used commercial airlift for its initial Asian tsunami relief efforts. The process for mobilization of civil aviation assets is included in *China's National Defense in 2004* (White Paper), chapter 6.

operation is conducted at suitable airfields, aircraft availability is probably not a primary limitation.

Logistics, however, remains as a limiting factor in terms of the deployability of supporting equipment and personnel. Once the aircraft arrives at the receiving airfield, the humanitarian cargo must be downloaded. Commercial support equipment may be available—or not. If China wants to play a lead role in a humanitarian airlift, it will need to be able to deploy its own materials handling equipment (MHE) and personnel trained to rapidly download an aircraft and get it airborne again to clear the ramp for other incoming aircraft. In such an operation, command and control assets (personnel and communications equipment) are also essential to keep the flow moving. A certain level of deployable maintenance capability is also a factor. It is not clear that the PLAAF or even civil sector has equipment capable of deployment on short-notice, or whether their personnel train for such missions on a regular basis.

As the world leader in such efforts, this is how the US conducts successful humanitarian airlift operations. China would have to do the same to play a leading role; the alternative is to rely on other states to provide the supporting capabilities which the PLAAF does not possess. The discussion about deployability also applies to another key support asset which played a major role in the recent humanitarian operations in relief of natural disasters in Pakistan and southeast Asia—helicopters. Lacking any aircraft carriers, if China wanted to move helicopter assets to a distant location in support of relief efforts, it would have to rely on those which could either (1) fit into an IL-76 or Y-8, or (2) be airlifted by wide-body military aircraft from other states. If the former is not possible, and the latter not acceptable, China would have to yield leadership on the helicopter airlift piece of the operation to those who can. Overall, the bottom

line assessment on China's ability in 2005 to support a constructive humanitarian airlift operation is "capable, but without resources to lead."

Detailed assessments of China's, and in particular the PLAAF's, operational ability to project conventional force are uncommon in open source western literature. Most assessments take a very broad view, with little detailed assessment of current readiness and training status as they impact operational capability to project force...or focus almost exclusively on hardware. However, one fairly recent assessment by logistics specialist and former US Army attaché in Beijing Susan Puska reviews in detail the training activities of the PLA in 2000-2001 as they apply to force projection by focusing on reporting from Chinese national and regional military newspapers. In concluding her assessment, Puska states:

"The PLA today possesses a rough but ready force projection capability, one that will continue to steadily improve over time, which adds greater risks and costs for potential opponents in China's near periphery. The modernizing PLA increasingly provides the Chinese leadership with credible coercive strength—one that can back up the threat of force and/or selective employment of force to promote China's national sovereignty and security interests along its land, air, and maritime borders."¹²⁷

Reviewing the situation for the PLAAF in 2005, it appears that the steady improvements predicted by Puska have occurred. Subject to the limitations discussed above, the PLAAF presently offers a credible near-periphery conventional force projection capability to Chinese leadership. How that capability will evolve over the next 15 years is the subject of the next section of this analysis.

¹²⁷Susan M. Puska, "Rough But Ready Force Projection: An Assessment of Recent PLA Training," in *China's Growing Military Power: Perspectives on Security, Ballistic Missiles, and Conventional Capabilities*, Andrew Scobell and Larry M. Wortzel, eds. (Carlisle, PA: US Army War College Press, 2002). For an earlier but even more thorough assessment of the PLAAF, see Kenneth W. Allen, "PLA Air Force Operations and Modernization," in *People's Liberation Army After Next*, Susan M. Puska, ed. (Carlisle, PA: US Army War College Press, 2000).

A Look to the Future: PLAAF Force Projection Capabilities in 2020

The following analysis will build upon the analysis of PLAAF capabilities in 2005 and focuses primarily on expanding those capabilities based on known factors and some reasonable projections. However, before launching into this section, some overall assumptions need to be made up front. First, over the 15 year period leading to 2020, it is assumed that China will sustain a level of economic growth sufficient to produce and/or procure weapons systems at planned rates. This is not to imply that China must continue with blistering 10+% rates of growth which it has experienced over the past decade. Indeed, the historical experience of other growing economies has been that as the economy matures, growth rates slowly decline from earlier double-digit levels. However, it does assume that China will continue to commit resources to a defense budget that will support planned acquisitions.¹²⁸ Second, this analysis assumes that China will experience no major conflicts over the next 15 years that would significantly degrade overall capabilities. Specifically, this is a reference to a struggle over Taiwan; while the outcome of such a conflict is uncertain, what is very likely is that the PLAAF would put everything it had into the conflict, with some inevitable losses. Finally, it is also assumed that China's overall security dilemma does not change; to wit, that China does not engage in a partnership or alliance with another state which significantly changes the security environment in which it operates. While there is perhaps some room for debate on the margins, on the whole these assumptions are reasonable based on the current trend of economic and security affairs in Asia and on China's traditional preference to ensure its own security rather than rely on a foreign partner.

¹²⁸ This is also the conclusion reached by a recent major research effort by the RAND corporation, which concluded that by 2025, China would spend approximately 2.3% of GDP on military-related expenditures. See Keith Crane,

2020: Coercive Scenario

In comparison to its present capability to project conventional force beyond Taiwan, the first change in the PLAAF's ability in 2020 will be considerably longer range. The primary reason for this development will be the planned acquisition of IL-78 tankers to support compatible strike aircraft such as the Su-30. Although no delivery schedule has been formally announced, barring any major break in Sino-Russian relations it is very likely that all 8 tankers will be in the PLAAF inventory well before 2020.¹²⁹ With tanker support, the range of strike aircraft is theoretically unlimited, although in practice the limitation quickly becomes aircrew fatigue and length of duty day. Realistically, a coercive application supported by tankers would involve one or perhaps two refuelings; in such a scenario, the combat radius of the Su-30 is extended to 2,600 kilometers with one refueling and 3,500 kilometers after a second refueling.¹³⁰ Figure 5 graphically depicts these expanded combat radii; it is worth noting that the increased range brought about by tanker support brings the Malacca strait within the 2,600 kilometer ring while the Strait of Hormuz still remains slightly outside the 3,500 kilometer ring (unless Lhasa were available as a staging base). While no formal announcements have been made with respect to where the tankers will be based, the PLAAF would most likely opt to put them co-located with an air division which already operates the similar IL-76 in order to take advantage of maintenance and logistics efficiencies while also keeping them relatively close to regiments of

Roger Cliff, Evan Medeiros, James Mulvenon, and William Overholt, *Modernizing China's Military: Opportunities and Constraints* (Santa Monica, CA: RAND Corporation, 2005), 228.

¹²⁹ In a recent report, *Kanwa* quotes an Ilyushin executive who stated that the IL-76/IL-78 contract is effective through 2008, thereby implying deliveries would be complete by then. See "More Details of PLA IL78MKK Tankers," Toronto *Kanwa Defense Review*, 1 December 2005, in FBIS CPP200511295117019, 1 December 2005.

¹³⁰ Fisher, "Impact of Foreign Weapons Systems and Technology on the Modernization of the People's Liberation Army," (Air Force Systems: Sukhoi Su-30MKK/MKK2 Flanker).

receiver capable aircraft.¹³¹ While the limited size of the tanker fleet will have an impact on the number of PLAAF Su-30 pilots who can maintain full currency in aerial refueling, it can be assumed that a cadre of highly qualified pilots will maintain this skill in preparation for a long-range strike tasking.



Figure 5. 2,600 and 3,500 kilometer combat radii from PLAAF airfields

¹³¹ For example, the 13th Air Division at Wuhan Airbase, Hubei Province, which operates IL-76 aircraft in support of the 15th Airborne Army could be a likely bed-down location for the IL-78. Centrally located, Wuhan is within 1000 kilometers of the three main PLAAF Su-30 bases as well as the Cangzhou flight test center which also hosts Su-30s.

Since the September 2005 announcement, there has been no further discussion about additional tankers for the PLAAF. However, if past patterns can be a guide for future action, it is likely that there will be some additional procurement of tankers before 2020. As with the Su-27 and Su-30, China typically makes an initial purchase with a foreign weapon system, determines if it is useful, and if so, makes a further investment either through additional procurement, or, as in the case of most of the former Soviet aircraft in its inventory, builds locally based on co-production agreements or through reverse engineering. Which route the PLAAF takes on this question—whether to procure or try and build locally—remains to be seen.¹³² The number of additional tankers to be procured also is an open question...although based on the numerous other pressing modernization needs of the PLAAF which also must fit into a growing but still limited budget, the number will likely be in the single digits to teens. Regardless of how it happens, additional procurement beyond the eight tankers on order will be an important step by the PLAAF toward developing a large-scale long-range strike capability rather than the “niche” capability it will have with just eight tankers.

An organic tanker fleet is the clearest indicator that the PLAAF will have a better capability in 2020 to conduct a long-range coercive strike than at present. With respect to the other limitations noted above (dealing with enemy air defenses, strike aircraft availability, C2 and ISR support aircraft, deployability, and logistics sustainability), the picture is less clear. The tanker fleet, albeit small, actually helps with the deployability question; with air refueling, there is less of a need to redeploy aircraft to airfields near the periphery to extend their range beyond China’s borders. Although no additional Su-30 procurement is planned beyond the additional 24 on

¹³² One potential indication of the PLAAF’s intentions can be found in the recent Kanwa report. While no plans are yet made to transfer production, Ilyushin is said to be planning to help China establish an IL-76/IL-78 maintenance and repair center at the Xian Aircraft Company. See “More Details of PLA IL78MKK Tankers,” Toronto *Kanwa Defense Review*, 1 December 2005.

order for the PLANAF, the availability of strike aircraft may be enhanced as Su-27 models are modified for air-to-ground precision munitions and new precision weapons capable J-11 aircraft come off a restarted production line.¹³³ Reports also continue to surface regarding potential procurement of advanced Su-35 fighters from Russia.¹³⁴ In the meantime, the H-6 bomber line has been re-started and, although unsuitable for any missions penetrating significant enemy air defenses, will ensure the PLAAF has a viable platform for longer-range air-launched missiles.

The limitations associated with enemy air defenses and the PLAAF's lack of C2/ISR assets are interrelated to an extent, and these are probably the greatest area of uncertainty in predicting PLAAF capability in 2020. While the PLAAF will undoubtedly make some progress in dealing with known air defense threats either through improved anti-radiation technology or more effective tactics,¹³⁵ at the high threat end of the spectrum the question is whether the gains by PLAAF crews will outpace the inevitable improvements in surface-to-air defenses. China is not the only foreign buyer of the advanced Russian S-300 system, and in possible engagements against the US or its allies, the Patriot and AEGIS systems are no slouch either. As discussed previously, China has a mixed record on indigenous development of C2/ISR assets. Such systems will be essential for the PLAAF to successfully engage and defeat mobile enemy air defenses, as well as mobile targets in a coercive campaign, in 2020. It is not clear the PLAAF will have a significant capability by then.

Other than the tanker procurement, the other "nearly sure" change between the present and 2020 with respect to the PLAAF's coercive force projection capability is the PLAAF's training

¹³³ Fisher, "Impact of Foreign Weapons Systems and Technology on the Modernization of the People's Liberation Army," (Air Force Systems: Sukhoi-Shenyang J-11).

¹³⁴ For example, see "Russian Aircraft Manufacturer Opens Office in China," *RIA Novosti*, 17 October 2005, internet at <http://en.rian.ru/world/20051017/41802608.html>, accessed 11 Jan 2006.

¹³⁵ According to Richard Fisher, both the JH-7A and the Su-30 are capable of employing the Russian Kh-31 anti-radiation missile, which may be in co-production as the KR-1. See Fisher, Fisher, "Impact of Foreign Weapons

program. As noted by many observers, since the “eye-opening” performance of coalition air forces in the 1991 Gulf War, the PLAAF has rapidly and aggressively boosted its training programs to regain lost ground in comparison to potential opponent’s air arms.¹³⁶ Performance by the USAF and others in subsequent conflicts over Kosovo, Afghanistan, and Iraq have only spurred the PLAAF on to more dedicated efforts. The evolution of realistic training, as evidenced by the adoption of red force versus blue force formats, in which PLA units train against “aggressor” forces using foreign tactics, shows that the PLAAF has made an institutional change.¹³⁷ The institutionalization of this concept is evident in a December 2005 *Jiefangjun Bao* report which indicated the PLAAF has set up a “...combined tactics training center in northwest China to conduct large scale base tactics confrontation” which includes training for attack and bomber regiments.¹³⁸ While any analogy to US Air Force combined combat training events such as RED FLAG should not be taken too far, the PLAAF is clearly moving in a direction which will improve combat capability.

Efforts to improve mobile logistics support and sortie generation capabilities should also improve commensurate with combat employment techniques. One indication of the PLA’s movement in this direction is establishment of a joint logistics system in order to improve efficiency and reduce the number of supply channels. After a period in which there was much discussion of the concept but little action, reporting in January 2006 indicated that

Systems and Technology on the Modernization of the People’s Liberation Army,” (Air Force Systems: Russia’s Zvezda-Stela Kh-31 Anti-radar/Anti-ship Missile).

¹³⁶ For an example of the PLAAF leadership reaction to US success in the first Gulf War, see Major General Zheng Shengxia and Senior Colonel Zhang Changzhi, “The Military Revolution in Airpower,” *China Military Science* (Spring 1996), in Michael Pillsbury, *Chinese Views of Future Warfare* (Washington, DC: National Defense University Press, 1997), 297-310.

¹³⁷ For a discussion of current PLA training status, to include the red force versus blue force concept, see Dennis J. Blasko’s testimony to the US-China Economic and Security Review Commission, 15 September 2005, http://www.uscc.gov/hearings/2005hearings/written_testimonies/05_09_15wrts/blasko_dennis_wrts.htm, accessed 9 November 2005.

“the logistics services for the three armed forces in a theater will no longer be divided into general-use and specialized-use logistics, since everything will be organized and implemented by the joint logistics system. At the same time, the present multiplicity of channels for supplying the different branches of the armed forces have been readjusted and merged into one channel in the joint logistics system...”¹³⁹

At the same time, the PLAAF continues to improve the professionalism of the NCO’s working in first-line aviation unit and equipment maintenance field stations, to include recruiting over 150 personnel with junior college level or higher degrees and professional qualification certificates directly from non-military organizations.¹⁴⁰ If current trends continue, it is reasonable to assume that whatever equipment the PLAAF has in 2020, the crews, maintainers, and other support personnel tasked with employing that equipment will possess an enhanced level of readiness compared to 2005.

Taking all these factors into consideration, the PLAAF’s “limited in terms of size, range, targets, and duration” coercive capability of 2005 is likely to evolve by 2020 into a much more capable force in terms of range and duration of conflict (improved sortie generation capability) but still limited to mostly fixed targets against medium threat air defenses. The limitations are primarily due to the uncertainty about C2/ISR assets, as well as the still relatively modest size of the tanker force. By no means will the PLAAF have a capability in 2020 approaching that of the long-range coercive capability of the USAF.

With respect to doctrine to employ such a force, the words of PLAAF Deputy Political Commissar Lieutenant General Liu Yazhou may provide an indication of where the PLAAF is headed prior to 2020. In a wide-ranging interview on the uses of airpower in modern conflict,

¹³⁸ Zhang Jinyu and Tan Jie, “Air Force Steps Up Close to Real War Intensive Confrontation Training,” *Jiefangjun Bao*, 30 December 2005, in FBIS CPP200512300502002, 30 December 2005.

¹³⁹ Bai Ruixue, Li Xuanliang, and Xu Zhangzi, “What Downsizing by 200,000 Has Done to the Army,” *Renmin Ribao*, 10 January 2006, in FBIS CPP20060110510003, 10 January 2006.

¹⁴⁰ Chen Guofang and Weng Huainan, “Over a Hundred Directly Recruited NCOs Quickly Take on Key Roles,” *Jiefangjun Bao*, 26 December 2005, in FBIS CPP20051226502014, 26 December 2005.

Liu notes the effectiveness of western airpower in the conflicts of the past 15 years, and comes to the conclusion that “We can not limit our war concepts to the ground any longer. The frontiers of our national interests are expanding. Our military strategy should embody characteristics of the time.”¹⁴¹ His recommendation for China in the new age is to “...cultivate and establish a kind of offensive consciousness. That is to say, under the premise of a general defensive strategy, we should first possess a powerful counterattack capability rather than a defensive capability. We’ll only stop war by way of conducting counterattacks.”¹⁴² In the context of a discussion about airpower, such words point directly toward a concept of independent strategic operations. While Liu’s thoughts are controversial within the PLA leadership and are by no means universal,¹⁴³ if he is representative of the next generation of PLAAF leaders, then a doctrine to match the PLAAF’s improved capabilities in 2020 can be expected.

2020: Assertive Scenario

The biggest change with respect to the PLAAF’s ability to project conventional force in an assertive scenario in 2020 will come by virtue of the planned procurement of additional 30 IL-76 aircraft. A 150% increase in the size of the IL-76 fleet will permit the rapid, simultaneous deployment of a much larger force. Making the same assumptions as used in the analysis of 2005 capability, and total increase of 30 IL-76 generates an increase of 12 aircraft for an actual operation. When used to airdrop personnel, the IL-76 is capable of dropping 190 paratroopers—nearly twice that of the Y-8—and while some of the additional IL-76s would be used to drop

¹⁴¹ Dai Xu, interview with Lieutenant General Liu Yazhou, posted on <http://www.worldaffairsboard.com/showthread.php?t=8549>, 1 October 2005.

¹⁴² Ibid.

¹⁴³ For a discussion of Liu’s writings and their impact on the PLA, see Alfred Chan, “Young Turk in China’s Establishment: The Military Writings of Liu Yazhou,” *China Brief* (Jamestown Foundation), vol. 5 issue 19 (13 September 2005), http://www.jamestown.org/publications_details.php?volume_id=408&issue_id=3453&article_id=2370203.

more equipment, assuming that 2/3 (or 8) of the additionally available aircraft were used for personnel, then an additional 1,520 personnel could be airdropped on a single pass. Combined with the 1,824 that can be dropped by the existing Y-8 fleet, the PLAAF is now at 3,344 jumpers in a single pass—roughly brigade size. While additional Y-8X/Y-9 procurement is uncertain, any procurement between the present and 2020 would simply add to PLAAF capability. While there have been persistent rumors that the procurement of the 30 additional IL-76s is intended to support the formation of an additional airborne army,¹⁴⁴ for the purposes of evaluating force projection capability in 2020, the addition of a second airborne army is irrelevant. The PLAAF airlift fleet, while larger and more capable, will still only be able to airdrop a brigade at one time—not a division, nor another army. An additional airborne army may be useful for other airborne force missions, but adds little to rapid force projection capability.

In addition, known IL-76 procurement and potential Y-8X/Y-9 production will help to alleviate some of the sustainment limitations identified in the previous analysis. However, the mere presence of additional aircraft does not solve the problem; doctrine and training for sustainment operations—to include deployable logistics, communications, and MHE—must become part of the PLAAF airborne concept in order to completely overcome present limitations by 2020. Based on the track record of aggressive training and innovation in the PLAAF since 1990, and especially within the airborne army, it is likely that such challenges will be overcome. Assuming sustainment doctrine and training is firmly established, and combined with planned and potential procurement, it is likely that by 2020 the PLAAF will have a strong capability to employ force in an assertive scenario...approaching but not yet up to the standards of Russian and American airborne forces in that timeframe.

¹⁴⁴ Fisher, “PLA Air Force Equipment Trends,” 164. Fisher also cites “multiple sources” at the 2005 Moscow Airshow indicating this possibility. See Fisher, “Chinese Dimensions of the 2005 Moscow Aerospace Show.”

2020: Constructive Scenario

Similar to the assertive case in 2020, the big difference here is the planned addition of 30 IL-76 aircraft to the PLAAF fleet, which will provide a significantly enhanced organic capability to support humanitarian airlift operations. With a fleet of 50 large transport aircraft, the PLAAF will not feel compelled to immediately look for assistance from China's civil aviation fleet during a crisis—although that resource will be there should the magnitude of the disaster require it. Potential additional production of the Y-8X/Y-9 would go even further to generate internal options for the PLAAF. In the intervening 15 years, as the PLAAF continues to improve its overall training status with respect to mobile offensive combat operations, it is likely that some improvements will be made with respect to the logistical and C2 challenges identified in the analysis of 2005. By 2020, in a small scale humanitarian relief operation within the Asian region, China most likely will have the capability to play a leadership role if desired. In the event of a large scale humanitarian relief operation, spanning several countries and multiple different airports, China would still probably need to seek partnership in such an operation with a state possessing more robust capabilities and experience.

Of the major and emerging powers, China has the greatest potential to compete militarily with the United States and field disruptive military technologies that could over time offset traditional U.S. military advantages absent U.S. counter strategies. U.S. policy remains focused on encouraging China to play a constructive, peaceful role in addressing common security challenges, including terrorism, proliferation, narcotics, and piracy.

US Office of the Secretary of Defense
Quadrennial Defense Review Report, 2006 ¹⁴⁵

Chapter 6

Implications for US National Security Strategy

From this analysis, the picture which appears regarding the PLAAF's ability to rapidly employ conventional force is that of a small and limited nature at present, with some notable improvements by 2020 with respect to range and lethality...but well short of the capabilities of the US or its allies. The one exception to this statement is the PLAAF airborne force in 2020; with the addition of a larger airlift fleet, the PLAAF's ability to insert brigade size forces will be approach that of western and Russian forces. With this information in mind, and referencing back to the potential hot spots identified in the earlier sections of this paper, what are the implications for US national security over the next 15 years?

The Question of China's Intent

The focus of this paper has intentionally been on reviewing the capabilities of the PLAAF with respect to the rapid application of conventional military force. As discussed previously, a state's intent can change much more rapidly than the capabilities required to support a given intent; thus, it is useful to gauge capability as supporting a "range of options" available to leadership in pursuit of a state's strategic interests. However, it can also be argued that the opposite is true—that in some ways, "capability breeds intent." In fact, Johnston's detailed study

of Chinese history notes that as the relative balance of capability swings in favor of the Chinese, the more likely offensive uses of force are considered as a viable option in response to external threats.¹⁴⁶ Consequently, as we assess the implications of China's military modernization for the US, it is worthwhile to briefly address the relationship of capability and intent for the upcoming period leading to 2020.

As previously discussed, China's official statements—as presented in the 2004 White Paper as well as by more recent commentaries by Zheng Bijian, Chair of the China Economic Reform Forum—clearly state that China is uninterested in any policy of expansion or aggression. Charting a course for the next 45 years—until 2050—Zheng describes China's route as “the development path to a peaceful rise.”¹⁴⁷ Noting the multiple challenges China faces as it continues economic and social development—limited resources, environmental pollution and waste, and a huge population that requires social development to balance economic development—Zheng argues that China will be too busy focusing on its own internal development to spend time with distracting foreign quarrels.¹⁴⁸

This argument has been met with a guarded reception in Washington, DC. Prior to the fall 2005 round of US senior leadership visits to China, Deputy Secretary of State Robert Zoellick stated “China's rapid military modernization and increases in capabilities raise questions about the purposes of this buildup and China's lack of transparency.”¹⁴⁹ Secretary of Defense Donald Rumsfeld added “China's lack of transparency for its modernization goals generates uncertainty in the region over its strategic direction.”¹⁵⁰ Both sum up the current dilemma facing

¹⁴⁵ 2006 Quadrennial Defense Review, 29.

¹⁴⁶ Johnston, 243.

¹⁴⁷ Zheng, “China's ‘Peaceful Rise’ to Great-Power Status,” 20.

¹⁴⁸ Ibid, 24.

¹⁴⁹ Robert B. Zoellick, “Whither China: From Membership to Responsibility?” Remarks to the National Committee on US-China Relations, 21 September 2005, <http://www.state.gov/s/d/rem/53682.htm>.

¹⁵⁰ Donald H. Rumsfeld, “America's Friendship with Asia,” *Asian Wall Street Journal*, 17 October 2005.

Washington and Beijing as to how China can work its way through the current transition without alarming its neighbors—if that is indeed the intent.

With respect to intent, the principal question for the US is how China intends to employ its improved military forces: to pursue regional leadership in cooperation with the US, or to go beyond and challenge American pre-eminence on a global scale. The two scenarios are quite different with respect to the US response. One key to see through the fog is to focus on the distinction between those capabilities (weapons systems, training and exercises, and overseas relationships) that support a regional leadership role only versus those that would enable the employment of conventional force on a global basis.

Distinctions in Capability...

The first point to be made is that China's military modernization to build a force commensurate with status as a regional Asian power should come as no surprise to the United States. Such a situation is consistent with China's historic status in Asia and is a logical outcome from the growing economic strength of China—and the strategic interests which China inevitably accretes as a result of integration into the global economy. Energy is one obvious example, but as a major net exporter of goods, trade is another. China's reaction to build a military capability to look after these interests, in the absence of an alliance relationship such as enjoyed by Germany or Japan during their period of economic development following the Second World War, is a logical and consistent response to its security dilemma. Within this context, the United States should continue to encourage China to employ means to ensure its military buildup is not perceived as threatening to its neighbors in Asia. Openness with respect to planned military procurement and confidence building measures such as information sharing

on exercises and deployments are two steps that will help ensure regional stability. Recent statements by Defense Secretary Rumsfeld and President Bush during visits to China demonstrate this approach and should be continued.¹⁵¹

At the same time, the US needs to keep a hard eye toward any developments within the Chinese military which signal a threat to US supremacy in, as MIT professor Barry Posen puts it, the global “commons” of the sea and air.¹⁵² While an assessment of the naval balance is beyond the scope of this paper, it is clear that at present, the PLAAF does not yet possess a capability to threaten American supremacy in the air with respect to the rapid projection of conventional force in scenarios beyond Taiwan. However, an important signal of intent to challenge will be a decision at some point to build and/or acquire robust capabilities in the AR and C2/ISR areas—in terms of dozens of each type of aircraft—which take the PLAAF from a “niche” capability to a full capability in terms of long-range coercive and assertive operations. In the near term, acquisition of a modern fleet of long-range bombers (such as the Tu-22M3 or next generation Sukhoi variants) may also send the same signal. Both angles must be closely monitored.

In terms of signals, the latter two points focus on “hardware,” but it is also important to consider signals related to “software” as well. One key step which is not yet clear the PLAAF will take is to establish a concept for strategic operations independent of the other service branches...or at least as the principal actor with the other services in support. As discussed above regarding the 2005 and 2020 coercive scenarios, Chinese airpower until very recently was primarily focused on territorial defense and support of ground maneuver elements. However,

¹⁵¹ For example, see Secretary of Defense Donald Rumsfeld, Remarks to the PLA Academy of Military Sciences, 20 October 2005, <http://www.defenselink.mil/speeches/2005/sp20051020-secdef2041.html> and President George Bush, Remarks in Kyoto, Japan, 16 November 2005, <http://www.whitehouse.gov/news/releases/2005/11/20051116-6.html>.

¹⁵² Posen argues control of the “commons” is the basis of American power. See Barry R. Posen, “Command of the Commons: The Military Foundation of U.S. Hegemony,” *International Security*, vol. 28 no. 1 (Summer 2003), 5-46.

recent doctrinal changes emphasizing a balanced concept of offense and defense, as well as a commitment to “strike first” and “win the first battle” reflect a growing awareness of the importance of Chinese airpower as potentially a decisive element in its own right.¹⁵³ The articulation of a revised doctrine for the PLAAF which includes the concept of independent air operations will be an important event in gauging Chinese intent to employ conventional airpower outside its periphery. An equally important second step, however, would be a corresponding increase in training events to employ such a doctrine. Long-range exercises involving multiple tankers and supported by multiple C2 and ISR aircraft, perhaps supported by PLAN assets and applicable Army and/or Second Artillery units will provide key evidence the PLAAF has made the doctrinal shift to independent strategic coercive or assertive operations. Such a development should concern the US and its allies as much as any future PLAAF acquisition of additional tankers, C2/ISR assets, or long-range bombers.

A third and further step in terms of the PLAAF’s ability to rapidly employ conventional force on a global scale is the use of facilities on foreign soil to extend the range of PLAAF assets. Such activities have not been conducted to date, nor do there appear to be any plans to do so. However, Chinese activities in the Indian Ocean region, to include a listening post on Great Coco Island and a construction of a base on Small Coco Island in the Bay of Bengal,¹⁵⁴ construction of port facilities at Gwadar, Pakistan,¹⁵⁵ and the building of a 12,400 foot long runway in Myanmar¹⁵⁶ lead to speculation regarding Chinese planning. Whether there are agreements in place with host nations to permit the PLA to operate from these facilities in a

¹⁵³ For a detailed discussion of these changes, see David M. Finkelstein, “China’s National Military Strategy,” in James C. Mulvenon and Andrew N.D. Yang, eds., *The People’s Liberation Army in the Information Age* (Santa Monica, CA: RAND Corporation, 1999).

¹⁵⁴ *US-China Commission Report*, 120.

¹⁵⁵ *Ibid.*, 151.

contingency remain to be seen. The fact that the PLAAF does not use any overseas bases in the course of its training exercises sends a reassuring signal, and any change in such a policy should certainly be viewed with concern.

A Chinese decision to take these steps and vie with the United States for leadership on a global scale would lead to a difficult scenario for America and its allies. If such a case were to occur, the potential for an escalating arms buildup similar to that which occurred between Great Britain and Germany prior to World War I would be real as each side seeks to resolve its security dilemma by maintaining superiority over the other. In response, the United States would have to carefully consider the best means to discourage China from global competition—or, in the absence of success in that effort, to develop a balancing coalition and/or increase organic capabilities which would keep a Chinese challenge in a subordinate position.

The discussion above about a “challenge in the commons” paints a somewhat alarming picture—which is not the intent. These are potential steps only for the PRC and there is no clear evidence to conclude that such a course of action has already been chosen by China. It appears that China’s determination to prevail in a struggle over Taiwan is matched by a sincere desire to peacefully grow; in fact, just in sheer terms of economics there is much more to be gained by China in a stable, peaceful Asia than in a region roiled by Chinese provocation. However, even if China were to limit its capabilities to a regional scope only, if history is any guide and the propositions of scholars such as Johnston, Whiting, and Scobell are accurate it is likely at some point that China may find its interests outside Taiwan challenged to the point that it is compelled to use force. The timing of such an incident cannot be precisely forecast—it may be more than 15 years into the future—nor is the location predetermined, although there are clearly some

¹⁵⁶ Air Commodore Ramesh V. Phadke, “People’s Liberation Army Air Force: Shifting Airpower Balance and Challenges to India’s Security,” (Working paper, Center for International Security and Cooperation, Stanford

regions in which a threat to strategic interests will quickly focus Chinese minds. The scale of such a conflict is also undetermined. Consistent with the principles of “active defense,” the language used by Chinese diplomats prior to using force will be inevitably characterized as “defensive”—although the PLAAF and possibly other branches of the PLA will not be constrained from employing offensive means as necessary to achieve China’s strategic objective.

In such a scenario, the best course of action for the United States is to do what it can to limit the conflict, and to encourage China to operate with respect to international norms should it feel compelled to use force. If the United States is somehow involved in the conflict, the means of responding will certainly depend on the situation...but the historical record indicates that the best way to limit the scope of the conflict will to retain a decisive advantage in terms of capability and make clear to China that whatever actions the US must take, the intent is resolve the immediate conflict and not to threaten the territorial integrity of China itself.

University, February 2002), 18.

We now need to encourage China to become a responsible stakeholder in the international system. As a responsible stakeholder, China would be more than just a member – it would work with us to sustain the international system that has enabled its success... We have many common interests with China. But relationships built only on a coincidence of interests have shallow roots. Relationships built on shared interests and shared values are deep and lasting. We can cooperate with the emerging China of today, even as we work for the democratic China of tomorrow.

Robert B. Zoellick, U.S. Deputy Secretary of State
Remarks to National Committee on U.S.-China Relations¹⁵⁷

Chapter 7

Conclusion

The objective of this paper has been to assess the current state of capability within the PLAAF, as well as a projection for 2020, to determine the range of options for China's leadership to rapidly project conventional force in terms of coercive, assertive or constructive actions. It is clear from the analysis that the PLAAF retains only a limited capability at present, and somewhat predictably, will possess a better capability in 2020. However, neither case presents a challenge for US and allied supremacy in the air. As far as conventional force projection capabilities in terms of airpower are concerned, any "near-peer" threat which China might represent lies well into the future, after a certain set of decisions which would need to be made by Chinese leaders with respect to developing additional capabilities beyond those currently planned.

Nevertheless, the relative balance over the next 15 years bears close watching. Put plainly, the PLAAF with Su-30s is one thing; the PLAAF with Su-30s and tanker capability is another thing; the PLAAF with Su-30s, tankers, a modern long-range bomber force, overseas bases, and

¹⁵⁷ Robert B. Zoellick, "Whither China: From Membership to Responsibility?" Remarks to the National Committee on US-China Relations, 21 September 2005, <http://www.state.gov/s/d/rem/53682.htm>.

an airlift fleet to sustain deployed operations is an entirely different matter. Operating in parallel with all these considerations of “hardware” are the “software” elements of doctrine, training, maintenance, and logistics support for mobile offensive operations. Even should the Chinese decide to press for capabilities on the high end of the range, it will still take a considerable amount of time before the PLAAF will have full-spectrum capabilities approaching that of the US. In the meantime, the US response to PLA (and PLAAF) development need not necessarily be a policy of containment or hostility; in the absence of an alliance relationship with another major power, China will need to develop a conventional capability to give it force employment options consistent with its growing security needs.

At the same time, efforts to relieve the pressures inherently created by China’s security dilemma (for example, a cycle of reaction/counter-reaction between China and the US) will be essential. Transparency, military exchanges, and confidence-building measures (as currently proposed by the US administration) will go a long way toward this goal. Along the same lines, the US and China should be closely looking at areas of mutual interest—for example, maintenance of open sea (and air) lines of communication in Asia and peaceful resolution of third-party to disputes, to create opportunities for actual cooperation in ensuring the security of the Asian region. By finding a way forward together, America and China may be able to avoid the pitfalls of the past.

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