

China's Modernizing Military:
Credible Conventional Threat to Taiwan?

by

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I. INTRODUCTION

Some people have made some calculations about how many aircraft, missiles and warships China possesses and presumed that China dare not and will not use force based on such calculations. ... those people who have made such calculations and who have made such conclusions do not understand and do not know about the Chinese history. The Chinese people are ready to shed blood and sacrifice its lives to defend the sovereignty and territorial integrity of the motherland.

Premier Zhu Rongji, *Third Press Conference as Premier*, March 16, 2000.

A. BACKGROUND

The United States government has publicly stated that it considers the People's Republic of China (PRC) as a strategic competitor, not a strategic partner. There is a growing tension between two nations that want to maintain economic ties, but cannot trust each other's strategic intentions. The PRC believes that United States "hegemonic" intentions seek to isolate China from the world community and limit its influence in the region. The United States sees China as a future threat to peace and stability in the region, even as a potential military adversary. These perceptions were further inflamed by the tense standoff over the recent collision of an American reconnaissance plane and Chinese fighter near Hainan. This standoff has already heightened tensions between the PRC and the United States over the upcoming decision by President Bush to sell Taiwan advanced weapons, especially Aegis destroyers. Many within the United States Congress feel that China's continued military build-up pose a direct threat to Taiwan and that the United States must act in accordance with the Taiwan Relations Act to maintain for the self-defense of the Republic of China (ROC).

China is in the midst of an ambitious modernization effort of the People's Liberation Army (PLA). China's growing military power and continued modernization has attracted much attention, with much focus on its nuclear and missile capabilities. After the collapse of the Soviet Union and the arrival of a new world order where regional conflicts became the norm, China became more of a perceived threat. The 1995-96 Taiwan Strait incident, the potential transfer of United States nuclear technology as outlined in the Cox Report in 1999, the bombing of the Chinese Embassy in Yugoslavia later that year, and the public outcry over the Wen Ho Lee spy case in the last two years have recently increased public awareness of the potential sources of conflict the United States may have in the future with China and the PLA.¹ The recent Hainan incident has further increased American public distrust of China to almost paranoia levels. Though many fears are unjustified and have resulted more from sensationalistic media reporting than actual fact, there has been a clear trend in Chinese military modernization in the last two decades.

Chinese military thinking has also evolved in the last two decades. In the past, the PRC was content with a low technology military that made up for lack of technology with large numbers of personnel. It relied on a continental defense strategy that would defeat threats to the mainland using China's sheer size and its advantage in manpower. Backing up that defense was a small, minimal-deterrence threat of low technology nuclear weapons. However, the PRC's threat perceptions have also changed in the last two decades. It felt the need to have a power projection capability in the region, and the

¹ James P. Lucier and Jamie Dettmer, "Cox Report Details Accelerating Intelligence Failures," [Insight on the News](#) 15.22 (1999): 6, [California Periodicals Database](#), online, California Digital Library, 28

PLA did not have those capabilities. The military had to change its doctrine, upgrade its weapons, and develop new tactics. The PLA's improving capabilities reinforced China's growing nationalism and sense of territorial sovereignty. China is a growing power and wants a military appropriate to its new status. The question is to what ends is this buildup. To most outsiders, the obvious immediate threat is to Taiwan.

Many news stories have picked up on those fears and looked at whether or not China has the military capability to threaten Taiwan. What are China's intentions with this newly modernizing military? How much of a threat does that pose to the United States? The assumption generally is that the United States will intervene in some form in the event that China attacked Taiwan. Consequently, most scenarios look at how China can overcome Taiwan's defenses rapidly before the U.S. military can influence the situation or how China's military can use other means to delay U.S. involvement and force Taiwan to capitulate without actually having to overcome its defenses. Even the threat of force resulting in economic ruin by using missile attacks and blockades of the island is a possible scenario.

But what if the U.S. does not intervene and Taiwan does not succumb to threats alone? Can China back up its threats and succeed in an invasion of Taiwan using only its conventional forces? How successful has the PLA modernization drive been so far and what promise does it hold in the next few years to achieve the objective of taking Taiwan back by force? A more balanced assessment of the PLA's modernization status can be derived from a better understanding of the current state of the PLA's continuing

modernization program, the condition of the forces and equipment, and the readiness of the PLA to execute the Taiwan mission.

B. PURPOSE AND METHODOLOGY

The purpose of this thesis is to measure the results of China's military modernization efforts and determine if the PLA has the capability to defeat Taiwan in a conventional war and succeed in an invasion of the island. Results of the modernization efforts are derived from an analysis of the PLA's modernization plan and current status of each of the different branches of service. Capability to defeat Taiwan is determined by identifying the mission requirements in the most likely invasion scenario of Taiwan and determining if each branch of service can help achieve those requirements as part of a larger operation. I will argue that the PLA cannot achieve those requirements now or in the near-term future to ensure a successful invasion of Taiwan.

This analysis of the PLA's conventional threat to Taiwan will provide insights as to what military options Beijing can use to influence international political and security affairs. With a reasonable understanding of what military threat the PRC can realistically pose, Beijing's courses of action can be more readily determined and U.S. security policy in regards to the PRC and the ROC can be adjusted appropriately. Specifically, the United States can have a better understanding of how to provide an appropriate level of security to Taiwan in the area of weapons sales, as legally mandated in the Taiwan Relations Act, and ensure that only a minimal defense capability will be maintained. This will ensure that United States policy does not inadvertently and adversely upset the balance of power in the region.

To measure accurately the results of the PLA's modernization efforts, it is important to have a thorough understanding of China's military strategy and how it has evolved in the last two decades. Chapter II provides a historical framework highlighting China's military strategy. It shows how factors that shaped the founding of the PLA in the PRC's early years still linger on to affect the PLA of today. The pivotal role that the United States military has played in determining the direction and nature of PLA modernization is also examined. And finally the change in thinking of the Chinese military towards Taiwan and how it motivates current defense modernization is explained. With an understanding of the PRC's current military strategy, it is possible to measure the results of those modernization efforts against that strategy.

Chapter III looks at the modernization plan of the PLA and examines how China reacted in changing the military to meet the challenges of the new defense strategy. It takes a look at PLA strategy and determines what each branch of service has done to help achieve that strategy, examining doctrine, organization, equipment, and training status to determine combat capability. This will provide the necessary data to make an accurate mission analysis and allow an educated assessment of China's capability to defeat Taiwan in an invasion scenario.

To make that analysis, Chapter IV explains what a basic scenario would look like for an invasion of Taiwan. It examines the geographical, terrain, and military situation in Taiwan and describes the key elements for a successful invasion. To organize the analysis, the chapter breaks down the invasion into four key missions that must be accomplished to ensure success. Using that as a basis, it then it analyzes whether each branch of service can accomplish those missions in this situation, briefly examining the

capabilities of the Taiwan military and determining how the PLA matches up. This chapter will argue that the PLA cannot meet the requirements for a successful invasion of Taiwan.

Chapter V concludes the thesis and looks at the future direction that PLA modernization is heading, drawing out implications and tasks essential for the United States in dealing with security in the Taiwan Straits region. It asserts that the United States must continue to maintain a forward presence in Asia , monitor China and its modernizing military, and take positive steps in accordance with the Taiwan Relations Act to ensure that Taiwan has appropriate defensive capabilities.

II. HISTORICAL FRAMEWORK

A. MILITARY STRATEGY DURING PRE-REFORM ERA

During the 1950's, the PLA was a fairly effective military force appropriate for China's basic self-defense needs. It was a military that was able to bring the United States and United Nations armed forces to a stalemate during the Korean War. It was also a military dependent on Soviet aid and training assistance. But when the Soviet Union suspended its aid efforts in 1959, the PLA did not receive much emphasis in modernization for two decades, with the nation putting the priority on its nuclear weapons program. The result was a military that relied on 1950's and 1960's Soviet technology.² Since China was a poor, developing country, the emphasis was placed on industrial development with little resources remaining for development of the military on any major scale.

Even today, the PLA is mostly equipped with weapons based on Soviet technology of the 1950's and 1960's. This is largely due to China's reliance on a Soviet assisted defense industry developed in that era. When the Soviet Union cut off aid and assistance in 1959, especially in the field of military technology, the Chinese defense industry suffered a severe setback and is still struggling to recover.³ Only a few elements

² Paul H.B. Godwin, "The PLA Faces the Twenty-First Century: Reflections on Technology, Doctrine, Strategy, and Operations," China's Military Faces the Future, ed. James R. Lilley and David Shambaugh, (New York: M. E. Sharpe, 1999) 42.

³ Paul H.B. Godwin, "The PLA Faces the Twenty-First Century: Reflections on Technology, Doctrine, Strategy, and Operations," China's Military Faces the Future, ed. James R. Lilley and David Shambaugh, (New York: M. E. Sharpe, 1999) 42.

have received advanced weaponry and the required training to implement them. This type of force was adequate for China's defense needs in the 1960's and 1970's and was probably why further modernization did not become a very high priority.

In that era, the main focus of the PRC's defense strategy was relatively unchanged from the strategy it held for centuries. China's main priority was control of the Asian mainland, and China focused on a continental defense strategy. The majority of its forces were deployed along the northern and northeastern regions to defend against the traditional invasion routes and against Russia in the north and Japan and the United States in the Korean Peninsula.⁴ Historically, this was quite similar to the situation China faced in the 19th century against the same perceived enemies. The only major changes in technology in the 20th century were more mobility through mechanization and air power. In the Korean conflict of the 1950's, China proved that its forces were adequate in a defensive situation to stop the best that the United States and the West could offer militarily. Thus it was natural for China to believe that its 1950's and 1960's technology military was adequate for its defensive needs. The relative failure of the United States military to achieve a decisive victory in the Vietnam War in the early 1970's could only help reinforce China's confidence.

The role of the PLA in the 1960's and 1970's seem to indicate more of a concern for internal problems than of a fear of external threat. During the Cultural Revolution, the PLA was used to maintain order in the country, quelling riots and restoring authority. At the local level, the PLA was in charge of administration and led the revolutionary committees. At the provincial and national levels, PLA officers were placed in key

positions in the government and state owned enterprises. The PRC's concern for external invasion, primarily from the Soviet Union, was allayed by its continuing Maoist faith in its masses and its collective strength. The Chinese belief in the advantage of its country's large territorial size allowed it to adopt a strategy of trading space for time. China could then take advantage of the size of its military force and population which could then could wage a "people's war" of popular resistance that would eventually wear the enemy down over time.⁵ This parallels the same confidence that Mao Zedong and the Chinese had in the Red Army during the civil war in the late 1940's. With a numerically inferior and poorly equipped force, the masses, strengthened by ideology and organization, easily defeated a much larger Kuomintang force supplied by the United States with better weapons.

Also in the mid-1960s, the creation of a small, low technology nuclear force added to China's defense strategy. The nuclear weapons would be used as a means of minimal deterrence against attack from the Soviet Union and the United States and became another crucial element of its defense strategy. Using a small number of nuclear weapons aimed at major population centers in the Soviet Union and the United States, the PRC was able to maintain a credible threat to menace the larger, stronger military powers without having to resort to a large, second-strike arsenal of nuclear weapons as required by the U.S. / Soviet doctrine of mutually assured destruction.⁶ This limited threat further backed up the Chinese continental defense strategy and allowed it to feel comfortable

⁴ Larry M. Wortzel, China's Military Potential, (Carlisle PA: U.S. Army War College, 1998) 8.

⁵ Andrew J. Nathan and Robert S. Ross, The Great Wall and the Empty Fortress, (New York: W. W. Norton & Company, 1997) 140.

with its military status. Thus using only simple, low technology nuclear weapons, China was able to maintain an adequate deterrent force to keep its major enemies at bay.

For its basic defense needs, China had an effective military for several decades. In that period, the security environment was one of bipolar confrontation between the United States and the Soviet Union, both stronger powers than the PRC. China was still a poor country with a large, uneducated population and a still developing economy. The ideologically charged period was dominated by the Chinese desire for self-reliance and the national priority of basic self defense and industrial development. Thus, even by the early 1970s, China had little incentive to fund further modernization, especially since the overall growth of industry and agriculture was stagnant in the midst of the Cultural Revolution. But as China was self-absorbed in its own internal problems during that period, the rest of the world continue to move forward and the threat environment began to change.

B. MILITARY STRATEGY CHANGES DURING REFORM ERA

1. Wake-up Call

When China finally emerged from the throes of the Cultural Revolution and began to look more to the outside, it slowly realized that its forces were becoming antiquated. The paranoia of a foreign threat invading China was giving way to a more rational view of China's role in Asia and the world. The world saw the PLA as a large

⁶ Michael Swaine, "Chinese Military Modernization and Asian Security," discussion paper for Asia/Pacific Research Center, Institute for International Studies, Stanford University, August 1998.

fighting force, but one that was poorly equipped with out of date weapons and was poorly trained. This fact was reinforced by the PLA's inability to project power beyond China, as demonstrated in its poor showing against Vietnam in 1979. The poor combat performance gave impetus to the post Mao leadership to start reform measures to modernize the PLA.⁷ The PRC realized that its military forces had deteriorated, were poorly equipped, and were poorly trained to deploy and fight beyond the borders of China. In fact, those fears were already being acted upon in the late 1970's under Deng Xiaoping's modernization efforts under the banner of the Four Modernizations, with the national defense, the defense industry in particular, given specific emphasis. Thus by the late 1970's the PLA and the defense industry were finally given greater attention after two decades of neglect.

Strategically, the PRC's threat perceptions began to change in the early 1980's. China perceived a shift in the world balance of power as the United States embarked on a massive arms build-up to counter the Soviet threat. China concluded that, despite the United States gaining a military advantage, both sides had reached a strategic stalemate. Neither the United States or the Soviet Union could risk attacking each other or China.⁸ With the diminishing influence of the superpowers, regional powers, specifically in Asia, would have more of a role in regional politics, and perhaps in regional wars. In addition, China concluded that a war with the Soviet Union was improbable. Consequently, the result was a change in national military strategy from its traditional continental defense

⁷ June Teufel Dreyer, China's Strategic View: The Role of the People's Liberation Army (Carlisle PA: U.S. Army War College, 1996) 6-7.

⁸ Mark Burles and Abram N. Shulsky, Pattern in China's Use of Force: Evidence from History and Doctrinal Writings (Santa Monica: RAND, 2000) 30.

strategy to one that focused on local, limited wars. This change in strategy gave the PLA a more focused mission that relied on modernization, technology, and new methods of fighting as the backbone.

This recognition of the need for a more modern force came as a result of the global revolution in military capability that was taking place. Military technology was improving in the areas of accuracy and firepower, and the pace of warfare increased dramatically. China began to slowly realize the importance of technology and modernization and realized it was falling behind. In addition, its small, minimal deterrence nuclear stockpile was being threatened by advances in technology that would cancel out its effectiveness. Advances in capability to detect and target nuclear facilities threatened its very existence. The development of technology that had the potential for future missile-defense capability threatened to take away its ability to menace.⁹ The threats and security challenges in the region had changed and the PRC was unprepared to meet them. China had no choice but to change its military strategy.

This revolution in strategy fundamentally changed the direction the PLA was heading. No longer would a large force using low technology weapons backed up with the threat of nuclear weapons be sufficient. The new force would have to be able to react in a new uncertain environment, where regional conflicts could erupt at any moment. To China, that meant a smaller, more technologically sophisticated PLA.¹⁰ The PLA was downsized, with forces demobilized. There was increased emphasis on more modern

⁹ Michael Swaine, "Chinese Military Modernization and Asian Security," discussion paper for Asia/Pacific Research Center, Institute for International Studies, Stanford University, August 1998.

¹⁰ Andrew J. Nathan and Robert S. Ross, The Great Wall and the Empty Fortress, (New York: W. W. Norton & Company, 1997) 145-46.

technology in PLA weaponry. By the middle of the 1980's, the number of military regions reduced from eleven to seven. The size of the PLA went from over 4 million to just over 3 million. Units were transferred to form the People's Armed Police (PAP). Thousands of vehicles, vessels, and major weapons that were obsolescent were removed from the inventory.¹¹ The groundwork was being laid that would eventually transform a larger PLA into a smaller, more effective fighting force. To lead this smaller fighting force, there was a concerted effort to professionalize the PLA officer corps. Ranks were reintroduced in 1988, after an absence. Military academies and staff schools were established to better educate its officers.¹² China's military was changing and adapting to its new environment.

To equip the force, priorities had to be set. The new strategy of fighting limited wars in the new environment required new types of weapons both locally produced and purchased from abroad. With the initial defense budget of the mid 1980's reserved for personnel matters in the areas of increased salary and standards of living, there was precious little left for weapons modernization. Though the long-term intention is to create a self-sufficient military-industrial complex, the new defense industries would take years to mature. With the United States and Europe banning the sale of weapons and defense technology to China during that period, the PLA had to turn to Russia and Israel

¹¹ Paul H.B. Godwin, "The PLA Faces the Twenty-First Century: Reflections on Technology, Doctrine, Strategy, and Operations," China's Military Faces the Future, ed. James R. Lilley and David Shambaugh, (New York: M. E. Sharpe, 1999) 52-53.

¹² David Shambaugh, "China's Military in Transition: Professionalism, Procurement and Power Projection," China's Military in Transition, ed. David Shambaugh and Richard H. Yang (Oxford: Clarendon Press, 1997) 19.

for major weapons purchases.¹³ After years of self reliance, China began to look to the open market to provide for its defense needs. China could once again turn to its former Russian ally and seek military assistance.

With the normalization of Sino-Soviet relations in 1989, military sales to the PRC resumed for the first time since the 1959 rift. This was key since the arms and technology embargo of the West was imposed that same year after the Tianamen tragedy. Russia, after the collapse of the Soviet Union, honored the initial agreement, and by the end of 1992, Russian arms sales to China amounted to US\$1.2 billion, which still continues to today.¹⁴ Since it could not produce cutting-edge technology, China decided to take advantage of cheap prices in the former Soviet Union, buying sophisticated aircraft, naval ships, battle tanks, radar systems, etc. In addition, China began to take advantage of Russia's technological expertise by hiring as many as 1,000 ex-Soviet research scientists to bolster its defense industry.¹⁵ Thus by the early 1990s, China had taken major steps to modernize its military. In a short period of time China had the means to produce and acquire a more modern arsenal of lethal, high technology weapons.

The PRC opened itself to the outside world in the 1970s and realized how far back it had fallen behind. The rest of the world had passed them by economically and militarily. The security environment in the region changed dramatically. China had regional threats that its military could not adequately handle. Its military needed to

¹³ David Shambaugh, "China's Military in Transition: Professionalism, Procurement and Power Projection," China's Military in Transition, ed. David Shambaugh and Richard H. Yang (Oxford: Clarendon Press, 1997) 22.

¹⁴ Paul H.B. Godwin, "From Continent to Periphery: PLA Doctrine, Strategy and Capabilities Towards 2000," China's Military in Transition, ed. David Shambaugh and Richard H. Yang (Oxford: Clarendon Press, 1997) 209.

change with the times or risk being obsolete. So it took those first measures that allowed it to adapt and modernize. If there were any doubts as to the pressing need to modernize its military, those doubts were quickly erased by the spectacular example the United States provided during the Gulf War showcasing how warfare really had radically changed.

2. Challenge of the United States Military

The collapse of the Soviet Union in 1991 further reinforced China's belief in a multipolar world where smaller, regional conflicts were more likely to occur. The bigger threat of the Soviet Union broke up into smaller regional threats. There were now four new neighbors that China had to deal with that were potential sources of ethnic unrest.¹⁶ Suddenly, the need for a smaller, more lethal military force that could deploy outside of China became obviously apparent. In addition, the loss of the Soviet Union as an opponent to the United States clearly drew the line in the sand, showing who the most dangerous threat for China was. Fears of United States hegemony, especially fears of the United States military capability, quickly became stark, realistic fears with the United States military performance in the Gulf War.

The Gulf War was a turning point in Chinese attitude toward modernization and was a stark reality check. Chinese leaders saw that the technological gap had widened much more than initially suspected between the United States military capability and the

¹⁵ April Oliver, "The Dragon's New Teeth: China's Military Buildup," *Nation* 258.7 (1994): 229-232, [California Periodicals Database](#), online, California Digital Library, 17 Feb. 2001.

technology and doctrine of the former Soviet Union.¹⁷ On CNN, China and the world saw the devastating accuracy of "smart" bombs, the apparent invisibility of stealth technology, the mastery of command and control at the joint and international coalition level, and the ability to integrate it all smoothly and effectively. Relying on the strength of masses was an outdated strategy. Coalition air attacks showed how quickly Iraqi armed forces could be reduced by airpower. Quick moving, lethal armor forces, backed up by joint and combined arms support in the air and on the ground, rapidly overran and destroyed larger Iraqi formations, leading to the surprisingly swift defeat of the Iraqi military. China saw itself aspiring to being in the same league as the Iraq, with a large military and fairly modern arsenal of weapons, mainly supplied by the former Soviet Union and China. In spite of that, the militaries of the west, led by the United States, used its doctrinal and technological superiority to easily destroy that military.

Obviously, Chinese military equipment and doctrine could not even come close to matching the staggering technological levels demonstrated. Jiang Zemin said: "The Gulf War let us further realize the importance of technology in modern war. Although we believe that the decisive factor in winning a war is human power not firepower, advanced weaponry is very important and we cannot neglect [the impact of] science and technology [in a modern war]."¹⁸ It was a point that many in the PLA and government had already believed, as suggested by the implementation of Russian arms sales, and it took the shocking results of the Gulf War for the leadership to publicly admit it. China could not

¹⁶ Mel Gurtov and Byong-Moo Hwang, China's Security: The New Roles of the Military (Boulder, CO: Lynne Rienner Publishers, 1998) 12.

¹⁷ Andrew J. Nathan and Robert S. Ross, The Great Wall and the Empty Fortress, (New York: W. W. Norton & Company, 1997) 147.

deny that modernization of its military and updating its doctrine would have to be a main priority.

The new Chinese military strategy of 1985 that focused on preparing for "local, limited war" (jubu zhanzheng) suddenly had its wartime conditions catch phrase changed to "local, limited war under high-tech conditions" (jubu zhanzheng zai gaoji jishu tiaojian xia). This became the new PLA strategic doctrine in 1993.¹⁹ The phrase indicates that China now believes that the next local, limited war could be decided by high technology weapons. Thus the results of the Gulf War, specifically the success of United States technological superiority in weapons, convinced China that high technology would be the most essential trait of a successful PLA of the future. To properly use the high technology would require a highly trained force. The concept of a smaller, more technologically sophisticated PLA that China envisioned in the early 1980's was validated. The concept of the likelihood of regional wars was validated. And the United States military was the role model that China looked to in the goal of modernizing for the PLA of the future.

Chinese defense literature after the Gulf War indicates that several strategic views have formed about how best to deal with a future threat. They differ on what strategies and what weapons China would have to develop to deal with a potential future enemy. But they all recognize a "significant technological gap that exists between the PLA and

¹⁸ Qtd. in Mel Gurtov and Byong-Moo Hwang, China's Security: The New Roles of the Military (Boulder, CO: Lynne Rienner Publishers, 1998) 109.

¹⁹ Paul H.B. Godwin, "The PLA Faces the Twenty-First Century: Reflections on Technology, Doctrine, Strategy, and Operations," China's Military Faces the Future, ed. James R. Lilley and David Shambaugh, (New York: M. E. Sharpe, 1999) 54.

the enemy that needs to be overcome."²⁰ It is clear that the Gulf War and United States performance became the standard for PLA modernization. The PRC's most senior officer during that period, General Liu Huaqing, stated in 1993 that the PLA did not meet the requirements for modern warfare. His proposed solution was more importation of foreign technology and expanding China's defense industry modernization program, with a heavy emphasis on research and development.²¹ Thus, the desire for a technological sophisticated force is evident.

3. Emphasis on Taiwan

For decades, United States presence in the region had effectively prevented any major Chinese military moves against Taiwan. With Taiwan under the protective umbrella of United States, China made no real efforts to create a force capable of challenging U.S. presence and invading Taiwan. With official diplomatic relations established in 1979 with the United States and improving military ties with the U.S. military throughout the 1980s, the PRC's military modernization moved along at a steady pace, but with no major advances. The progress was piecemeal, with the Air Force and Navy receiving priority in upgrading weapons systems while the ground forces continued to reorganize, but not at a pace to result in major changes in military capability. China's threat posture towards Taiwan remained relatively unchanged.

²⁰ Mel Gurtov and Byong-Moo Hwang, China's Security: The New Roles of the Military (Boulder, CO: Lynne Rienner Publishers, 1998) 110.

²¹ Paul H.B. Godwin, "From Continent to Periphery: PLA Doctrine, Strategy and Capabilities Towards 2000," China's Military in Transition, ed. David Shambaugh and Richard H. Yang (Oxford: Clarendon Press, 1997) 209-10.

The post-Tiananmen period saw a shift in attitude and military posture. The political atmosphere in Beijing became more conservative, as the United States and the rest of the world imposed sanctions and cut military relations. Within the PLA, pro-Western officers were purged or lost influence. Many within the PLA felt that they were being unfairly punished for an incident in which many did not want to participate.²² Protests over arms sales to Taiwan under the Taiwan Relations Act increased. As Taiwan underwent democratization after years of martial law under Nationalist rule, Beijing began to worry about the growing independence movement. Even as economic and informal diplomatic relations between the PRC and Taiwan improved, China's position on eventual reunification did not change.

With the possibility that an indefinite delay in recovering Taiwan could result in *de facto* independence, the PRC pressed harder for reunification, especially with the upcoming handovers of Hong Kong and Macao. A growing sense of nationalism began to fill the void that Communist ideology failed to provide the Chinese people, and pride in national sovereignty, symbolized by the eventual return of Taiwan, grew over the years. The Chinese military stepped up military activity and shows of force to demonstrate its willingness to use force to prevent independence. This culminated in the 1995-96 Taiwan Strait crisis and the involvement of U.S. aircraft carriers. China realized its menacing tactics could possibly trigger an American response, which they did, but decided its actions were necessary to discourage Taiwan independence measures. During the 2000 Taiwan elections, China took a less menacing stance militarily, not wanting to

²² United States, General Accounting Office, National Security and International Affairs Division, Impact of China's Military in the Pacific Region (Washington DC: GAO, 1995) 13.

evoke a similar response from the United States, but the language coming from Beijing continued to warn of the dire consequences for any Taiwan independence moves.

But because of varying assessments of the success of the PLA modernization program and the variance in estimates of the PLA budget, there is disagreement on the ability of China to pose a threat to Taiwan. There is, however, agreement that China is rapidly acquiring the weapons that will become a credible threat to Taiwan in the near future.²³ Beijing's rhetoric and actions back up its intention to possibly use force to reunify Taiwan. After Chen Shui-bian's election as president of Taiwan in 2000, Beijing issued a white paper threatening that China will not wait indefinitely for reunification and reserved the right to use force against Taiwan to "safeguard its own sovereignty and territorial integrity."²⁴ Clearly, the PRC has upped the ante and has placed more emphasis lately on the threat of force to ensure reunification and deter independence.

The military option against Taiwan has become more and more of a motivating factor in Chinese defense modernization efforts. In the early 1990s military thinking began to rationalize its short modernization goals and focus on military operations against Taiwan as the driving force. This can be seen in the Nanjing Military Region, the area directly across from Taiwan. This area was essentially demilitarized for most of the 1980s. But in the 1990s, that situation as changed radically with increased training in the region and a noticeable military buildup along the coast, especially with short- and

²³ Richard D. Fisher, Jr., prepared testimony, House Armed Services Committee, 19 July 2000, LEXIS-NEXIS Congressional Universe, online, LEXIS-NEXIS, 17 Feb. 2001.

²⁴ China, Information Office of the State Council of the People's Republic of China, "The One-China Principle and the Taiwan Issue," March 2000, online, Internet: <http://chinadaily.com.cn.net/highlights/taiwan/whitepaper.html>, 25 Feb. 2001.

intermediate-range ballistic missiles pointed at Taiwan.²⁵ Also, when the new PLA doctrine of local war under high technology conditions was announced in 1993, Russian weapons procurements began to be directed specifically to the Nanjing Military Region.²⁶ In 1999, the Taiwan military revealed the discovery of replicas of ROC airbases in China for the purpose of training pilots and missile units for attacks on Taiwan.²⁷ Obviously, the new strategic thinking and modernization efforts had the recovery of Taiwan as a major impetus. In the last two years, dramatic increases in the Chinese defense budget has also signaled a shift in thinking towards achieving that goal.

In the early 1990's, while the West was in the midst of the post-cold war downsizing, China in contrast was increasing its defense budget. Throughout the 1980s, despite the new emphasis on modernization, defense spending took a back seat to economic development and was fourth in priority of the Four Modernizations. In response to the shock of the Gulf War and as a reward for its loyalty to the CCP leadership, the PLA received rapid budget growth from 1989 forward. While budget estimate vary wildly, the official budget did see a 150% growth from 1989 to 1994, with the official budget listed as \$6 billion. Like many countries, the PRC reveals only a portion of its military spending in its published budgets, with estimates guessing the actual spending being three to five times the published amount. China's military

²⁵ Michael Swaine, "Chinese Military Modernization and Asian Security," discussion paper for Asia/Pacific Research Center, Institute for International Studies, Stanford University, August 1998.

²⁶ June Teufel Dreyer, "The PLA and the Taiwan Strait," issue paper, International Forum on the Peace and Security of the Taiwan Strait, July 1999, rpt. in Taiwan Security Research, online, National Taiwan University, Internet: <http://taiwansecurity.org/IS/Dreyer-The-PLA-and-the-Taiwan-Strait.htm>, 26 Feb 2001.

²⁷ June Teufel Dreyer, "The PLA and the Taiwan Strait," issue paper, International Forum on the Peace and Security of the Taiwan Strait, July 1999, rpt. in Taiwan Security Research, online, National

spending was probably comparable to Japan's 1994 \$42 billion defense budget. By comparison, the other countries in the region spent: Republic of Korea (\$14 billion), Taiwan (\$11 billion), India (\$7.3 billion), and the United States (\$290 billion).²⁸ Whether or not this signals a significant growth, it is evident the scale of spending is definitely intended to at least raise China's level of spending to match its neighbors.

But the budgets of the last two years have even surpassed those levels. The PRC announced the 2000 military budget was officially \$14.5 billion, a 12.7 percent increase. This year, China announced a 17.7 percent increase to \$17.2 billion, its biggest military budget increase in 20 years, after taking in account that this budget increase comes in the midst of a period of low inflation in China. Officially, it was the third highest increase since 1990.²⁹ There is debate about whether this increase will have any significant near-term impact on China's military effectiveness. The PLA does have significant immediate cash needs, especially to replace lost revenue from divesting commercial business which had been a major source of PLA income in the 1990s. Also, the PLA realizes that modernizing its military also requires increasing the standard of living for its poorly paid soldiers who for years have had to make do with a budget that did not account for the basic living needs. A modernizing military cannot afford to spend the time or resources growing its own food. So it can be argued that these budget increases are required to just allow the PLA to keep on pace with changing conditions in a modernizing environment.

Taiwan University, Internet: <http://taiwansecurity.org/IS/Dreyer-The-PLA-and-the-Taiwan-Strait.htm>, 26 Feb 2001.

²⁸ Richard D. Fisher, Jr., prepared testimony, Senate Foreign Relations Committee, 11 Oct. 1995, LEXIS-NEXIS Congressional Universe, online, LEXIS-NEXIS, 17 Feb. 2001.

²⁹ Craig S. Smith, "China Sends Its Army Money, and Taiwan a Signal," New York Times 11 Mar. 2001: sec. 4: 4, LEXIS-NEXIS Academic Universe, online, LEXIS-NEXIS, 15 Mar. 2001.

However, if you look at the hidden budget costs, China's budget increases are significant. While the PRC's actual defense spending is difficult to calculate, most experts agree that the hidden budget is at least three times the published budget. Some spending is hidden in other parts of the state budget, such as civilian ministries absorbing military research and development costs. Weapons procurement is not listed in the official budget. Profits from China's extensive arms exports subsidize the purchase of foreign weapon systems.³⁰ This significant budget increase should come as no surprise if you look at the trends of the last few years. Not only was the fear of Taiwan independence making China nervous, perceived United States involvement and "hegemony" in the region, specifically aimed at China, continued to irritate Beijing. Japan's moves to cooperate with the United States in 1997 in developing a theater missile defense system inflamed tensions in the region due to China's belief that the system will eventually be used to protect Taiwan. The North Atlantic Treaty Organization's accidental bombing of the Chinese embassy in Belgrade accentuated existing concerns that NATO's intervention in Kosovo was a foreshadowing of U.S. future involvement in Taiwan. China's desire to enhance its capabilities to defend its sovereignty comes as no surprise, as shown by the budget increases.

Taiwan is the most obvious and most realistic objective. Even the PRC realizes that modernization cannot happen overnight. Developing new weapon systems, let alone the high technology arms industry required, is a slow process. Piecemeal integration of newly purchased foreign weapons systems and the training of the new doctrine required

³⁰ David Shambaugh, "China's Military: Real or Paper Tiger?" Washington Quarterly 19.2 (1996): 19+, California Periodicals Database, online, California Digital Library, 25 Feb. 2001.

will take years for the PLA to absorb. So the near-term objective of its modernization program must be to give China the leverage to intimidate Taiwan and, if needed, to carry out its threats of reunifying the island by force. The question is whether China can carry out that threat now or in the near-term future. That questions is often overlooked when analyzing the Chinese military threat.

On one end of the spectrum, a lot of analysis is focused on the psychological threat that China's military poses. The continuing buildup of short- and medium-range ballistic missiles has received much attention, and this factor is often cited in the arguments that the PRC can defeat Taiwan by use of threats alone, threatening to harm Taiwan's economy by damage done with missile strikes or economic isolation by a blockade of the island. On the other end of the spectrum, many experts write off any threat that China can pose in a force comparison with the U.S. military. They become fixated with the assumption that the United States will come to the aid of Taiwan in the event of attack and focus on comparing the PLA against the U.S. military. Its assumption is that the PLA is at least a decade away from being able to military influence the situation in Taiwan to its favor.

But what if the United States does not intervene in a military conflict? The Taiwan Relations Act only requires that the United States ensures Taiwan has the capacity for self-defense. It does not require the United States to intervene if Taiwan is attacked. There is always a remote possibility that the United States may make the political decision not to involve itself in such a scenario. The discussion of whether or not in that situation the PLA can actually back up its threats and defeat Taiwan alone with its conventional forces in an invasion does not get much attention in mainstream media.

Whether or not the current state of modernization has provided China with a military that is up to that task today is the crucial question. I will take a look at that question in the following chapters.

III. CURRENT STATE OF PLA MODERNIZATION

A. MODERNIZATION PLAN

1. Strategy

Current PLA military strategy focuses on the likelihood of fighting local, limited wars under high-tech conditions fought by a smaller, well trained and well equipped high-tech force. The military must be highly mobile and able to quickly deploy and project power to nearby areas of operation. It must also find ways to eliminate its vulnerabilities to other high-tech military technologies and, at the same time, find and exploit enemy vulnerabilities, such as disrupting command and control and denying battlespace. All the different services must be able to coordinate with each other in joint operations.

To achieve that strategy the PLA needed to overcome major obstacles. Despite having large numbers of weapons, they were mostly of low quality, had limited range, and were not very maneuverable. Naval and air transport was lacking. Command and control and coordination between units was poor. Systems for battle-management and early-warning, such as AWACS, were non-existent.³¹ Consequently, all the different services needed to acquire equipment through foreign purchase or domestic production to give them these capabilities. On top of that, new doctrine and tactics had to be developed

³¹ Michael Swaine, "Chinese Military Modernization and Asian Security," discussion paper for Asia/Pacific Research Center, Institute for International Studies, Stanford University, August 1998.

and military units had to be reorganized to effectively use the new technology. Lastly, training of the soldiers and units to use the equipment and fight in new ways had to occur.

Due to limited resources, China has concentrated on making improvements in selected areas. The size of the ground forces have been reduced and the quality of the soldiers have been raised to improve the level of training of the force. To equip the force, China has taken a two pronged approach to acquire newer weapon systems. It has focused on a long term reform of its defense industry while at the same time looking to foreign countries to provide it the military hardware the PLA needed. Instead of trying to upgrade the entire PLA at once, the leadership has decided to focus on pockets of excellence. Key equipment purchases from abroad of selected high-end weapon systems could quickly make-up for serious shortcomings while a comprehensive modernization of the force would take decades. In this way, China could ensure it had improving, limited modern capabilities in the near-term while ensuring that overall defense modernization still occurred in the long-term.

2. Personnel Reform

Currently with 2.5 million soldiers, sailors, and airmen, China has the world's largest military, double the American number. In the 1980s, the military had a million more people. The CCP recognized that its military was too large and too much was being wasted on too many surplus, excess soldiers who would never reach the high-tech battlefield. Deng Xiaoping is often quoted as saying, "Cut troop expenditures, take more money for our weaponry," and this sentiment is evident in the higher priority set on air

force, navy, and light weaponry.³² At the 15th Party Congress in 1997, it was announced that a total of 500,000 troops would be reduced over three years, bringing the size down to about 2.5 million. To put things into perspective, there are a handful of countries with militaries larger than 500,000 in number. So even to the PRC, this was a major reduction. This adds to the 200,000 troops reductions already achieved from the early 1990s to the end of 1996.³³ In line with the new military strategy, this was a specific, concrete steps taken to help reshape the PLA force structure.

In line with that, the CCP has taken steps to improve the quality of the force. In 1998 National People's Congress instituted revisions to the Military Service Law at the end of 1998, shortening the length of service for conscripts to two years and extending those of professional servicemen from 18 years to 30 years. This would result in an increase of the proportion of professional servicemen in the PLA.³⁴ Also, the troop reductions were focused on units in lower readiness categories, with more than 150,000 personnel transferred to the PAP in the last four years. These lower quality units were more suited to fight a People's War, less suited to fight in a modern war.³⁵ What remained was a smaller, better educated and trained force that had better capability to learn the new tactics and use the new equipment required by the PLA.

³² Solomon M. Karmel, "The Maoist Drag on China's Military," ORBIS 42.3 (1998): 375+, California Periodicals Database, online, California Digital Library, 24 Feb. 2001.

³³ Jan-Ping Wu, "The People's Liberation Army in the 21st Century: An Analysis of the Possible Implications of Troop Reductions," RUSI Journal 145.3 (2000): 45-50, ProQuest Direct, online, Bell & Howell, 17 Feb. 2001.

³⁴ Jan-Ping Wu, "The People's Liberation Army in the 21st Century: An Analysis of the Possible Implications of Troop Reductions," RUSI Journal 145.3 (2000): 45-50, ProQuest Direct, online, Bell & Howell, 17 Feb. 2001.

³⁵ Dennis J. Blasko, "A New PLA Force Structure," The People's Liberation Army in the Information Age, Ed. James C. Mulvenon and Richard H. Yang, Santa Monica: RAND, 1999, 263.

To lead these soldiers and units, the officer corps had to be reshaped to be a more technically oriented and professional group that could effectively command in this new environment. So far, that program seems to have been quite effective resulting in an officer corps much different from the past. Promotions are now more regular and based more on merit. Standards of evaluation are based on professional criteria and training requirements. The result has been a more technically proficient, better educated, and professional officer corps. Unfortunately, China does not have a true non-commissioned officer corps yet, with captains and lieutenants performing the tasks normally assigned to sergeants.³⁶ Certainly the better trained officers will have an impact on the training levels and proficiency of the PLA units. Whether that will have a measurable effect on the capabilities of these units is harder to determine.

3. Defense Industry Reform

Purchase of significant numbers of weapons systems from Russia can be looked as a failure so far of the Chinese defense industry so far. Comparing current Chinese production estimates with those of the Soviet defense industrial base of the late 1980s, the Chinese produce less sophisticated equipment at only a fraction of the rate of the Soviet's production of sophisticated equipment.³⁷ Like many other state owned enterprises, the defense industries are bogged down in bureaucracy and are unwilling or incapable of changing its ways.

³⁶ June Teufel Dreyer, "The New Officer Corps: Implications for the Future," China's Military in Transition, ed. David Shambaugh and Richard H. Yang (Oxford: Clarendon Press, 1997) 60.

China's military-industrial complex has been slow to innovate, slow to absorb technology and transform those technologies into sophisticated weapon systems. The defense industry itself has been struggling to survive in the era of economic reform, with the individual organizations having difficulty becoming profit-seeking corporations and unwilling to depart from its planned market mentality. As of 1996, 55 percent of the defense industries still remained in Third Front areas, remote areas of southern and western China strategically developed in the 1960s and 1970s.³⁸ In the economic reform era, these areas have been cut off from the richer, more profitable coastal areas hampering attempts by these industries to economically grow and develop. Defense industries continued to suffer the inefficiencies of other struggling state-owned enterprises and Beijing is unwilling to make radical moves of major investments or reorganization to result in any near-term changes.

Except for small pockets of success, such as nuclear weapons, ballistic and cruise missiles, and a few frigates and destroyers, there are tremendous production shortfalls. Most production is still focused on upgrading foreign systems using pre-1970s technology and manufacturing techniques.³⁹ These shortfalls have forced the Chinese to look to foreign technology, even when they have comparable indigenous weapon systems. The Chinese decision to buy *Sovremenny* destroyers from Russia despite already having the fairly modern Chinese developed *Luhu* destroyer of the same class is a good indicator. Another example is the decision to purchase Russian SU-27s fighters

³⁷ Dennis J. Blasko, "Evaluating Chinese Military Procurement from Russia," Joint Force Quarterly Autumn/Winter 1997/1998: 94.

³⁸ John Frankenstein and Bates Gill, "Current and Future Challenges Facing Chinese Defence Industries," The China Quarterly 146 (1996): 394+, ProQuest Direct, online, Bell & Howell, 18 Feb. 2001.

after years of trying to develop the J-10 Chinese equivalent using reverse-engineering from an acquired U.S. F-16. In short, China's military-industrial complex has been unable to meet the immediate demands for high technology weapon systems demanded by the modernizing military. That is probably a major reason that the PLA has resorted so much to foreign weapons purchases for its high-tech needs.

China's industrial base needs massive foreign assistance to raise its level of production to meet the needs of the modernizing PLA. Beijing seems reluctant to make major investments for fear of bankrupting the nation in the effort to revamp the industry. In the near-term future, the PLA must continue to rely on foreign equipment purchases for the bulk of its high technology needs.

4. Equipment Purchases

To fill the gaps that the home defense industry could not fill, China has looked to arms imports. Chinese weapons purchases have been in selected fields, concentrating on high technology, high capability combat systems for the air force and navy. No major ground force hardware purchases have occurred, except for Mi-17 multi-role helicopters in support of ground units. The types and numbers of purchases indicate that the PLA modernization direction is to acquire new equipment for only a few, select rapid reaction units, rather than to upgrade the whole force.⁴⁰ This trend started in 1991 as the PLA successfully made the case for high tech weapons after the Gulf War. Even as

³⁹ Dennis J. Blasko, "Evaluating Chinese Military Procurement from Russia," Joint Force Quarterly Autumn/Winter 1997/1998: 94.

desperately needed cash from China's own arms exports decreased and access to Western arms practically disappeared following the Tiananmen incident, China's foreign weapons buying increased, pushing it to sixth among developing countries for arms purchases.⁴¹ This is a clear indication that China's leadership had committed to the modernization of the PLA, especially in accepting the new strategy of the 1990s. Also, it is evident that it also recognized that China's arms industries could not provide what the PLA needed.

The most important source of military transfers has been Russia (the former Soviet Union). This has ranged from specific weapons purchases to technical cooperation in helping China create / upgrade its own equipment or assemble Russian equipment. It has also been a valuable relationship for Russia, allowing it to earn hard currency and support its defense industrial complex.⁴² There is a notable emphasis on purchasing weapon systems that would be more useful in theater operations in a local war, rather than in a strategic major war with a large superpower. This further backs up the notion that the PLA has been serious about preparing for small, regional conflicts rather than an attack by a larger adversary. In this light, Russia has been wise not to supply a potential adversary weapons that could be turned against them in a strike into the Russian heartland.

Despite the immediate positive gains in combat power the PLA got from foreign purchases, this is a troubling trend for the local defense industries. By continuing to upgrade its equipment with the most up to date technology, the PLA may not give the

⁴⁰ Richard D. Fisher, Jr., "Foreign Arms Acquisition and PLA Modernization," China's Military Faces the Future, ed. James R. Lilley and David Shambaugh, (New York: M. E. Sharpe, 1999) 106-108.

⁴¹ Mel Gurtov and Byong-Moo Hwang, China's Security: The New Roles of the Military (Boulder, CO: Lynne Rienner Publishers, 1998) 225-26.

defense industry the time it needs to absorb the lessons learned from the imported technology since the industry is so dependent on acquiring and reverse engineering foreign technology. The other problem that comes with dependence on foreign equipment is danger of producing more problems than actually solving equipment shortage problems. The wide array of foreign equipment and limited, expensive spare parts, are a logistician's nightmare and a challenge for maintenance crews. China must find ways to wean itself off of this continuous dependence on foreign military equipment.

B. STATUS BY BRANCH OF SERVICE

1. Theater Ballistic and Cruise Missiles

China has put significant emphasis on short- and intermediate-range ballistic missiles and cruise missiles early on in its modernization drive. This is one area the PLA has succeeded so far in meeting the needs of the new military strategy. It has phased in more accurate, mobile, and faster to launch solid-fuel ballistic missiles to replace older liquid-fueled ones. Initially deployed across the Taiwan Strait more as terror weapons, the PLA is currently upgrading its missile capability to increase accuracy. Taiwan estimates that there are more than 400 missiles currently in the areas across the island, which exceeds U.S. estimates. U.S. sources conservatively estimate that China intends to

⁴² Mel Gurtov and Byong-Moo Hwang, China's Security: The New Roles of the Military (Boulder, CO: Lynne Rienner Publishers, 1998) 225-26.

build 650 DF-15 and M-11 missiles by 2005, bringing the total to a reasonable estimate of 1,000 or more ballistic and cruise missiles aimed at Taiwan by the end of the decade.⁴³

Cruise missile technology is still insignificant for land attack, with the missiles mostly concentrated in anti-ship missiles, mostly in the navy and some in the air force. However, a robust land attack cruise missile program is underway with possible production by 2005. The PLAN is gradually upgrading its ship attack cruise missile technology that already poses a sizeable threat against Taiwan's navy.⁴⁴ The addition of SS-N-22 *Sunburn* missiles on its recently purchased Russian Sovremenny destroyers has tipped the balance of anti-ship cruise missile balance dangerously toward the PLAN. These missiles have received much press attention lately due to its lethality and difficulty to defend against, even for the U.S. Navy, having earned the nickname of "aircraft carrier killer."⁴⁵ These developments have given China a potent ship attack capability with a growing potential for land attack.

Currently, these missiles would have problems striking targets with great accuracy, perhaps missing by 300 meters, the length of a football field.⁴⁶ However, China is taking measures to improve accuracy by taking advantage of satellite guidance technology from the U.S. GPS or the Russian GLONASS guidance systems. This

⁴³ Richard D. Fisher, Jr., prepared testimony, House Armed Services Committee, 19 July 2000, LEXIS-NEXIS Congressional Universe, online, LEXIS-NEXIS, 17 Feb. 2001.

⁴⁴ June Teufel Dreyer, "The PLA and the Taiwan Strait," issue paper, International Forum on the Peace and Security of the Taiwan Strait, July 1999, rpt. in Taiwan Security Research, online, National Taiwan University, Internet: <http://taiwansecurity.org/IS/Dreyer-The-PLA-and-the-Taiwan-Strait.htm>, 26 Feb 2001.

⁴⁵ Bill Gertz, "Admiral Warns of Perilous Buildup of Chinese Missiles," Washington Times 28 Mar. 2001: A1, NewsBank NewsFile, online, NewsBank, 7 Apr. 2001.

⁴⁶ Bates Gill and Michael O'Hanlon, "China's Hollow Military," The National Interest 56 (1999): n.pag., rpt. by Foreign Policy Studies Program, online, The Brookings Institution, Internet: http://www.brook.edu/views/articles/1999natint_sum.htm, 25 Feb. 2001.

increased accuracy will allow them to deliver decisive strikes against airfields, naval bases, and communication nodes, massively disrupting Taiwan's command and control and logistics.⁴⁷ If China achieves this capability, it certainly will have successfully achieved the capability for battlespace denial and command and control disruption integral for successful execution of modern combat. Already the PLA has a significant arsenal that is and will continue to be fairly effective at finding vulnerabilities in Taiwan's defense and attacking them. So at least for the needs of the Taiwan attack mission, China's missile force is beginning to meet the needs of the new military strategy. Ballistic and cruise missile information is summarized in Table 1.

NAME	DESCRIPTION	STATUS
M-11 Mod1	short range ballistic, 300 km has satellite guidance	newly revealed
DF-21	medium range ballistic, 1,800 km mobile launchers	improving accuracy using satellite guidance
DF-15 / M-9	short range ballistic, 600 km used in 95'-96' against Taiwan	improving accuracy using satellite guidance
DF-11 / M-11	short range ballistic, 300 km replacement for Scud	
JL-1	sub launched ballistic, 1,900 km similar to DF-21	
Hong Niao, Cheng Feng	land attack cruise missile similar to early U.S. Tomahawk	enter service around 2005

Table 1. Theater Ballistic and Cruise Missiles⁴⁸

⁴⁷ Richard D. Fisher, Jr., prepared testimony, House Armed Services Committee, 19 July 2000, LEXIS-NEXIS Congressional Universe, online, LEXIS-NEXIS, 17 Feb. 2001.

⁴⁸ Compilation of data presented in written text of this thesis.

2. Air Force

China's air force suffered the most from the decades of technological isolation prior to the reform period, and since then, it has received the highest priority in modernization. The fact that China had the world's largest air force is deceiving in that the majority of the aircraft were obsolete. Not only was its equipment out of date, pilot training and proficiency was low, the force structure did not meet the needs of the new strategy, and air force doctrine was out of date. The PLAAF was the most obvious example of how lacking China's military was in being able to fight local wars in high-tech conditions.

For decades the PLAAF's strategic thinking was not oriented toward offensive operations. Its primary mission of air defense to protect the cities controlled by the PLA dates back to 1949. Most airfields are located near major cities and away from international borders. Consequently, for decades 70 percent of the PLAAF's aircraft were fighters.⁴⁹ To meet the needs of the new strategy, the air force needed transport planes, reconnaissance aircraft, airborne warning and control systems (AWACS), refueling aircraft, and definitely more attack aircraft. There was little need for more strategic bombers that would be of little use in a limited battlefield, could be backed up by attack aircraft and missiles, and could possibly fuel and arms race with Russia or the

⁴⁹ John Wilson Lewis and Xue Litai, "China's Search for a Modern Air Force," International Security 24.1 (1999): 64+, California Periodicals Database, online, California Digital Library, 18 Feb. 2001.

United States. At the same time, it needed to retire thousands of 1950s era aircraft to free up resources for a newer fleet and also simply due to wear and tear.⁵⁰

China has been devoting great resources to upgrade its air force with Russian and Israeli assistance. The development of a local military aviation industry capable of producing technologically advanced aircraft has been given top priority. However, results so far have not been promising. Consequently the Chinese government has turned to other means to acquire what it needs.

The current inventory of more than 4,000 aircraft, including 900 in the PLA Naval Air Force, is comprised mostly of obsolete, Soviet designs from the 1950s. They are short range and lack advanced radar, navigation systems and modern missiles. The backbone of the fighter force consists of 1,800 J-6 / F-6s, an aircraft that is the Chinese version of the 1950s Soviet Mig-19. This plane is at least twenty years out of date and outmatched by aircraft flown by all of its neighbors.⁵¹

The only advanced Chinese produced aircraft is the J-8 / F-8 strike fighter which is based on early 1960s Soviet designs and is comparable to the 1960s U.S. F-4 Phantom. The aircraft is trouble-prone and poorly armed. Production of the J-8 / F-8 illustrates well the unsatisfactory state of the defense industry that has been only able to produce 150 fighters after over two decades of development.⁵² Another example of the failure of the Chinese aerospace industry is the J-10 / F-10 fighter bomber which has been in

⁵⁰ John J. Schulz, "China as a Strategic Threat: Myths and Verities," Strategic Review 26 (1998): 7.

⁵¹ Avery Goldstein, "Great Expectations: Interpreting China's Arrival," International Security 22.3 (1997): 36+, California Periodicals Database, online, California Digital Library, 24 Feb. 2001.

⁵² Frank W. Moore, "China's Military Capabilities," Institute for Defense and Disarmament Studies, Jun. 2000, rpt. by The Center for the Studies of Chinese Military Affairs, online, National Defense University, Internet: http://www.ndu.edu/inss/China_Center/Chinaart2.htm, 25 Feb. 2001.

development for over a decade. It is a reverse-engineering project copying a U.S. F-16 with assistance from Israeli engineers. There are doubts if this plane will make it into the inventory by the expected 2005 target date.⁵³ Due to this lack of success with its local aviation industry, China has been forced to turn to foreign sources to purchase what it needs.

The only modern, up to date fighter, comes from foreign military acquisitions. China has taken delivery of about fifty 4th generation SU-27 fighters from Russia. This is a modern multi-role fighter comparable to the U.S. F-16 / F-18 fighters. In 1996, Russia agreed to work with China to co-produce domestically an additional 200 (designated as the J-11) over the next decade. In 1999 Russia agreed to sell thirty SU-30 all-weather strike fighter comparable to the U.S. F-15 E.⁵⁴ These aircraft are the only ones in the Chinese arsenal that can be regarded as modern, accounting for only ten percent of the force.

In addition to obtaining modern fighter aircraft, China has also sought to add support planes to its inventory. However, the expected Israeli \$250 million sale of advanced airborne warning technology was suspended last year after opposition by the United States. This is a major setback for China's desire to give improve its command

⁵³ Russell D. Howard, "The Chinese People's Liberation Army: Short Arms and Slow Legs," USAF Institute for National Security Studies, Sep. 1999, rpt. by The Center for the Studies of Chinese Military Affairs, online, National Defense University, Internet: http://www.ndu.edu/inss/China_Center/Chinaart1.htm, 25 Feb. 2001.

⁵⁴ Russell D. Howard, "The Chinese People's Liberation Army: Short Arms and Slow Legs," USAF Institute for National Security Studies, Sep. 1999, rpt. by The Center for the Studies of Chinese Military Affairs, online, National Defense University, Internet: http://www.ndu.edu/inss/China_Center/Chinaart1.htm, 25 Feb. 2001.

and control operations in the air.⁵⁵ About ten long-range Russian Il-76 transport aircraft that have the capacity to transport large numbers of men and equipment have been added to the PLAAF's limited air transport fleet. In terms of airborne transport capability, this translates to 6,000 troops, a little more than one airborne brigade.⁵⁶ Unfortunately, this is inadequate for its needs and may force China to look to its civil aircraft fleet in times of emergency.

China has looked to various countries to add in-flight refueling technology and has already modified at least ten H6 bombers into H6D refuelers. These additions all add to China's ability to project power beyond its coastline to some degree. However, this is an incomplete list of additions and China still needs more. Also, taking this potential and making it a reality requires substantial training before China can truly have a power projection air force. This mirrors the training requirements that pilots flying air combatant aircraft need.

Pilot training programs in the past were geared to prepare for fighting conventional local wars. By 1997, the PLAAF started carrying out new training programs designed to prepare for the strategy of fighting high-tech local wars. However, it has had limited success so far in raising training levels. There is an acute shortage of qualified personnel with technical background. One major indicator is that only 20 percent of air officers are college graduates. Another example is the problem the PLAAF has had integrating the new equipment into training, as demonstrated by continuing Su-

⁵⁵ Richard D. Fisher, Jr., prepared testimony, House Armed Services Committee, 19 July 2000, [LEXIS-NEXIS Congressional Universe](#), online, LEXIS-NEXIS, 17 Feb. 2001.

27 accidents.⁵⁷ This has been compounded by the limited flying time the PLAAF has been willing to or able to afford, around 100 hours a year, compared to the NATO minimum of 180 hours a year that Taiwanese, Japanese, and South Korean pilots easily attain.

Additionally, the value of these training flights is questionable since most are short in duration and focus on basic navigation. There is only limited flight simulator training time to reinforce air training.⁵⁸ Faced with such problems, it is no surprise that the PLAAF has had problems improving the training level and readiness of its pilots. This certainly raises questions about the effectiveness of the pocket of excellence the PLAAF has been able to develop.

Despite problems with its indigenous military aircraft industry and the need to rely on foreign arms purchases, what is noteworthy is that China at least is attempting to develop or procure half a dozen tactical aircraft. This is notable when compared other nations that have difficulties maintaining one program. It has a small pocket of excellence in the Su-27 force backed up by a large force of older airframes. It is beginning to add the pieces to the puzzle needed to complete the whole picture on support planes. China's air force has made the first tentative steps needed to meet the

⁵⁶ Bates Gill and Michael O'Hanlon, "China's Hollow Military," The National Interest 56 (1999): n.pag., rpt. by Foreign Policy Studies Program, online, The Brookings Institution, Internet: http://www.brook.edu/views/articles/1999natint_sum.htm, 25 Feb. 2001.

⁵⁷ John Wilson Lewis and Xue Litai, "China's Search for a Modern Air Force," International Security 24.1 (1999): 64+, California Periodicals Database, online, California Digital Library, 18 Feb. 2001.

⁵⁸ Russell D. Howard, "The Chinese People's Liberation Army: Short Arms and Slow Legs," USAF Institute for National Security Studies, Sep. 1999, rpt. by The Center for the Studies of Chinese Military Affairs, online, National Defense University, Internet: http://www.ndu.edu/inss/China_Center/Chinaart1.htm, 25 Feb. 2001.

demands of the new defense strategy. Data on significant military aircraft in the PLAAF is summarized in Table 2.

NAME	DESCRIPTION	STATUS
SU-30	30 Russian all-weather strike fighter similar to U.S. F-15E <i>Strike Eagle</i>	future purchase
SU-27 / J-11 <i>Flanker</i>	50 Russian fighter bombers similar to U.S. F-16 <i>Falcon</i> / F-18 <i>Hornet</i>	co-producing 200 more as J-11, 20 a year
J-10 / F-10	China's 1st 4th generation fighter reverse engineered U.S. F-16 <i>Falcon</i>	future production by 2005, having problems
J-8 / F-8 <i>Finback</i>	150 fighters most similar to 1960s U.S. F-4 <i>Phantom</i>	
J-7 / F-7 <i>Fishbed</i>	500 strike fighters based on 1950s Soviet Mig-21	obsolete, needs to phase out
J-6 / F-6 <i>Farmer</i>	1,800 strike fighters based on 1950s Soviet Mig-19	obsolete, needs to phase out
H-6 <i>Badger</i>	bomber based on 1950s Soviet Tu-16 Badger	obsolete, no plans to upgrade
H-6D	10 aerial refueling tankers	
IL-76	10 Russian medium range jet transports similar to U.S. C-141	

Table 2. Significant Military Aircraft⁵⁹

3. Navy

The Chinese navy is struggling to adapt to its new requirements of being able to project power over, under, and on water. China's history has been dominated by concerns for defense of inland borders and that legacy still haunts the military today. Consequently, the PLA has always been dominated by the land-based Army first. The name of the navy -- the People's Liberation Army Navy -- demonstrates the subordinate

position to the land-based Army that the navy is trying to free itself from.⁶⁰ The PLAN has traditionally focused on coastal defenses, relying on defensive tactics implemented by a large fleet of low technology missile boats, diesel submarines, and unsophisticated destroyers. China has not had the deep tradition and experience that the United States, England, even Japan, have in being a blue water force. That is one of the biggest challenges facing China, a traditional land power, that now has to face the reality of operating in a new environment in which it has little experience.

Recently the maritime strategy has evolved from coastal defense to "active offshore defense," where the navy has the responsibility to project power to back up China's role as a regional maritime power. The PLAN must extend its operational area from China's coastal waters to several hundred miles out. This includes responsibilities for capturing and defending islands, blockading sea lanes, and engaging regional navies in combat.⁶¹ Achieving a green water maritime capability is critical for the next step of gaining blue water capability. Consequently, the PLAN has engaged in selective modernization focusing on vessels with more range, lethality, and survivability. Like the PLAAF, the PLAN has suffered the shortcomings of the indigenous defense industry and has had to depend on foreign equipment to supplement its needs.

The PLAN has 60 submarines, 50 large surface combatants, and hundreds of smaller ships. It has been replacing large numbers of older ships with smaller numbers of modern ships. With the new strategy dictating the need to control the sea lanes, mine

⁵⁹ Compilation of data presented in written text of this thesis.

⁶⁰ Bates Gill, prepared testimony, House Armed Services Committee, 19 July 2000, LEXIS-NEXIS Congressional Universe, online, LEXIS-NEXIS, 17 Feb. 2001.

approaches around Taiwan, and destroying Taiwan's naval defense, the PLAN has focused on the acquisition of new submarines, anti-ship missiles, and mines and adding to its inventory of destroyers. China has shied away from purchasing or developing an aircraft carrier due to financial and technical constraints.

The backbone of the navy surface combatants consists of 22 destroyers and 35-37 frigates. The navy launched a ship-building program in 1988 to expand its blue-water capabilities. By the mid 1990s, limited numbers of ships in four new classes were deployed, including the *Luhu* class destroyer and the *Jiangwei* class frigate. The intended goal was to phase in a new class of vessels that focused on joint, multi-ship operations.⁶² However, these new ships are not state-of-the art when compared to Western and regional standards, having limitations in air and missile defenses and anti-submarine defense. They do have a broad and expanding array of anti-ship cruise missiles.⁶³ As earlier noted, even with the existence of newer Chinese made destroyers, the PLAN has still opted to purchase Russian *Sovremenny* destroyer of a similar class.

Like its sister service, the PLAN has turned to Russia to create a small pocket of excellence in its destroyer force. It has received the second of two *Sovremenny* class destroyers from Russia. These will be the largest ships in the PLAN fleet, with significant air defense and anti-ship attack capabilities.⁶⁴ As previously mentioned, the accompanying SS-N-22 *Sunburn* anti-ship cruise missiles give China's navy a significant

⁶¹ Brad Kaplan and Gordon I. Peterson, "China's Navy Today: Storm Clouds on the Horizon... or Paper Tiger?" *Sea Power* 24.12 (1999): 28-33, [ProQuest Direct](#), online, Bell & Howell, 25 Feb. 2001.

⁶² Roxane D.V. Sismanidis, "Chinese Security as Asia Evolves: Constraints and Ambiguities," *Journal of Northeast Asian Studies* 15.2 (1996): 68.

⁶³ Brad Kaplan and Gordon I. Peterson, "China's Navy Today: Storm Clouds on the Horizon... or Paper Tiger?" *Sea Power* 24.12 (1999): 28-33, [ProQuest Direct](#), online, Bell & Howell, 25 Feb. 2001.

ship destroying capability. This addition, along with the large arsenal of anti-ship cruise missiles on many other destroyers and frigates, not to mention the more than 400 other patrol, guided missile, and torpedo boats, give the PLAN a well-armed, large fleet of vessels with tremendous potential for sea attack.⁶⁵

However, the sheer numbers can be deceptive. Despite having the third largest navy in the world, China does have a tremendously large coastline it must defend. In addition, there are questions about the quality of the ships constructed in China, with problems in various areas such as antiquated powerplants, ineffective weapons, and problematic electronics.⁶⁶ This compounds the problem of poor anti-ship, missile, and submarine defenses, as previously mentioned. In addition, logistical support is weak due to the navy's inadequate underway replenishment capabilities which it is aggressively trying to address.⁶⁷ This will be a problem for the near-term as the navy tries to extend its operations farther from the mainland. And even if the navy can extend its operations farther out, there are still the problems of vulnerabilities from the air due similar difficulties in the air force extending its operations past the mainland and working in a joint manner with the navy.

Perhaps the most important element of the PLAN is the submarine force. Not only are they less vulnerable to attack than surface combatants, they still can accomplish the same missions of sinking ships and laying mines. China has a sizeable force of 60

⁶⁴ Avery Goldstein, "Great Expectations: Interpreting China's Arrival," International Security 22.3 (1997): 36+, California Periodicals Database, online, California Digital Library, 24 Feb. 2001.

⁶⁵ Brad Kaplan and Gordon I. Peterson, "China's Navy Today: Storm Clouds on the Horizon... or Paper Tiger?" Sea Power 24.12 (1999): 28-33, ProQuest Direct, online, Bell & Howell, 25 Feb. 2001.

⁶⁶ John J. Schulz, "China as a Strategic Threat: Myths and Verities," Strategic Review 26 (1998): 9.

odd submarines, the world's third largest force, but most are two to three generations behind Western models, are noisy, and unreliable.⁶⁸ The PLAN has already begun to phase out older models while replacing them with more modern Chinese models. Even then, the domestically produced Song model still uses 1980s or earlier technology and is another example of the limitations of the Chinese defense industry. To supplement this force, China once again has looked to Russia for equipment purchases.

China has already received three advanced diesel *Kilo* submarines from Russia, awaiting the fourth, and will probably purchase sixteen more after that. The last two purchased submarines are of the more advanced export version, comparable to the U.S. *Los Angeles* class, the backbone of the U.S. submarine force.⁶⁹ These represent a significant threat to even U.S. vessels. As discussed previously, developing a submarine-launched cruise missile is a priority, with one possible in a few years. These submarines, along with the large number of less sophisticated submarines, give China a potent force to carry out the mission of sinking ships and laying mines.

Just like the PLAAF, the PLAN submarine force also faces problems of crew training proficiency. The crews such little time at sea (only a few days a year) that its basic seamanship is questionable. Compounding this problem is the low operational rate of these vessels. Most are kept in dock, needing major maintenance jobs and crew

⁶⁷ Brad Kaplan and Gordon I. Peterson, "China's Navy Today: Storm Clouds on the Horizon... or Paper Tiger?" *Sea Power* 24.12 (1999): 28-33, [ProQuest Direct](#), online, Bell & Howell, 25 Feb. 2001.

⁶⁸ James H. Nolt, "The China-Taiwan Military Balance," [Taiwan Security Research](#), online, National Taiwan University, Internet: <http://taiwansecurity.org/IS/IS-012000-Nolt.htm>, 26 Feb 2001.

⁶⁹ Avery Goldstein, "Great Expectations: Interpreting China's Arrival," *International Security* 22.3 (1997): 36+, [California Periodicals Database](#), online, California Digital Library, 24 Feb. 2001.

training to get them back on line.⁷⁰ Like the air force, the navy has created a small pocket of excellence in a few submarines backed up by a mass of unsophisticated submarines. The level of proficiency of these seamen also raises questions about the real effectiveness of this pocket of excellence.

The PLAN's marine forces disappeared in the 1950s and 1960s when plans for an invasion of Taiwan were abandoned. In 1979, the PLAN rebuilt its marine force in its South Sea Fleet.⁷¹ This force has become a well trained and equipped unit, supported by amphibious tanks and armored personnel carriers. These forces can be used for amphibious raids and establishing beachheads in amphibious assaults.⁷² Its relatively small size would not normally give them a major role in invasion scenarios of Taiwan. Instead, they would normally provide support to a much larger ground force in any major operation against Taiwan, as I will discuss later. However, due to a shortage of landing ships, this force will have first priority for transport and will be critical in spearheading the amphibious assault of Taiwan. Certainly, in smaller scale conflicts that China can support much more easily involving small islands and reefs, the Marine Force will play a key future role.

This brings up a key issue for the navy in an armed conflict and invasion of Taiwan. The PLAN may have increasing capabilities in projecting itself beyond China's coastlines to Taiwan. But this does little good if it does not have the capability to move a large number of ground forces there and to logistically support them. China's amphibious

⁷⁰ John J. Schulz, "China as a Strategic Threat: Myths and Verities," Strategic Review 26 (1998): 9.

⁷¹ You Ji, The Armed Forces of China (New York: I.B. Tauris Publishers, 1999) 193.

transport capacity of about 70 ships can move 10,000 to 15,000 troops, approximately one infantry division.⁷³ This consists of 49 assault ships, including World War II era U.S. Navy LSTs, and several more under construction. Inexplicably, there seem to be no signs of future plans to build larger troop ships needed for a Taiwan amphibious assault.⁷⁴ The ability to project power in the Taiwan invasion scenario hinges on this key support element. Despite recent improvements to the surface and submarine force to give the PLAN limited capability to project power a short distance, without the capacity to insert combat forces and logistically support them, power projection by amphibious assault will not happen in a Taiwan invasion scenario. It seems that the PLAN is satisfied that meeting the needs of the new defense strategy does not require major amphibious operations for the time being. Data on significant naval vessels in the PLAN is summarized in Table 3.

⁷² Brad Kaplan and Gordon I. Peterson, "China's Navy Today: Storm Clouds on the Horizon... or Paper Tiger?" *Sea Power* 24.12 (1999): 28-33, *ProQuest Direct*, online, Bell & Howell, 25 Feb. 2001.

⁷³ Bates Gill and Michael O'Hanlon, "China's Hollow Military," *The National Interest* 56 (1999): n.pag., rpt. by *Foreign Policy Studies Program*, online, The Brookings Institution, Internet: http://www.brook.edu/views/articles/1999natint_sum.htm, 25 Feb. 2001.

⁷⁴ Frank W. Moore, "China's Military Capabilities," Institute for Defense and Disarmament Studies, Jun. 2000, rpt. by *The Center for the Studies of Chinese Military Affairs*, online, National Defense University, Internet: http://www.ndu.edu/inss/China_Center/Chinaart2.htm, 25 Feb. 2001.

NAME	DESCRIPTION	STATUS
<i>Sovremenny</i> Type-956	2 Russian destroyers SS-N-22 <i>Sunburn</i> anti-ship missiles	recently purchased
<i>Luhai</i> / -054	1 destroyer 1990s upgrade of <i>Luhu</i>	
<i>Luhu</i> / -052	2 destroyers early 1990s, first modern Chinese vessel	production stopped for <i>Luhai</i>
<i>Luda</i> / -051	17 destroyers 1970s models with some 1980s upgrades	being supplemented by <i>Luda</i> / <i>Luhai</i>
<i>Jiangwei</i>	7 frigates early 1990s upgrades to fleet	
<i>Jianghu</i>	28 frigates	obsolete, used for coastal patrols
Type-093	nuclear attack submarine	entering service soon
<i>Han</i> / -091	5 nuclear attack submarine older, 1960s design	will be supplemented by more modern Type-093
<i>Kilo</i>	3 Russian conventional submarines modern, quiet, can lay 22 mines each	awaiting 1 more, last 2 very modern may purchase 16 more
<i>Song</i> / -039	2 conventional submarine 1980s technology, replacing <i>Ming</i>	having difficulties, may be discontinued
<i>Ming</i> / -035	16 conventional submarine 1970 technologys, remodeled <i>Romeo</i>	obsolete but still effective
<i>Romeo</i> / -033	30+ conventional submarine oldest, 1950s-60s design	obsolete, phasing out

Table 3. Significant Naval Vessels⁷⁵

4. Ground Forces

The army is the largest of the three services, has been reduced the most, and is last in priority for resources. Its current strength of 1.8 million (2000 estimate) is half of what it was when Deng Xiaoping came to power in 1978, with further announced cuts of at

⁷⁵ Compilation of data presented in written text of this thesis.

least 20 percent.⁷⁶ Historically, the ground forces have always been the backbone of the military, and even today, the air force and navy are not independent services like in most other countries, but subordinate to the army. However, the other services have reaped the benefits of the new strategy which specifically emphasizes the importance of naval and air forces, and the army has been slow to adapt and modernize in this new environment. The army could always be counted on to adequately defend Chinese territory against invasion, but has not been able to adequately carry offensive operations beyond China's borders, let alone past China's coastal waters.

The PLA has always been and still is an infantry force, despite efforts at increasing mobility and mechanization. According to the Pentagon, only twenty percent of the ground forces were equipped to move around China, let alone had the capability to project power regionally.⁷⁷ The PLA has always had a large tank force, but most are 1950s era and are committed to defending China's long borders. The ground forces lacked experience in conducting combined arms and joint warfare, compounded by its obsolete weaponry and low education level of officers and soldiers.⁷⁸ The low level of training has further been hampered by a lack of a non-commissioned officer corps, as previously discussed, and the high turnover rate of recruits as its enlistment periods

⁷⁶ James H. Nolt, "The China-Taiwan Military Balance," Taiwan Security Research, online, National Taiwan University, Internet: <http://taiwansecurity.org/IS/IS-012000-Nolt.htm>, 26 Feb 2001.

⁷⁷ Bates Gill and Michael O'Hanlon, "China's Hollow Military," The National Interest 56 (1999): n.pag., rpt. by Foreign Policy Studies Program, online, The Brookings Institution, Internet: http://www.brook.edu/views/articles/1999natint_sum.htm, 25 Feb. 2001.

⁷⁸ Russell D. Howard, "The Chinese People's Liberation Army: Short Arms and Slow Legs," USAF Institute for National Security Studies, Sep. 1999, rpt. by The Center for the Studies of Chinese Military Affairs, online, National Defense University, Internet: http://www.ndu.edu/inss/China_Center/Chinaart1.htm, 25 Feb. 2001.

complete. With such a large force and so little resources, the army had to prioritize where it wanted to upgrade its capabilities.

To address the army's limitations and to begin to meet the demands of the new military strategy, the army has focused on building two types of specialized forces to form the cutting edge of a smaller fighting force. The first one, *quantou*, are often called "fist units." These selected battalion or brigade size units were established in each of the seven military regions to receive the best equipment and training. They test the new doctrine and tactics being developed to use its new weapon systems. In addition, they have the task of teaching the new doctrine and tactics to the lower priority units as each of these units are gradually supplied with better equipment.⁷⁹ The second, *kuaisu*, are the larger "rapid response force" or rapid reaction force (RRF). Equivalent to the U.S. Army's 82nd and 101st Airborne Divisions, the RRF division size units are the rapid mobility forces China would need in limited, local wars and in response to internal crisis. These units have begun to form small pockets of excellence within the ground forces.

The primary strategic quick reaction force is the 15th Airborne Army, comprised of three airborne divisions of 10,000 troops each.⁸⁰ Besides this large RRF unit, it is hard to say right now how ready these newly trained units are or how many other units there are. Estimates of its size range from 275,000 to 300,000.⁸¹ While

⁷⁹ Paul H.B. Godwin and John J. Schulz, "Arming the Dragon for the 21st Century: China's Defense Modernization Program," *Arms Control Today* 23.10 (1993): 4.

⁸⁰ June Teufel Dreyer, "The PLA and the Taiwan Strait," issue paper, International Forum on the Peace and Security of the Taiwan Strait, July 1999, rpt. in *Taiwan Security Research*, online, National Taiwan University, Internet: <http://taiwansecurity.org/IS/Dreyer-The-PLA-and-the-Taiwan-Strait.htm>, 26 Feb 2001.

⁸¹ Jan-Ping Wu, "The People's Liberation Army in the 21st Century: An Analysis of the Possible Implications of Troop Reductions," *RUSI Journal* 145.3 (2000): 45-50, *ProQuest Direct*, online, Bell & Howell, 17 Feb. 2001.

agreeing on the existence of a large number of elite forces, experts still downplay its ability. Despite widely publicized exercises showing off airborne and marine assaults in joint operations, these displays should not indicate that this dramatic reorganization of the ground forces has resulted in a well-trained force able to successfully handle combined arms and joint operations. The new tactics and new equipment that these types of units have create more challenges for logistics, command and control, and coordination beyond the basic scope of these missions.⁸² Until these units mature and learn to apply newly learned skills, there will remain questions as to how much more effective these quick reaction forces are compared to traditional units.

Despite having the third largest tank force in the world, China's 8,000 plus tanks are mostly Type-59s, copies of the 1950s Soviet T-54 tank. There are also a variety of other models at small quantities, but the only ones worth noting are the around 600 Type-80s and around 500 Type-85s, produced in the late 1980s and early 1990s. Although they are China's most modern tanks, they represent 20 to 30 year old technology and are easily outclassed by Taiwan's 300 superior U.S. M-60A3 tanks. In addition, there are no indications of any production of newer, better tanks in the near future.⁸³ Looking at light tanks, China has around 2,000 Type 62 and Type 63 light tanks based on 1960s Soviet technology. The only thing of interest is that the 1,200 Type 63s are amphibious tanks.⁸⁴ This will be useful in an invasion of Taiwan, but since the lack of amphibious transport is

⁸² Andrew N. D. Yang and Milton Wen-Chung Liao, "PLA Rapid Reaction Forces: Concept, Training, and Preliminary Assessment," The People's Liberation Army in the Information Age, ed. James C. Mulvenon and Richard H. Yang (Santa Monica: RAND, 1999) 56.

⁸³ James H. Nolt, "The China-Taiwan Military Balance," Taiwan Security Research, online, National Taiwan University, Internet: <http://taiwansecurity.org/IS/IS-012000-Nolt.htm>, 26 Feb 2001.

so critical, whatever advantage China may have in numbers of tanks will not come to fruition since they cannot get to the battlefield. What tanks China can deploy will be outgunned by superior Taiwan tanks. Thus, armor modernization, or lack of it, has done nothing to enhance the combat capabilities of the ground forces to tackle the needs of the new military strategy. Even if China had more modern tanks, the same problems of lack of combined arms experience would plague the ground forces, making whatever contributions that extra firepower would bring minimal. Data on significant ground force characteristics is summarized in Table 4.

DESCRIPTION	STATUS
<i>quantou</i> "fist units" battalions / brigades priority trained, equipped units, train others	established in each of 7 military regions
<i>kuaisu</i> "rapid response" RRF divisions equivalent to U.S. 82nd, 101st Airborne Div	prepared to deploy within 24 hours, use Il-76 transports
Type 85 tank (600), 125mm gun 1990s Type 80 upgrade	inferior to Taiwan U.S. M-60A3 (300) tanks, 105mm gun
Type 80 tank (500), 105mm gun 1980s, based on Soviet T-54	inferior to Taiwan U.S. M-60A3 (300) tanks, 105mm gun
Type 63 tank (1,200), 85 mm gun Type 62 tank (800), 85 mm gun	light tanks, based on 1960s Soviet PT-76 PT 63 is amphibious light tank
Type 59 tank (6,000), 100mm gun based on 1950s Soviet T-54	will remain in service until next generation tank

Table 4. Significant Ground Force Characteristics⁸⁵

⁸⁴ Frank W. Moore, "China's Military Capabilities," Institute for Defense and Disarmament Studies, Jun. 2000, rpt. by The Center for the Studies of Chinese Military Affairs, online, National Defense University, Internet: http://www.ndu.edu/inss/China_Center/Chinaart2.htm, 25 Feb. 2001.

⁸⁵ Compilation of data presented in written text of this thesis.

IV. CAN THE PLA TAKE TAIWAN?

A. POSSIBLE SCENARIO

The ROC Ministry of Defense believes that the most likely military options for China would be a partial blockade of Taiwan's offshore islands, seizing the offshore islands, blockading Taiwan itself, invading Taiwan, or attacking Taiwan with missiles and bombs.⁸⁶ Most analysts believe that the missile attack scenario would be the most likely in the near-term future since it would give Taiwan little time to prepare, can be easily executed with the current inventory of PLA weaponry, and will minimize the possibility of United States intervention. They also believe that the invasion of Taiwan scenario would be the most risky, especially since it would have the most risk of United States intervention. But what if the United States does not intervene? If all other scenarios fail to force Taiwan to capitulate, China would have no choice but to invade Taiwan. It is this scenario I want to examine.

The basic military option would consist of a combined arms amphibious and airborne assault followed by a military campaign to clear the island of ROC Army forces. The purpose of the amphibious and airborne assault is to obtain a lodgment area for the insertion of land combat forces in order to start the land campaign of clearing the island.⁸⁷

⁸⁶ June Teufel Dreyer, "The PLA and the Taiwan Strait," issue paper, International Forum on the Peace and Security of the Taiwan Strait, July 1999, rpt. in Taiwan Security Research, online, National Taiwan University, Internet: <http://taiwansecurity.org/IS/Dreyer-The-PLA-and-the-Taiwan-Strait.htm>, 26 Feb 2001.

⁸⁷ John I. Alger and Thomas E. Griess, eds., Definitions and Doctrine of the Military Art (Wayne, New Jersey: Avery Publishing Group, 1985) 118.

The most critical phase of the operation would be that actual assault. Looking at the history of amphibious assaults, several key elements to a successful invasion stand out. First of all, the invading force needs to establish air superiority. Next, it needs to land forces quickly in a place where the attackers outnumber defenders in both troops and firepower. After that, the attackers must reinforce the lodgment area faster than the defenders can bring more troops and equipment to counterattack.⁸⁸ Once the assault has been successful enough to secure the lodgment area and the invading force has inserted enough combat power to initiate offensive operations to break out of the lodgment area, the next phase of clearing the island can begin.

To analyze this basic scenario, it is useful to break down the assault phase into specific missions in order to determine if each of the PLA services has the capability to accomplish each mission. One mission is the fight for air superiority, both over the strait and over the island. Another is the sea battle for control of the strait. The next mission would be the attack on key assets to "soften up" the defenders. Key assets would include airfields, ports, command and control facilities, air defense assets, radar sites, power stations, and major transportation links such as railroads and vital roads. Then of course is the actual landing mission, including amphibious, airborne, and helicopter assaults. By using these missions as a baseline for analysis, it is possible to see if the PLA can accomplish the objectives required to achieve the key elements for a successful amphibious assault. And then it is possible to determine if China can defeat Taiwan in an invasion.

⁸⁸ Michael O'Hanlon, "Why China Cannot Conquer Taiwan," International Security 25.2 (2000): 51+, California Periodicals Database, online, California Digital Library, 26 Feb. 2001.

To get a better understanding of the mission requirements, it is necessary to understand the enemy (Taiwan) situation. Taiwan is a fortress. Much of the west coast is covered with marshes and mud flats extending two to five miles out to sea that would bog down landing forces, giving the defender the advantage. The east coast is made up of mountains and steep cliffs with some limited access. An amphibious assault on the east side of the island would lengthen the distance ships would have to travel and would give defenders more time to prepare. Rough seas and storm conditions are typical in the strait.⁸⁹ All of these natural defenses give Taiwan quite an advantage. The Taiwan military also poses a formidable challenge. The analysis below will continue to lay out the enemy situation in military forces and whether or not the PLA's capabilities can overcome those obstacles. For a geographical overview of the Taiwan Strait theater of operations, see Figure 1.

⁸⁹ David Shambaugh, "A Matter of Time: Taiwan's Eroding Military Advantage," Washington Quarterly 23.3 (2000): 119+, Project Muse, online, Johns Hopkins University Press, 26 Feb. 2001.

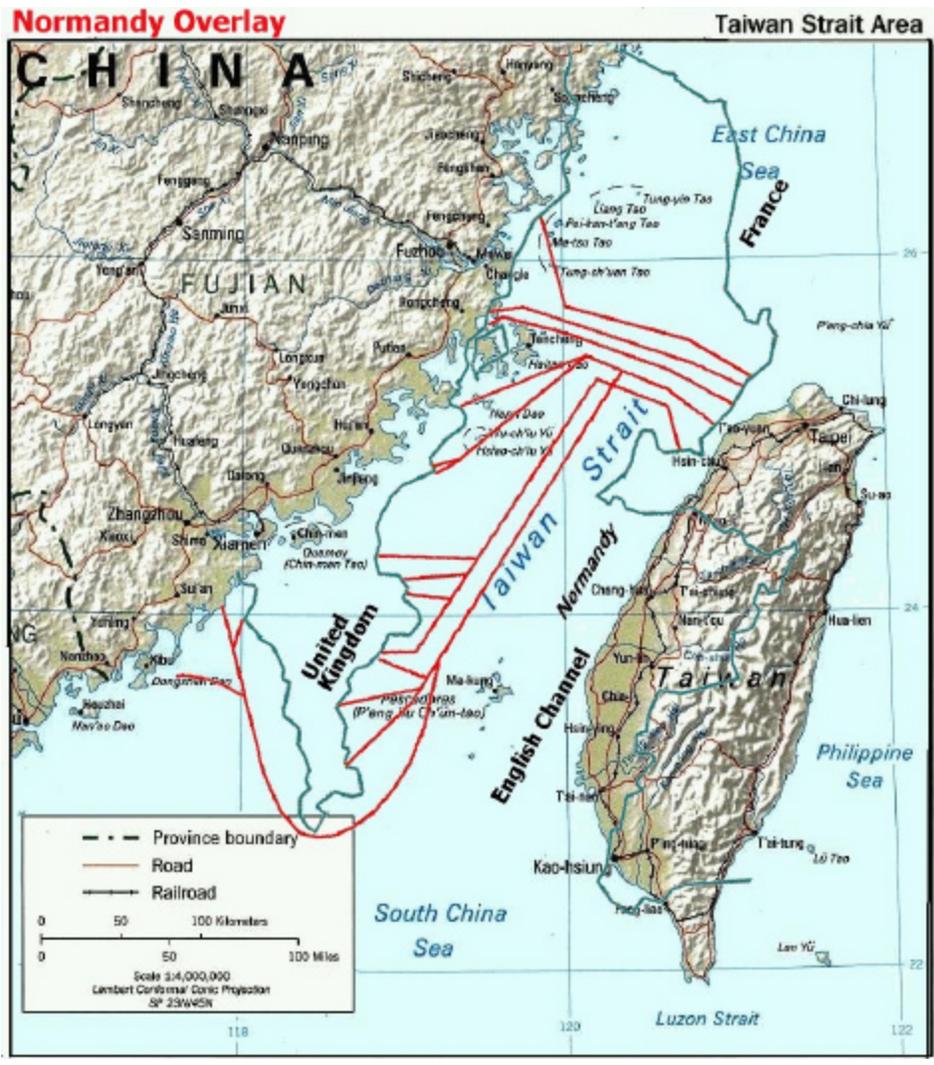


Figure 1. Taiwan Strait Theater with Normandy Overlay⁹⁰

B. ANALYSIS OF PLA CAPABILITIES

Taiwan has a large military, with the army having 220,000 active-duty soldiers in 24 divisions and a large reserve of 1.5 million. Its air force is technologically superior, with around 300 modern first-class aircraft. Despite being smaller than China's with two-

thirds as many destroyers and frigates, Taiwan's navy has superior anti-submarine, anti-aircraft, and anti-missile capabilities. However, it only has two useful submarines.⁹¹ The Taiwan military has always had the advantage of being on the receiving end of modern military equipment from the United States. During the 1990s, Taiwan substantially upgraded its military capabilities in response to the growing PLA threat.

A useful rough comparison is the Allied assault on Normandy in June 1944. Remarkably, the general geographic scope of the British Channel theater of operation matches that in the Taiwan Strait. See the above Figure 1. Chinese forces would have to cross a similar distance to assault Taiwan with the goal of gaining control of a region of similar size. However, the situation for Taiwan is much more favorable than that of World War II Germany, with Taiwan having a much better ratio of defenders, aircraft, and warships.⁹² This gives an idea of the magnitude of the operation and what was successful in history. The difference now is that the lethality of the forces today is exponentially greater, especially synchronized together in combined arms and joint operations. The question is whether China's military has the capability to meet the requirements of today's battlefield.

⁹⁰ Military Analysis Network, online, Federation of American Scientists, Internet: <http://www.fas.org/man/dod-101/ops/taiwan-d-day.htm>, 26 Feb 2001.

⁹¹ James H. Nolt, "The China-Taiwan Military Balance," Taiwan Security Research, online, National Taiwan University, Internet: <http://taiwansecurity.org/IS/IS-012000-Nolt.htm>, 26 Feb 2001.

⁹² Military Analysis Network, online, Federation of American Scientists, Internet: <http://www.fas.org/man/dod-101/ops/taiwan-d-day.htm>, 26 Feb 2001.

1. Theater Ballistic and Cruise Missiles

In any military scenario, China would certainly use its ballistic and cruise missiles. They do not require the time to prepare and assemble that a fleet of aircraft, flotilla of ships, or armies of soldiers require, giving Taiwan less time to react and giving China the advantage of surprise. The terror aspect of these weapons opens the possibility that Taiwan may capitulate before more military action is required, saving time and resources. With the estimated 400 or so now and up to 1,000 in a decade, any accuracy problems now can be somewhat overcome simply by saturating the key targets with more missiles than necessary. This will be less of a problem in several years as more of these missiles are upgraded with satellite guidance technology. In addition, China has a growing advantage in ship-attack cruise missiles which will help the PLAN.

To counter this threat, Taiwan has three U.S. *Patriot* Advanced Capability-2 (PAC-2) air defense batteries of 200 missiles and six batteries of locally produced *Tien Kung* (*Skybow*) missiles, based on the *Patriot*. These were added in the mid 1990s to begin to counter the growing missile threat China was building across the strait.⁹³ This will address some of the problems posed by the Chinese missiles, but China's arsenal continues to grow and become more accurate, while missile defense assets primarily focus on protecting the major population centers and were designed primarily to protect against aircraft, some ballistic missiles, but not cruise missiles. As China develops land-attack cruise missiles, the missile defense network will be totally unequipped to handle that threat.

Thus China has the edge with its theater ballistic and cruise missile capability and can overwhelm Taiwan's missile defense assets. This gives China a much better chance at succeeding in the mission to attack and "soften up" key targets, especially when backed up with air strikes by the PLAAF. The success of this mission would directly benefit the air and sea fights as airfields, radar sites, ships, and harbors are destroyed or damaged. Taiwan needs to increase missile defense capabilities to continue to keep up with this growing threat.

2. Air Force

To win the battle for air superiority, the PLAAF will have to run a gauntlet of dangerous threats. Despite its numerical superiority over Taiwan, China's small force of modern aircraft is easily matched by Taiwan's larger force of comparable planes. Also, the limited missile defense Taiwan has masks the fact that these weapons were originally designed for air defense, an area in which Taiwan has a lot of capability. In addition, Taiwan has superior early warning and command and control capabilities, allowing the air force and air defense to effectively coordinate the battle.

Taiwan's air force has received a major upgrade in the last several years, giving it around 300 modern fighters in the same league as China's 50 SU-27s. They can fly in a layered defense, with the high level covered by the 58 French *Mirage* 2000s, mid level by the 150 U.S. F-16s, and low level by 130 of Taiwan's Indigenous Defense Fighters

⁹³ June Teufel Dreyer, "Taiwan's Military: A View From Afar," *The Chinese Armed Forces in the 21st Century*, ed. Larry M. Wortzel (Carlisle: Strategic Studies Institute, 1999) 303-305.

(IDF).⁹⁴ With its better trained pilots and better aircraft, Taiwan should have a distinct advantage in the early phases of the air war. Adding to that advantage is China's limited ability to put enough planes in the air at one time. It is constrained by the limited capacity of airfields in Fujian and Guangdong, with some estimates that the PLAAF would only be able to send 200 planes at any one time.⁹⁵ This is further hampered by the limited aerial refueling capabilities.

In addition, Taiwan has essential force multipliers and air defense assets that would make the sky more dangerous for the PLAAF. Taiwan has four U.S. E-2C *Hawkeye*'s AWACS with the capability of tracking over 2,000 targets all the way deep into mainland China, giving the ROC Air Force critical capability in coordinating its air defense.⁹⁶ Taiwan has an extensive air defense network that links radar surveillance stations, fighter bases, anti-aircraft artillery, and surface-to-air missile sites throughout the island.⁹⁷ These assets further improve Taiwan's chances for an effective air defense, not for just the air force, but also for the navy and other critical targets. This would take away the key element of surprise that any attacker would have need as an advantage. These force multipliers hurt China more in light of the current lack of its own AWACS capability in the PLAAF.

⁹⁴ June Teufel Dreyer, "Taiwan's Military: A View From Afar," The Chinese Armed Forces in the 21st Century, ed. Larry M. Wortzel (Carlisle: Strategic Studies Institute, 1999) 302-303.

⁹⁵ Gary Klintworth, "Chinese Defense Modernization and the Security of Taiwan," In China's Shadow: Regional Perspectives on Chinese Foreign Policy and Military Development, Ed. Jonathan D. Pollack and Richard H. Yang (Santa Monica: RAND, 1998) 160.

⁹⁶ Felix K. Chang, "Conventional War Across the Taiwan Strait," ORBIS 40.4 (1996): 577+, California Periodicals Database, online, California Digital Library, 26 Feb. 2001.

⁹⁷ Peter Yu Kien-Hong, "Taking Taiwan: How Would China Set About Recovering the Republic?" Jane's Intelligence Review 10.9 (1998): 31-32.

However, there are many vulnerabilities that China can exploit. First of all, the PLAAF can simply continue to fly planes at this air defense until it is eventually worn down. Even Taiwan realizes this. The Taiwan military has run simulations that indicate the ROC Air Force's more advanced fighters and better trained pilots losing in a war of attrition over time to large numbers of less threatening J-7s and J-6s flown by poorly trained pilots.⁹⁸ As discussed earlier, missiles and bombs that hit its target would make it difficult for Taiwan to keep enough landing strips open for fighters to takeoff.

These missile strikes could also cripple the air defense network by aiming at radar sites and command and control facilities. Taiwan will continue to have these vulnerabilities, especially as the PLAAF continues to upgrade its fighter force and emphasize more training for its pilots. To preserve its small edge in winning the air superiority mission, Taiwan must continue to maintain and train a large, modern air force, and take effective steps to improve missile defense capability in order to protect its already effective air defense capability.

3. Navy

The PLAN also has to breach a formidable naval defense before it can conduct amphibious landings. Like the air force, Taiwan's navy is also smaller than its adversary, but has superior capabilities. Its ships are well armed, have advanced anti-aircraft and anti-missile defenses, and are modern. China's ships are also vulnerable to air attack

⁹⁸ June Teufel Dreyer, "Contemporary China: The Consequences of Change," Journal of International Affairs 29.2 (1996): 391-411, California Periodicals Database, online, California Digital Library, 18 Feb. 2001.

because of its poor defenses. In addition, Taiwan has extensive anti-submarine warfare capabilities.

Until recently, Taiwan maintained a large World War II era destroyer force that had limited capabilities. Only seven *Gearing*-class destroyers were upgraded to serve mainly as air defense platforms and the rest were retired. However, additional modernization has seen the purchases and leases of 24 new U.S. and French built (seven built in Taiwan, one more under construction) *Perry*-, *Knox*-, and *Lafayette*-class frigates to replace the lost destroyers. These have advanced *Phalanx* air-defense systems, *Harpoon* anti-ship cruise missiles, and significant anti-submarine warfare capability.⁹⁹ These ships give Taiwan a modern fleet with lethal killing power and superior air defense. In addition, Taiwan has a small fleet of more than 50 fast attack boats equipped with anti-ship missiles.¹⁰⁰ They are small, hard to hit, and provide close-in shore defense against, especially vital in defending against an amphibious assault.

To counter the technologically superior Taiwan navy, China also can attempt to use its advantage in numbers and overwhelm the Taiwan navy. Despite having a less sophisticated fleet, PLAN ships are still outfitted with a large number of fairly effective anti-ship missiles. This capability is further bolstered by the addition of the new Russian *Sovremenny* destroyers equipped with the very lethal SS-N-22 missile. China obtained the destroyers and missiles to attempt to deter the deployment of U.S. carrier battle groups. Aimed at the Taiwan navy, these missiles would be devastating. It is estimated

⁹⁹ James H. Nolt, "The China-Taiwan Military Balance," [Taiwan Security Research](http://taiwansecurity.org/IS/IS-012000-Nolt.htm), online, National Taiwan University, Internet: <http://taiwansecurity.org/IS/IS-012000-Nolt.htm>, 26 Feb 2001.

that Taiwan's *Phalanx* point defense system would not be able to stop this missile. Only the U.S. *Aegis* naval air defense system equipped on the *Arleigh Burke*-class destroyers that Taiwan has unsuccessfully attempted to purchase has a possibility of defeating this missile.¹⁰¹

Additionally, China's large submarine fleet could exceed Taiwan's anti-submarine capabilities, especially with the addition of the newest Russian *Kilo* submarines. To help bolster the anti-submarine capability, Taiwan desperately needs more submarines than its two Dutch submarines from the 1970s. Submarines would also help Taiwan break through PLAN naval blockades. However, no country has been willing to sell Taiwan submarines, not wishing to anger China.¹⁰²

Thus, looking at the sea control mission, China may have an even chance at domination, especially with the addition of the new Russian destroyers and submarines. To keep from falling behind, Taiwan must continue to pursue expanding its submarine force and adding destroyers to the fleet, especially the *Aegis* equipped destroyers. One bright spot for Taiwan's naval defense is the glaring lack of sea lift capability. With only enough amphibious transport ships to carry one infantry division across the strait, they will be inviting targets for Taiwan's anti-ship defenses. This will be discussed below in the ground force analysis.

¹⁰⁰ Gary Klintworth, "Chinese Defense Modernization and the Security of Taiwan," *In China's Shadow: Regional Perspectives on Chinese Foreign Policy and Military Development*, Ed. Jonathan D. Pollack and Richard H. Yang (Santa Monica: RAND, 1998) 160-61.

¹⁰¹ Sean Boyne, "Taiwan's Troubles: National Defence Report Highlights Chinese Threat," *Jane's Intelligence Review* 10.9 (1998): 25-28.

¹⁰² James H. Nolt, "The China-Taiwan Military Balance," *Taiwan Security Research*, online, National Taiwan University, Internet: <http://taiwansecurity.org/IS/IS-012000-Nolt.htm>, 26 Feb 2001.

4. Ground Forces

Assuming that the PLA could muster its estimated 300,000 highly trained RRF plus any other additional units for the invasion and assuming that its capability is comparable to Taiwan's ground forces, that does not solve the mathematical problem of insufficient sealift and airlift to get those soldiers into Taiwan. Whatever troops that reach Taiwan would be met by a large force well organized, dug-in defenders backed up by mobile reserves heavy with armor and attack helicopters. The situation looks very dire for any potential PLA attackers.

There are some estimates that say the PLA would have to put ashore three divisions, around 60,000 men, in the first phase of an assault. Even if that is a valid assumption, the PLA would be hard pressed to do that. Even the U.S. Marines do not have that type of capability today.¹⁰³ But assuming the PLA has complete air superiority, control of the waters, good weather, a captured port, and all of its sealift and airlift involved, including fishing trawlers, and lands three divisions, those forces would immediately be overwhelmed by Taiwan's 24 divisions. By comparison, the Allied invasion of Normandy succeeded by inserting more forces than the Germans could meet. On the first day, the ratio was 10 Allied divisions to seven German divisions. At the end of the first week, it was 16 Allied divisions facing 14 German ones.¹⁰⁴ The situation would be quite the reverse in Taiwan.

In fact, it is quite reasonable to assume that China would face a more drastic scenario. The PLAN would probably lose many boats to anti-ship missiles from close-in

¹⁰³ John Barry, "How We Match Up (US and Chinese Military)," Newsweek 1 Apr. 1996: 41.

missile boats and land based platforms. Many air transports and helicopters would be shot down. Whatever forces that land would quickly be outnumbered by defenders. The defenders would be quickly reinforced from nearby. The defenders would have the advantage of fighting with a full combined arms team of armor, mechanized infantry, artillery, and attack helicopters. The attackers would basically be light infantry with some minimal tank support. China definitely cannot win the landing mission

C. Summary

Right now China does not have the capability to defeat Taiwan in a conventional war and succeed in an invasion of the island. Perhaps in several years China will have acquired a limited power projection capability, possibly as far out as Taiwan. But that power projection capability will not allow China to accomplish all of its desired missions, especially a successful invasion of Taiwan. Taiwan's military is a formidable adversary, dug-in and well entrenched. China needs to make specific improvements to its military, and even then, modernization will have only improved the PLA incrementally.

To help put things into perspective, the Defense Intelligence Agency expects that in the next decade, only ten percent of the PLA will have acquired "late Cold War equivalent" weaponry and become proficient in employing it.¹⁰⁵ The PLA is not and will not be a very modern force. Invading and defeating Taiwan is just too difficult and too costly a mission. This assessment is in line with most other assessments on the PLA's

¹⁰⁴ James H. Nolt, "The China-Taiwan Military Balance," *Taiwan Security Research*, online, National Taiwan University, Internet: <http://taiwansecurity.org/IS/IS-012000-Nolt.htm>, 26 Feb 2001.

objective on Taiwan. Most analysts agree that the priority is to develop capabilities sufficient to intimidate Taiwan, not capabilities sufficient to mount a successful invasion. The purpose of this would be to force Taiwan into accepting a political solution agreeable to China.¹⁰⁶ This is a military objective much more within reach of the PLA. For a summary of the Taiwan invasion scenario capabilities and missions assessments, see Table 5 and Table 6.

	PLA	ROC MILITARY
Missiles	+ overwhelming numbers + increasing accuracy + future land-attack cruise missiles + overwhelming ship-attack capability	- only 3 batteries <i>Patriot PAC-2</i> - only 6 batteries <i>Tien Kung (Sky Bow)</i>
Air Force	- only 50+ modern fighters - limited airfields + overwhelming numbers	+ 300+ <i>F-16 Falcon, Mirage 2000, IDF</i> + 4 <i>E-2C Hawkeye AWACS</i> + <i>Strong Net</i> air defense network
Navy	+ 50+ destroyers, frigates + 60+ submarines + overwhelming ship-attack capability	+ 24 <i>Perry-, Knox-, Lafayette-</i> class frigates + 50+ fast attack missile craft - only 2 submarines
Army	- only 1 division of amphibious transport	+ 300 <i>M60A3</i> tanks + large mobile reserve with armor

Table 5. Capabilities Assessments¹⁰⁷

¹⁰⁵ Bates Gill and Michael O'Hanlon, "China's Hollow Military," *The National Interest* 56 (1999): n.pag., rpt. by Foreign Policy Studies Program, online, The Brookings Institution, Internet: http://www.brook.edu/views/articles/1999natint_sum.htm, 25 Feb. 2001.

¹⁰⁶ Hans Binnendijk and Ronald N. Montaperto, *Strategic Trends in China* (Washington DC: National Defense University Press, 1998) 16.

	PLA	ROC MILITARY
Air Superiority	+ overwhelming numbers	+ more modern air force + strong air defense
Sea Control	+ larger destroyer, frigate advantage + ship-attack cruise missile advantage + overwhelming submarine advantage - poor air defense	+ ship-attack strength in air, missiles + strong anti-submarine warfare + strong air defense - almost no submarine force
Attack Key Targets "Soften Up"	+ overwhelming missile advantage	- inadequate missile defense
Landing / Airborne Assault	- minimal amphibious transport - minimal air transport	+ initial air superiority + ship-attack strength in air, missiles + strong air defense against airborne, hel + mobile armor and reserves

Table 6. Missions Assessments¹⁰⁸

¹⁰⁷ Compilation of data presented in written text of this thesis.

¹⁰⁸ Compilation of data presented in written text of this thesis.

V. CONCLUSION AND IMPLICATIONS

A. FUTURE DIRECTION OF PLA MODERNIZATION EFFORTS

China is a developing country, perhaps a future regional power, with a backward military that has only limited modern capabilities in specific sectors. If the PRC chooses to invest massively in defense, it could perhaps develop a force in one or two decades that could strategically threaten the United States and its forces in the Pacific region. However, it faces tremendous economic challenges at home, and such military expenditures would be costly. Despite the growing sense of nationalism in the population and a strong sense of pride in national territorial sovereignty, the Chinese seemingly want only to enjoy a long, stable period of prosperity and to honor Deng Xiaoping's motto, "To get rich is glorious." China is not a strategic threat to the United States. It only seeks to modernize its force to protect its territorial integrity.

But we cannot forget that this growing sense of territorial integrity includes the eventual return of Taiwan. The PRC will continue to modernize the PLA and give it the capability to really threaten Taiwan. It also realizes that the PLA cannot realistically invade Taiwan. The 90 miles of open water is too much to overcome for a military without adequate air or sea lift and amphibious assault capabilities. Nor does it want to engage in a close-in battle with the U.S. Navy.

China will continue to focus in on areas where it can immediately improve military abilities. Improved missile capability is one of those areas that China will maintain focus on in the next five to ten years. Emphasis on stand-off weapons, such as

the SS-N-22 *Sunburn* missiles and cruise missiles will continue. The focus on acquiring high-tech weapons and equipment for all the services will continue, but at a pace that the national budget can handle. Because of the sheer size of their military, the PLA will continue to focus on developing pockets of excellence while the rest of the force slowly improves. Despite little success in absorbing foreign technology to improve its defense sector, China will and must wean itself from its dependence on foreign weapons. Expect to see continued acquisition and outright theft of technology useful to the military. Chinese military doctrine will continue to change as the PLA slowly adjusts itself to meet the requirements of the new military strategy. All of this will provide the United States many challenges to implementing effective security policy in the region.

B. RECOMMENDED U.S. SECURITY POLICY

The United States must keep in mind that China has historically not let deficiencies in military capability limit its military actions. As China's economic and military might grows, its sense of nationalism and territorial integrity will only increase. Now that Hong Kong and Macao have successfully returned to the mainland, the eventual reunification of Taiwan has China's sole focus. We must remain vigilant in our role in deterring China from taking major military action against Taiwan. If we step down from that responsibility, our desires to maintain peace and stability in the Asia-Pacific region will be undermined.

To meet the security challenges China's modernizing military poses, the United States must continue to maintain a military forward presence in Asia. Our forces must be ready to deploy quickly and in strength to project power where needed. Because of

security commitments to other countries in the region, the U.S. military must continue to ensure interoperability of doctrine, weapons systems, and logistics with other foreign militaries in the area. We must also continue to monitor PLA modernization efforts. Not only does this include surveillance of PLA military activities, but it also includes gathering intelligence at a broader level, keeping an eye on Chinese acquisition of foreign technology and improvements to indigenous defense industries. All this does not mean increasing what we already do in the region. We just have to continue to maintain our current level of activities.

The United States must also ensure that Taiwan continues to have a deterrent capability for self defense in accordance with the Taiwan Relations Act. Taiwan needs advanced air-to-air missiles, anti-radar missiles, and more ballistic missile defense capabilities, otherwise air superiority will erode and vital areas of defense will be vulnerable. Its navy needs increased capabilities for both offense and defense to counter the large PLAN submarine threat and ant-ship cruise missile threat. But we must also be careful to only give enough to allow Taiwan to have the capabilities for current defense needs and not too much to upset the balance of military power. In this light, the United States should not pursue TMD for Taiwan. This system is not designed to take out cruise missiles, and the distance from China to Taiwan is too short for any effective use. Taiwan's defensive capabilities would not increase much and China would be spurred to build more missiles in response to this perceived defensive threat.

By taking these measures, the United States can help maintain peace and stability in the region. This is advantageous to both China and the United States. China can be a growing threat and strategic competitor if we allow it to be. But this growing threat will

only be harmful to our national interests if we take no effective steps to counter it. In the end, China may still be a strategic competitor, but specific U.S. actions can allow us to take whatever potential threat China may pose and turn it into a challenge for us to overcome. If we act with care, vigilance, and wisdom, the relationship between the United States and China can continue to improve in a manner conducive to both mutual respect and understanding while ensuring peace and stability in Asia.

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