

**Predicting the Future**  
**Capabilities of the People's Liberation Army Air**  
**Forces of China**

**A Monograph**  
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## **Abstract**

### **PREDICTING FUTURE CAPABILITIES OF THE PEOPLE'S LIBERATION ARMY**

**AIR FORCES OF CHINA**, by Lt Col Allen Griffis, USAF, 49 pages.

From 1990 to 2010, China's military experienced a massive modernization effort. U.S. efforts to determine the scale and scope of this effort were incorrect. In the case of the People's Liberation Army Air Forces (PLAAF), advanced technology and a menacing stance toward Taiwan, infer an offensive-minded China. This expansionist characteristic contradicts the PRC's stated grand strategy and understates China's willingness to participate in the international system. Given these contradictory strategic contexts, military analysts choose to base PLAAF growth purely on weaponry potential. These predictions disregard the effects of strategic context and therefore err in very large ways.

This monograph discusses the failure of the U.S. military to predict the evolutionary path of the PLAAF. These failures attribute unlimited capacity to PLAAF assets and apply the wrong strategic model to China's military industrial complex. Using two predictive case studies, the author compares the predicted analysis against historical acquisition data to determine the validity of each model. The RAND study presents the 1992 PLAAF as desiring modernization efforts that support an offensive realist model. These efforts attempted to bring the PLAAF into parity with the airpower witnessed in Operation Desert Storm. This offensive realist theme showed a preference for quantitative gains. The Holmes study however, shows a defensive realist interpretation where China balances internal and external sources of conflict. The defensive realist theme showed a preference for qualitative gains.

Predictive estimates about the PLAAF and PLA remain devoid of strategic intention. By not applying China's demonstrated strategic agenda, military analysts' predictions provide unreliable guidance. Despite offensive realist projections, the PLAAF and PLAN inventories continue to decrease, as the PLA opts for qualitative improvements over quantitative ones.

The broader implications of performing single-service military analysis without a true representation of the strategic environment weaken U.S. foreign policy and endanger U.S. national interests.

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## Introduction

China will never seek hegemony or engage in military expansion now or in the future, no matter how developed it becomes. —China's National Defense in 2008<sup>1</sup>

China is looking beyond a potential Taiwan contingency and is pursuing capabilities needed to become a major regional power. — Director, Defense Intelligence Agency, 2009<sup>2</sup>

The People's Liberation Army (PLA) is undergoing significant modernization efforts that began in the mid-1980s. Growing concerns over the People's Liberation Army Air Force (PLAAF) modernization efforts in the fields of fourth generation fighters, near AIM-120 air-to-air missile capabilities, and advanced airborne electronic attack technologies ignite dramatic projections about China's foreign policy aspirations. The interpretations of these weapon developments lead to excessive estimates of China's overall capabilities. *Why have efforts to predict the evolution of the PLAAF yielded little success?* Specific to China, military predictions of PLAAF structure and the rate of their acquisitions often fail because analysts ignore China's strategic intentions in building the worst-case scenario. This type of worst-case analysis of the PLAAF leads to an assessment of a much larger threat because it fails to account for China's overall strategic agenda. This type of analysis concludes the potential of a threat purely from capability and industrial capacity with no regard to strategic context. The inaccuracies from this type of worst-case analysis result in a U.S. military strategy toward China that anticipates

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<sup>1</sup> Information Office of the State Council of the People's Republic of China, *China's National Defense in 2008* (Beijing: Foreign Languages Press, 2009), 11.

<sup>2</sup> Congress, Senate, Committee on Armed Service, *Annual Threat Assessment*, 111<sup>th</sup> Cong, 1<sup>st</sup> sess., 10 March 2009, pg 1. Testimony by Lieutenant General Michael D. Maples, U.S. Army, Director, Defense Intelligence Agency.

aggressive and irrational actions from the PLA.<sup>3</sup> Meanwhile, the other elements of the U.S. government (Dept of State, Dept of Treasury) set policies that reflect China's broader strategic agenda.

Predictions of the PLAAF highlight this discrepancy between strategic intentions and capabilities. PLAAF predictions regarding PLA Air Force are comprised of mission-specific aircraft that are expensive to acquire and maintain. These two characteristics of cost and specificity force the PRC to make deliberate acquisition choices. These choices, analyzed over time provide evidence of strategic intentions.

Because assessments with overall strategic intention do not guide predictive efforts, the PLAAF studies show two common errors. First, these studies assume that the abilities China could project in a cross-strait conflict with Taiwan are the same as ones that the PLAAF could employ in a global scenario.<sup>4</sup> Second, these studies also do not consider what else the PLA may do to project power. Solely concentrating on the capabilities of the PLAAF, while ignoring the PLA Navy (PLAN) and China's space program, leads to an incomplete analysis. Incorporating these additional capabilities, leads to a more complete view of China's strategic agenda.

This paper analyzes previous efforts to explain the evolutionary path of the PLAAF, in terms of China's strategic intentions. ***In order to understand PLAAF modernization, it is necessary to understand China's strategic agenda.***

The structure of this monograph is as follows: Section one provides background to the three international relations approaches associated with China (offensive realist, defensive realist,

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<sup>3</sup> Anthony H. Cordesman and Martin Kleiber, *Chinese Military Modernization: Force Development and Strategic Capabilities* (Washington D.C., Center for Strategic and International Studies Press, 2007), 27- 28. Cordesman and Kleiber explain that PLA budget as a percentage of GDP and force structure studies yield incomplete analysis.

<sup>4</sup> Although the China-Taiwan conflict is beyond the scope of this paper, the fallacy of local PLAAF capability driving global power projection estimations exists in DOD analysis.

and liberal institutionalist) in order to provide a framework for assessing the PRC's strategic agenda. It also addresses how the Chinese strategies tie to their geostrategic environment. Section two explores two case studies that offer predictions of the growth of the PLAAF and of how the PRC envisioned its use. Finally, the output of this study provides for a better understanding of the role that strategic agendas play in predictive analysis regarding the PLAAF. The author will then present U.S. policy recommendations as they relate to this improved understanding.

## **Literature Review**

This literature review begins with a description of contemporary approaches to international relations associated with China. The next section discusses PLAAF force structure implications, for each of the international relations approaches. After these implications, a discussion of China is a description of how the PRC views its geostrategic environment. These elements form the framework of China's strategic agenda.

For the purposes of this monograph, two variants of realism are important—offensive realism and defensive realism. The author will first discuss the origins of realism in international relations theory. Following this discussion is an examination of the branches of offensive and defensive realism. Within the liberalism school, the attention will focus on liberal institutionalism.

These schools will allow the author to make predictions regarding PLAAF force developments. Finally, these schools of thought must be placed in their geostrategic context. This discussion will also include an evaluation of how the Chinese view their geostrategic environment.



The most basic assumption underlying the approach of realism is that power is relative and "...due to the anarchical nature of the international system any gain in power by one state represents an inherent threat to its neighbors."<sup>5</sup> Three distinct principles form the basis of neoclassical realism. First, the international system is one of anarchy. There is no structural model to regulate international behavior among independent states. This international anarchy is in contrast to the domestic order provided by states. Independent states therefore act in an explainable way when influenced by external international pressures. Dr. Kenneth Waltz is a leading scholar in the study of realism and for him, these international pressures and system of interactions themselves form a structure. The anarchic character to which Waltz subscribes primarily entails the lack of a central authority figure to guide the international system.<sup>6</sup>

This state of anarchy leads to the second principle of neo-realism, which states that violence, or the threat of violence, is fundamental to the existence of an independent state in a system of international anarchy because states are concerned with their survival. In facing this threat of violence, a state has two main options. First, a state could enter into alliances to at least maintain regional security. Secondly, a state could increase its military (offensive) capabilities and economic strength to gain advantage over potential threats. The difficulty associated with the alliance option is that "...the condition of insecurity--at the least, the uncertainty of each about the other's future intentions and actions--works against their cooperation."<sup>7</sup>

A third distinguishing feature of Waltz's neo-realist model is the idea that the international system, lacking authority, has significantly less power than individual state actors do. This observation stems from the context of capacities for economic power and an ability to

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<sup>5</sup> David L. Rousseau, "The Saliency of Relative Gains in International Politics," *The Journal of Conflict Resolution* 46, no. 3 (Jun., 2002): 394.

<sup>6</sup> Kenneth N. Waltz, *Theory of International Politics* (Reading, PA: Addison-Wesley Publishing Co., 1979), 105-106

<sup>7</sup>Waltz, 105-106.

commit offensive military operations.<sup>8</sup> States hold the power to commit national resources in a direct and expedient manner. The international system as an anarchic institution will only commit resources to efforts that endanger the hegemonic powers within the institution. Therefore, an offensive realist model says that states hold more power than international organizations.<sup>9</sup>

## Offensive Realism

Modern flavors of the ideal, namely of offensive and defensive realism, have their origins in Waltz's model of neo-realism (structural realism).<sup>10</sup> Dr John J. Mearsheimer represents the voice of offensive neo-realism. According to Mearsheimer, offensive neo-realism expounds upon the anarchic nature of the international system. In light of the aforementioned responses of the state to potential threats, power stems from military and economic capacities.

Mearsheimer contends that the lack of a credible authority and the "...best way to survive in such a system is to be as powerful as possible, relative to potential rivals."<sup>11</sup> This power leads states to dominate weaker neighbors in an attempt to create regional hegemony. Ultimately, however, a dominant, regional hegemon cannot ascend to a status of global hegemon, as "...it is too hard to project and sustain power around the globe."<sup>12</sup> Nevertheless, the aim of a regional hegemon is to prevent peer-level competitors from establishing a regional hegemony while simultaneously maintaining their own regional status.

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<sup>8</sup> Waltz, 105-106.

<sup>9</sup> Kenneth N. Waltz, "Structural Realism after the Cold War," *International Security* 25, no. 1 (Summer 2000): 5-41.

<sup>10</sup> Ibid.

<sup>11</sup> Brzezinski, Zbigniew and Mearsheimer, "Clash of the Titans," *Foreign Policy* no. 146, (Jan/Feb 2005): 3.

<sup>12</sup> Robert Jervis, "Cooperation under the Security Dilemma," *World Politics*, Vol. 30, No. 2 (January 1978): 167-170.

Finally, offensive neo-realism holds that the anarchic nature of the international system encourages expansionism, particularly by the greater powers. The incentives of security and potential regional dominance outweigh the disincentives of temporary condemnation, particularly as no central authority exists to enforce sanctions. This fear of expansionism generates counterbalancing alliances, which, in turn, can fuel the desire of a rising country to seek out ways of becoming as powerful as possible, for, as Mearsheimer continues, “The mightier a state is, the less likely it is that another state will attack...”<sup>13</sup>

**Defensive realism** takes a different approach to the fundamental principle of an anarchic international system. Dr. Jeffrey Taliaferro is a contemporary author that writes on international relations theory. Rather than encouraging expansionist tendencies, the defensive view proposed by Dr. Taliaferro holds that the system, “...provides incentives for expansion only under certain conditions...”<sup>14</sup> Defensive realism describes a security dilemma in which states’ pursuit of security measures (means and strategies) actually lead to unintended insecurity and potentially increased regional hostility. The security dilemma is a central theme among defensive realists. This dilemma contends that a state must make security provisions to guarantee its sovereignty; otherwise, it might be ripe for dominance.<sup>15</sup> The potential cost of participating, however, entails the possibility of escalating regional instability, thereby increasing the chances of conflict. Alongside discussions of security dilemmas are the prescribed policy recommendations of moderate positions that deter expansionist ambitions (generally through a credible threat of force), balanced with a non-escalatory message.<sup>16</sup>

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<sup>13</sup> Jervis, 167-170.

<sup>14</sup> Jeffrey Taliaferro, “Security Seeking under Anarchy: Defensive Realism Revisited,” *International Security*, Vol. 25, no. 3 (Winter 2000/01): 128-29.

<sup>15</sup> Jervis, 167-170.

<sup>16</sup> Ibid.

Another key difference between defensive and offensive realism is that defensive realism advocates a certain measure of restraint on the part of great powers. Offensive neo-realists contend that the aim of great powers is to establish regional dominance. Defensive realists advocate restraint to allay minor powers' fears of expansionism, thereby preventing unnecessary security escalations.<sup>17</sup>

Reviewing the key criteria of neoclassical realism, then combining it with the similar elements in both offensive and defensive neo-realism, provides a necessary baseline by which to evaluate case studies of how China intends to use the PLAAF. The caution that Mearsheimer provides when discussing the use of international relations models is especially relevant to this criteria when he explains that the models are explanatory rather than predictive in nature.

Using these criteria, the case studies that follow can be categorized as realist and potentially offensive or defensive. The evolution of the PLAAF to support these ends explains the strategic agenda the PRC will follow.

China's strategic ends, if categorized as **offensive realist**, assume that China is ascending to the status of a great power, with an eye on global dominance. Mearsheimer contends that, "...China will strive to maximize the power gap between itself and its neighbors...to ensure that no state in Asia can threaten it..."<sup>18</sup>

If China subscribed to expansionism, the evolution of the PLAAF should take the form of greater power projection capability, with a corresponding ability to not only defend its borders but to also provide a credible threat against domination by its neighbors. Evidence of the PLAAF

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<sup>17</sup> Taliaferro, 129.

<sup>18</sup> Brzezinski, Zbigniew and Mearsheimer, "Clash of the Titans," *Foreign Policy*, no. 146 (Jan/Feb 2005): 3.

moving in such a direction would take the form of forward air bases, allowing for increased strategic reach and extended power projection.<sup>19</sup>

If China's strategic ends were consistent with **defensive realism**, China's focus would be on maintaining its status as a greater power; not necessarily expansionist, but concerned with maintaining a dominant position while using enough restraint to placate the fears of potential rival powers (India, Japan, United States, and so forth) regarding potential expansionist ambitions.

The PLAAF should represent a sufficiently credible threat to justify China being included in the greater powers group. The PLAAF's criterion for "credible" is meeting the capabilities of the air forces of its proximal neighbors. Because of the counterbalancing alliances involved, however, this threshold shifts from the equipment of Japan, Taiwan, Singapore, and so forth, to that of their ally, the United States. The PLAAF must therefore demonstrate a capability on par with the United States, while not escalating unproductive threat spirals from these same countries.

Ultimately, there is a danger in assuming that states categorized as defensive realists do not harbor greater aspirations. The beginning phases of offensive realism are sometimes indistinguishable from defensive realism.<sup>20</sup> An example of this is Germany's rise in 1939 under Hitler. History has proven that Hitler's goal was always to incorporate the majority of Germany's neighboring countries into his Reich. Initially, however, his approach to international relations met a majority of the criteria aligned with defensive realism. Realist proponents make the same argument when describing China's modernization efforts.

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<sup>19</sup> Wang, 129.

<sup>20</sup> Jacqueline Newmyer, "China's Air-Power Puzzle," *Policy Review Hoover Institution, Stanford University*, no. 119 (June & July 2003): 3, <http://www.hoover.org/publications/policyreview/3448891.html> (accessed April 3, 2010).

## Liberal Institutionalism

Contrasting the international models of offensive and defensive realism is the school of liberal institutionalism. On the larger scale, liberal institutionalism declares that there is a structural order to the international system that exists above the level of individual states. Following the end of the Cold War, nations sought to find order in a multi-polar international system. This multi-polar characteristic and the United States' return to Wilsonian Idealism, particularly with respect to the UN, World Bank, and NATO, fostered empowered international institutions. Dr. G John Ikenberry's work concentrates heavily on describing China as a liberal institutionalist state. Given the relative strength of these modern organizations, in contrast to those of the pre-Cold War era (such as the League of Nations), Ikenberry asserts, "...the hierarchy today is different than global hierarchies of the past—it is harder to overturn and easier to join."<sup>21</sup> Ikenberry is the author of several works describing China's strategic aims in the context of Liberal Institutionalism.

Whereas realists believe that power is relative, liberal institutionalists believe that leaders of a state should, "...accept any agreement which makes the state better."<sup>22</sup> Supporting the liberal institutionalist approach are three key beliefs that distinguish Ikenberry's liberal institutionalism from other schools of international relations. The first belief addresses the very nature of man. Unlike the realist theory, which contends that greed and security dominate man's conscious thought, for idealists, man is inclined to act in a beneficial manner toward others. Liberal

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<sup>21</sup>G. John Ikenberry, "The Rise of China, Power Transitions, and the Western Order," Woodrow Wilson School of Public and International Affairs, [http://www.princeton.edu/~gji3/Microsoft\\_Word\\_-\\_ikenberry-beijing-paper-January-2006-word%20doc.pdf](http://www.princeton.edu/~gji3/Microsoft_Word_-_ikenberry-beijing-paper-January-2006-word%20doc.pdf) (accessed March 30, 2010): 3.

<sup>22</sup>David L. Rousseau, "Motivations for Choice: The Salience of Relative Gains in International Politics," *Journal of Conflict Resolution*, Vol. 46, no. 3 (jun., 2002): 394. The term "better" reflects absolute gains for the state. Here, the state's conditions have improved when compared to its earlier form.

institutionalism holds to the idea that the nature of the state is to seek balance, rather than conflict. States thereby actually seek to prevent conflict.<sup>23</sup>

The second tenet of liberal institutionalism regards the international system as having a hierarchical structure and order. This tenet makes up perhaps the biggest difference between liberal institutionalism and realism. This hierarchical structure is bound by an order favoring greater powers. Although Ikenberry acknowledges that anarchy exists within the international system, he sees the dominant characteristic of the post-cold war international system as an order that favors hegemonic powers, bound by institutions such as the World Bank, UN, NATO, EU, and other such organizations. Ikenberry asserts that these institutions and the presence of nuclear weapons keep hegemonic powers from going to war with one another. This “community security” requires great two conditions of the great powers. First, international order must attend to their national interests. Secondly, it must be in the best interests of the hegemonic powers to exercise limits and restraint if they wish to ensure their continued dominance. Ikenberry speaks of a hegemonic order in which “...rules and rights are established and enforced by the power capacities of the leading state.”<sup>24</sup> However, unlike neo-realism, in liberal institutionalism, the hegemonic powers use international institutions to assist with matters of compliance.

Finally, for liberal institutionalism, international power resides within the system, within which great powers rise and fall. This differs markedly from neo-realism, in which defines power in terms of security, leading to expansionist inclinations in hopes of building a regional hegemony.

Specific to the rise of China from a minor power to a world leader, Ikenberry theorizes that a transition of power is inevitable but does not guarantee a turbulent one. Institutions provide

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<sup>23</sup> Ikenberry, 3-5.

<sup>24</sup> Ikenberry, 5.

a buffering effect to the international order and serve as mitigating agents to conflict between great powers. Central to his observations is the thesis stating that the more inclusive the international system is, "...the harder it is for the rising state to reach parity, and the greater its incentives are to accommodate itself to that order."<sup>25</sup> Conversely, a less attractive, less inclusive system allows states to exploit the lack of structure and power absent in the system.

In Ikenberry's view of liberal institutionalism, a lead power dominates the international system. He contends that the current international system is a carryover from the Post-WWII order constructed by the United States. As such, this system reflects certain American democratic ideals, which form the structure of the order the United States uses to maintain its hegemonic status. Furthermore, Ikenberry delineates three important concepts that mark modern liberal institutionalism. First, the Marshall Plan created enduring political, military, and economic organizations that have acted for more than fifty years to further an inclusive international system with the United States in the lead. This inclusive nature provides a level of transparency and participation that reinforces the idea that the United States uses power in a responsible and predictable manner. In addition, these organizations represent status icons that provide a social incentive for participation.<sup>26</sup>

The second concept that Ikenberry furthers is that states within the international system have the potential to grow in capacity and capability without inciting "security competition."<sup>27</sup> International institutions provide incentives for growth. In the cases of Germany and Japan, they actually provided security guarantees, in that the international community agreed to protect them

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<sup>25</sup> Ikenberry, 9.

<sup>26</sup> Ikenberry, 17-20.

<sup>27</sup> Ikenberry, 23.



while their states reformed to a level of compatibility that was suitable for interaction within this community.

A final point concerning the modern international system pertains to the Western institutionalized order and its ability to generate power. Within the modern international system, the Western nations have demonstrated the capacity to generate significant military and economic power through organizations such as the NATO and the IMF. What makes the modern system sustainable is the Western powers' reluctance to directly apply this capability against an outsider.<sup>28</sup>

Power transitions within a liberal institutionalist framework must take place within the system if the ascending country desires to gain what the lead state(s) possess.<sup>29</sup> Inciting overt conflict carries with it the risk of the mobilization of power against the upstart as a perceived challenge to the world order and its beneficiaries. Increasing prestige and demonstrating capacity through participation in international institutions would prove to be the logical path of ascension.

In the context of China, the international relations approach of liberal institutionalism provides a counter-balance to the previous notions of realism. Including this variant of idealism augments the breadth of potential understanding of China's strategic agenda.

## Geostrategic Environment

Having examined how international relations facilitate predictions of PLAAF force estimations, the geostrategic environment becomes the next relevant topic of inquiry. The PLA's concept of power projection has a geographic meaning. It is important to understand how China

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<sup>28</sup> Ikenberry, 23.

<sup>29</sup> Ikenberry, 5.

defines its national interests and, conceptually, how it envisions using its military to most effectively secure these interests.

Understanding the geostrategic nature of Chinese national strategy provides a context to assess these case studies. Analyzing a nation's grand strategy uses three primary criteria to develop a descriptive framework. The criteria used by Dr. Christopher Layne, are as follows: "...determining a state's vital security interests; identifying the threats to those interests; and deciding how best to employ the state's political, military, and economic resources to protect those interests."<sup>30</sup>

China's Defense White Papers describe three main topics relating to security. First, China must defend its territorial claims. According to the 2008 Chinese Defense White Paper, "China places the protection of sovereignty, security, territorial integrity, safeguarding of the interests of national development, and the interests of the Chinese people above all else."<sup>31</sup>

The next security issue for China is the need to subvert Taiwan's secessionist aspirations. By smoothing and alleviating the tensions that encourage "...attempts of the separatist forces for 'Taiwan independence' to seek 'de jure Taiwan independence'" have been thwarted."<sup>32</sup> China's efforts over the course of the past thirty years to reclaim Taiwan have been overwhelmingly politically based, punctuated by insignificant shows of military force.

Finally, high among China's security concerns is their desire to maintain "social stability."<sup>33</sup> China identifies three threats to this stability. The first comes in the form of separatists, with examples being the various groups acting for the independence of Taiwan, East

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<sup>30</sup>Christopher Layne, "From Preponderance to Offshore Balancing: America's Future Grand Strategy," *International Security*, Vol. 22, no. 1 (Summer 1997): 86-124.

<sup>31</sup> United States Department of Defense, *Annual Report to Congress: Military Power of the People's Republic of China 2009* (Washington D.C.: Office of the Secretary of Defense, 2009), 12.

<sup>32</sup> *Ibid.*, 9.

<sup>33</sup> *Ibid.*, 6.

Turkistan, and Tibet. Another form of instability stems from unpredictable social phenomena related to natural disaster, economic insecurities (particularly those related to international forces), and what China calls ‘information insecurity’— the ability of external forces to incite unrest within the Chinese populace.

If China is a rational actor in an international system, its national strategies must incorporate these three interests as ends. China’s military growth and evolution follows the national security requisites. The ways in which China addresses the issues of national security provide data points that lend them to categorizations; thus, by analyzing these behaviors, China’s strategic intentions mean to its development of military power, chiefly for the purpose of this study, the PLAAF.

China’s concept of force projection lies within the naval branch of the PLA. The People’s Liberation Army Navy (PLAN) strategy uses a series of geographic boundaries to describe geographic lines of advance based on operational reach. The traditional Chinese naval doctrine of Offshore Active Defense cites three distinct lines in this strategy; each is associated with modernization goals. The first line extends from the northernmost point of Japan, southward through Taiwan, and ends in the Philippines (see Figure 1). The PLAN’s immediate goal is to develop and maintain the capability and operational reach required to perform sustained operations within the first island chain. The next step for the PLAN, in terms of modernization and reach, is “...to develop a regional naval force that can operate beyond the first island chain to reach the second island chain, which includes Guam, Indonesia, and Australia.”<sup>34</sup> The final goal

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<sup>34</sup> “Naval Forces,” sinodefence.com, <http://www.sinodefence.com/navy/vessel.asp> (accessed April 10, 2010).

of modernization entails fielding a truly capable stage of global operations during the mid-21<sup>st</sup> century.<sup>35</sup>



Figure 1. Offshore Active Defense<sup>36</sup>

Linking the Offshore Active Defense strategy with the international relations models leads to the following conclusions. If China that adopts a liberal institutionalist position would limit its activities to those inside the first island chain. If China subscribed to a defensive realist position, it would not seek expansion beyond the second island chain. Finally, an offensive realist

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<sup>35</sup> “Naval Forces,” sinodefence.com, <http://www.sinodefence.com/navy/vessel.asp> (accessed April 10, 2010).

<sup>36</sup> United States Department of Defense, *Annual Report to Congress: Military Power of the People’s Republic of China 2009* (Washington D.C.: Office of the Secretary of Defense, 2009), 18.

China would seek global operations, allowing it to project power to prevent insecurity from reaching its shores.

Geographic perspectives change the implications of these conclusions. For Taiwan, activities inside the first island chain represent an existential threat. For India, the expansion into the second island chain is equally threatening. For the purposes of this monograph, the island chain construct relates to U.S. national interests.

## Summary

An **offensive realist** China seeks to gain hegemonic status among the East Asian states. By dominating the areas adjacent to its borders, China can effectively ensure its security and its future prosperity. To accomplish this, China will need to develop and grow a PLAAF with the capability and capacity to project sustained combat power beyond the second island chain. Even if the PLAAF serves a supporting role for the PLAN in the Offshore Defense strategy, a long-range navy requires air superiority in order to operate effectively. Finally, complementing the need for a fleet of long-range strike aircraft, tankers, and heavy lift capability, are the critical requirements of forward basing and strategic partnerships.<sup>37</sup>

A **defensive realist** China seeks hegemony over adjacent states, where practical. It will develop and demonstrate military capabilities that deter potential conflict, while exercising enough restraint to avoid a security dilemma.<sup>38</sup> The PLAAF would therefore be strongest at protecting China's sovereign territorial claims while seeking to allay fears that this strength may

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<sup>37</sup> These strategic partnerships result in passage through sovereign territories and airspaces, provide refueling points and other territorial facilitations. They are resource-based without political inclusion, similar to the leasing agreement between the United States and Kyrgyzstan for Manas airfield.

<sup>38</sup> Taliaferro, 129.

lead to conflict. This version of the PLAAF favors a strong air defense force and enough projection capability to thwart potential rivals without instigating a regional arms race.

Finally, a **liberal institutionalist** China seeks to continue and sustain the tremendous economic gains made by operating within the international system while avoiding conflict with lead states, as a status quo state.<sup>39</sup> The PLAAF's contribution to a liberalist China would be to provide the same level of air defense for China's sovereign territorial claims, while avoiding programs that bring it into conflict with lead states and smaller states.

The PLAAF, acting with the PLAN, represents the majority of the PRC's military power projection capability. In the context of foreign policy, they represent the military component with respect to China's instruments of national power. The three international relations models of *offensive realism*, *defensive realism*, and *liberal institutionalism* represent methods by which China interacts with other states. These methods of interaction, in a Western sense, identify the ways and methods that China will employ in order to secure its national interests. As an instrument of national power, the PLAAF's evolution is a purposeful endeavor on the part of the PRC. Regardless of the level of transparency of the PRC's foreign policy, China's strategic ambitions guide the PLA's development.

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<sup>39</sup> Taliaferro, 129-130.

**Table 1. Summary of IR models with PLAAF Implications**

<b>Model</b>	<b>Offensive Realism</b>	<b>Defensive Realism</b>	<b>Liberal Institutionalism</b>
<b>Nature of system</b>	Anarchy	Anarchy	Hierarchical System
<b>Gains</b>	Relative	Relative	Absolute
<b>Interaction of states</b>	Security-based; Expansionist	Security-based; Expansionist if conditions permit; demonstrable deterrence	Participate in international organizations that benefit the state
<b>Regional goals</b>	Hierarchical system	Moderate security strategies that preserve status-Military/Economic dominance	Restraint; incentive-based participation
<b>Forward Air basing</b>	Expanding network to extend national power	Positioned to protect national borders/periphery/avoid security dilemmas	Avoid confrontational positioning with lead powers
<b>PLAAF role</b>	Regional Dominance; Power projection	Demonstrated capabilities serve as a deterring force; protection of the homeland primary	Compatible with international organizations/coalitions and capable of self-defense
<b>Projection Range</b>	3 <sup>rd</sup> Island Chain; global sustain operations (<3000km)	Up to but not beyond 2 <sup>nd</sup> island chain (3000km)	1 <sup>st</sup> island chain (1200km)

## **Methodology**

The introductory chapter proposed the research question pertaining to previous predictions of PLAAF modernization that transpired from 1985 to present. In the following sections, the author uses qualitative case study analysis to describe the association between the international relations models and the predictions of the PLAAF.

This analysis compares two predictive case studies to actual production data for the period from 1990 through 2010. The author selected these specific cases for their relevance, scholarly review, and the international relations approach inferred in each. The input variables used for this comparison include aerial refueling tankers, long-range bombers, heavy transport aircraft, fourth generation fighters, forward basing, naval reach, and space capabilities. The first five variables describe expeditionary air force capabilities based on the AEF construct explained by Dr. Thierry Gongora, a defense scientist employed by Canada's Department of National

defense.<sup>40</sup> The variables of forward basing and naval power describe topics recently cited as indicators of offensive behaviors by the U.S. Department of Defense.<sup>41</sup>

The first variable describing power projection capability for the PLAAF is the increase or decrease of aerial refueling tanker aircraft. Aerial refueling allows for extended flight times and ranges for fighter, bomber, and transport aircraft. Quantitative increases signal an increase in power projection capability across the PLAAF. A USAF example of this type of aircraft is the KC-135.

The second input variable describing power projection capability is the increase of long-range bombers. These aircraft have the capability of flying intercontinental missions (beyond the second island chain), nominally, within a greater than 500NM unrefueled combat radius. Quantitative increases provide enhanced lethality at greater ranges. Qualitative increases refer to improvements in avionics or armaments, which expand PLAAF target arrays or lethality. *U.S. equivalent: B-52.*

The third input used to describe power projection for the PLA is heavy transport aircraft. Heavy transport aircraft are capable of transporting payloads >50 tons (approximately 250 paratroopers) a distance of at least 500NM, without refueling.<sup>42</sup> Quantitative increases provide the PLA with enhanced operational reach and rapid response options for contingency missions.

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<sup>40</sup> Thierry Gongora. "The Meaning of Expeditionary Operations from an Air Force Perspective" (Paper presented at the Seapower Conference 2002, Dalhousie University, Halifax, 7-9 June 2002) <http://www.cfc.forces.gc.ca/papers/other/gongora.pdf> (accessed 11 Apr 10) 6-12. Gongora lists air superiority fighters, bomber aircraft, tankers, and medium lift (assuming inflight refuelable). Because of China's lack of tankers, the author listed heavy lift as a variable because PLAAF heavy lift does not require inflight refueling for intercontinental travel.

<sup>41</sup> United States Department of Defense, *Annual Report to Congress: Military Power of the People's Republic of China 2009* (Washington D.C.: Office of the Secretary of Defense, 2009) 20-25.

<sup>42</sup> Heavy transports were chosen instead of medium transport to the transport variable independent of the aerial refueling tanker variable.



Qualitative increases refer to greater payloads and ranges. A USAF example of heavy transport aircraft is the C-5.

The final PLAAF power projection variable describes presence and capabilities of the fourth generation fighters.<sup>43</sup> Fourth generation fighter capabilities are discussed in terms of air-to-air and air-to-ground capabilities, because the PLAAF does not delineate airframes from missions—an SU-27MKK in one unit may perform air defense roles, while an identical model might be tasked with the primary ground attack role. For air superiority missions, fourth generation fighters can employ air-to-air ordinance beyond visual range (BVR) against multiple adversaries, simultaneously. These aircraft are highly maneuverable with sophisticated weapons employment suites.<sup>44</sup> Qualitative improvements increase aircraft survivability or lethality, while quantitative increases represent an increase in the ability to amass firepower or perform sustained operations, both of which support the concept of air superiority. *U.S. equivalent: F-18C.*

Beyond the individual PLAAF assets, forward basing represents a variable indicating power projection. Forward basing refers to Chinese military bases abroad, foreign properties with basing rights, or coalition-type airfields. China's usage of this facility implies a greater than transitory period of stay with some degree of operational freedom, allowing the PLAAF to fly sorties at PLA direction, bound by host-country rules. The U.S. leasing agreement for Manas Airbase, Kyrgyzstan serves as an example of this type of agreement.

The sixth input variable moves beyond PLAAF assets and enablers to describe PLA power projection from a broader perspective. For the purposes of this study, PLA Naval power

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<sup>43</sup> United States Department of Defense, *Annual Report to Congress: Military Power of the People's Republic of China 2007* (Washington D.C.: Office of the Secretary of Defense, 2008), 18. Aircraft generation nomenclature varies with respect to the SU-27 but the DoD defines the SU-27 as a fourth generation aircraft in this report.

<sup>44</sup> Joe Yoon, "Ask Us - Fighter Generations," Aerospaceweb.org, <http://www.aerospaceweb.org/question/history/q0182.shtml> (accessed April 10, 2010).

refers to anti-access or area-denial capabilities of the PLAN. These take the form of submarines, principle surface combatants, and destroyers. Qualitative increases to naval power improve fleet offensive capabilities, fleet defenses, and potential lethality. Quantitative increases enhance the sea dominance mission by means of the principle of mass. USN examples of naval power are Tactical Submarines (SSN), Littoral Combat Ships (LCS), and ARLEIGH BURKE-class guided missile destroyers (DDG).

The final input variable describes China's Space capabilities. These capabilities span the use of chemical lasers and ground-launched rockets to perform anti-satellite (ASAT) missions all the way to manned space travel. For the purpose of this study, advances in space capabilities, military capabilities, and commercial capabilities with military applications are considered. Qualitative increases in space capabilities enhance PLA dominance of space assets. Meanwhile, quantitative increases refer to expanding the number of methods the PLA possesses to influence space assets.

The first five variables provide unique insight into how the PLAAF will or will not be used to project power. The last two variables, naval reach and space weaponization, represent PLA power projection capabilities beyond the PLAAF. Employing PLA power projection capabilities as a means of defining China's strategic ambitions then leads to the definition of the character of PRC. The output of this study is a characterization of the PRC that will lend itself to prediction.

Two case studies explore United States predictions of the rate and direction of PLAAF modernization efforts. The value of these case studies stems not from the prognostications of what the PLAAF will look like in twenty-five or fifty years, but rather from deriving the strategic model used to characterize its evolutionary path, and, more to the point, China's intended use of the PLAAF.

The first case study by RAND is the United States' first true study of the PLAAF. This report concluded that in 1995, the PLAAF did not represent a credible threat to the USAF in the near future. In a worst-case scenario, given funding and technological support, China could become an offensive realist and use the PLAAF to secure its ambitions.

The second case study, Major Holmes' monograph, provides a defensive realist prediction of the PLAAF. In Holmes' estimation, the PLAAF and PRC aimed to bolster internal security and fight local wars under modern conditions. Published in 2000, this monograph built upon the 1995-RAND report but came to contradictory conclusions regarding the PLAAF.

As a balance, a liberal institutionalist predictive study is desirable but at the time of this monograph, one did not exist. The body of work on liberal institutionalism while vast has yet to produce military analysis below the strategic level.

From these case studies, the author derives specific input variables to determine the level of power projection capability that China sought from 1990 to 2010. Power projection in this study is a primary indicator of expansionist ambition. Therefore, variables indicating a high level of power projection signal a high degree of expansionist ambition when describing the Chinese strategic character. The patterns observed in the case studies, in conjunction with the international relations models, provide the basis for analyzing the *DOD China Military Power Report 2009*.

## Section II, Case Studies

### Case Study 1-RAND Report, Offensive Realism and the PLAAF

#### Background

In 1992, the United States Air Force contracted the RAND Corporation to conduct a series of analyses called *Project Air Force*. With the dissolution of the Soviet Union and the resounding victory over a Soviet-based military, the US military needed to reassess the geopolitical environment. The goal of this study was to provide a comprehensive look at potential rivals to the United States Air Force, specifically peer-competitors, and to determine where and when potential adversaries might arise. In 1995, RAND published a report called “China’s Air Force Enters the 21<sup>st</sup> Century” as a component of this investigation. The relevance of a study conducted over fifteen years prior to this monograph is that it provides the starting point for any prediction of where the PLAAF would evolve to by 2010. The hidden value of the RAND report was that it provided a summary of the institutional changes that would be required if China wished to gain global power projection capability via airpower.

RAND used the stated desires of the 1992 PLAAF as the basis for their analysis. The comparison between PLAAF desires and China’s military industrial capacities led them to conclude the PLAAF, “...does not constitute a credible offensive threat against the United States or its Asian allies today, and this situation will not change dramatically over the coming decade.”<sup>45</sup> While RAND’s conclusions about the PLAAF gaining power projection, the report did identify PLAAF modernization goals that closely aligned with supporting an offensive realist

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<sup>45</sup> Kenneth W. Allen, Glenn Krumel and Jonathan D. Pollack, *China's Air Force Enters the 21st Century* (Santa Monica: RAND, 1995), xiii.

strategic agenda. In the subsequent sections of this monograph, references to the RAND report allude to this description of the PLAAF and the character of their modernization goals.

### Air Force Variables

To support China's rise to a hegemonic status, the PLAAF would need to become transform its Vietnam-era force. The PLAAF, in 1992 identified six major areas for modernization (prioritized):

1. “The proportion allocated for ground attack aircraft must be larger than that for bombers, since ground attack aircraft with a refueling capability could be used against rear-echelon targets.
  - a. Fighter aircraft must have the highest priority.
  - b. There must be a certain proportion of bombers, especially strategic bombers.
2. Reconnaissance aircraft, jamming aircraft, and AEW [airborne early warning] aircraft must be supplied in relevant proportions.
3. Development of transport aircraft, which have a strategic capability of moving troops and supplies, cannot be slowed down.
4. Aerial refueling must constitute a certain proportion of combat aircraft as a force multiplier.
5. China must pay attention to developing helicopters, especially armed helicopters, for the army and the navy.
6. The air force must develop ground-based weapon systems, particularly air defense missiles, radar, and communications systems.”<sup>46</sup>

RAND concluded that the scope of requirements identified by the PLAAF was so vast that the endeavor was untenable in its totality. They identified three primary impediments to PLAAF modernization: a constricted budget, competition from the PLA (not only for funding,

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<sup>46</sup> Allen, 144.

but also for continuing the primary existential mission of the PLAAF), employment doctrine (subordination to ground forces), and inferior manufacturing and sustainment industries. Despite the conclusion that the PLAAF would not pose a threat in the near-term, RAND's explanation of the missing elements provides a roadmap of what China needs to accomplish to become a threat in the long-term. This road map serves as a description of what an offensive expansionist serving PLAAF might look like, given their stated goals. This most dangerous potential articulates an offensive realist approach for China's grand strategy, in which the PLAAF attained the level of air dominance exhibited by the USAF in 1991.

Using the offensive realist criteria to describe a worst-case PLAAF in the year 2010 and beyond, the PLAAF's evolution should stress the acquisition and development of aircraft that could perform sustained operations out to the second island chain; among these, long-range bombers, tankers, and airborne command and control. Additionally, the volume of inflight-refuelable aircraft would need to increase to match the requirements of regional conflict. An offensive realist China seeking regional hegemony would sufficiently develop the PLAAF necessary to support simultaneous PLA and PLAN operations. After observing the results of Operation DESERT STORM, the PLAAF determined that airpower, as of 1991, is now the decisive capability in major military conflicts. Ultimately, an expansionist China would require the PLAAF to have a qualitative and quantitative advantage over the Indian Air Force and at least enough strength to deter potential interference from Russia or the United States.

### Non-Air Force Factors

The variables of forward basing, naval reach, and space capabilities do not fall within the scope of the report generated by RAND, describing the PLAAF. The limitations imposed by not accounting for these elements reduce the effectiveness of the predictions generated by RAND's PLAAF. In line with offensive realist tenets, China would seek forward basing agreements to extend its operational reach while continuing to exert its military power. Furthermore, the PLAN

would produce longer-ranged warships, with the PLAN-air force (PLANAF) providing an umbrella of protection for the fleet. Finally, space programs reflect qualitative gains to guarantee information superiority should conflict arise.

**Table 2.1 Summary of RAND predictions**

PLAAF 1992 – Offensive Realist Expansionist (global conflicts) requiring sustained projection	
Input variable	Desired evolution
<b>AF Factors</b>	
Long-range strategic bombers	Qualitative increase-capable of combat beyond 2 <sup>nd</sup> island chain
Aerial refueling tankers	Quantitative increase-capable of sustaining combat operations
Long-range heavy transport	Quantitative increase-provide inter-theater lift
Advanced fighter aircraft	Qualitative increase-advanced air-ground capabilities; advanced air-air abilities, expanding air superiority beyond 2 <sup>nd</sup> island chain to cover PLAN
<b>Non-AF Factors</b>	
Forward Basing	Quantitative increase-develop basing options to extend operations beyond 2 <sup>nd</sup> island chain
Naval Power	Qualitative increase-extend operational reach to a blue water, global navy
Space	Qualitative increase-develop offensive space capabilities

## Case Study 2-Holmes Monograph, Defensive Realism

Space and air are the first and most important lines of defense for any modern state.<sup>47</sup>

--Wang Mingliang, professor, Air Force Command College

### Background

In 2000, Maj Sharon Holmes authored a monograph for the School of Advanced Military Studies entitled “China’s PLAAF Power Projection in the 21<sup>st</sup> Century.” In it, Holmes describes

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<sup>47</sup> “Air Force 'no threat to others'”, *China Daily*, November 6, 2009.  
[http://www.china.org.cn/features/air\\_force/2009-11/06/content\\_18842116.htm](http://www.china.org.cn/features/air_force/2009-11/06/content_18842116.htm) (accessed April 19, 2010).

the PLAAF modernization efforts of the 1990s as they related to potential changes in Chinese foreign policy. Holmes describes the potential seeds of an RMA within the PLAAF, detailing how they chose to adopt United States acquisition, organizational, and training methodologies to increase PLAAF capabilities.<sup>48</sup> The conflict context detailed by Holmes is that between China and its regional neighbors, that is to say, India, Pakistan, Korea, and so forth.

The timing of the Holmes monograph is important, as it represents a critical time for Chinese leadership. Following the success of the United States' Kosovo Campaign, Chinese military leadership became enamored with the USAF as an organization, viewing airpower as the key to victory in the information age. Additionally, the monograph followed a period in recent Chinese history during which internal security threats from neighboring countries dominated the PLA's decision-making. The 1997 Chinese Nation Defense Policy reflected the principles of peaceful coexistence, "...mutual respect for territorial integrity and sovereignty, mutual non-aggression, noninterference in other's internal affairs, and equality and mutual benefit, and peaceful coexistence."<sup>49</sup>

The previous study identified the requisite capabilities of the PLAAF, should it pursue an expeditionary capability. In contrast, Holmes' description of the PLAAF describes both offensive and defensive elements. China required a defensive capability that either deterred such attacks, or, if deterrence failed, was capable of defending China's sovereign claims. If China's claims of witnessing an airpower-led revolution in military affairs were valid, then it would have to restructure its own airpower in order to defeat potential aggressors.<sup>50</sup> In terms of offensive

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<sup>48</sup> Sharon Holmes, "China's PLAAF Power Projection in the 21st Century" (master's thesis, School of Advanced Military Studies, 1999-2000), 1-4.

<sup>49</sup> Holmes, 21.

<sup>50</sup> You Ji, "Adding Offensive Teeth to a Defensive Air Force: The New Thinking of the PLAAF," *Issues and Studies A Journal of Chinese Studies and International Affairs* 35, no. 2 (March/April 1999): 116-19.



capabilities, Holmes' work characterizes the PLAAF's expeditionary abilities as focusing on projecting power from within the borders of China. She describes the two likely employments of the PLAAF as supporting a Rapid Reaction Force (RFF) or supporting conventional warfare in the form of high technology, Local War. As Holmes puts it, high technology, Local War is, "...an advanced version of Desert Storm with great dependence on technology, rapidity, precision, and lethality."<sup>51</sup>

### Air Force Factors

Holmes adequately surveyed the material requirements the PLAAF would require to grow a world-class air force. She notes the improved industrial capacity, organizational restructuring to facilitate the independence of the air branch, and the incorporation of modern air doctrinal principles each as being a key point in the PLAAF's evolution. The RAND report cited these same principles as three of the six institutional elements that the PLAAF would need to overcome if it was to mature into a credible air force. This discussion is lacking in depth, however, as it does not address China's grand strategy and the way in which it views the PLAAF parting the context of the PLA's overall military strategy.

Holmes' depiction of the PLAAF as evolving to meet internal security and Local War objectives assumes that China does not see an expansionist opportunity. According to Holmes, then, China sees the PLAAF as serving a defensive realist approach. With this underpinning, the PLAAF's primary concern is the protection of its internal security while still demonstrating a credible enough threat as to deter potential (India, United States) aggressors. From a defensive realist approach, the evolution of the PLAAF in 2010 satisfies these criteria. Ultimately, Holmes' characterization of the PLAAF's institutional growth was consistent with the actual growth of the

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<sup>51</sup> Holmes, 25.

PLAAF to date. The problem with this analysis was that it did not account for the overall evolution of the PLA. As former U.S. Deputy Secretary of State, Robert Zoellick remarked in 2005, “Many countries hope China will pursue a ‘Peaceful Rise,’ but none will bet their future on it.”<sup>52</sup>

Based on the Holmes study, the PLAAF requirements indicate a PRC requirement for the PLAAF to develop the capability of rapidly responding either to a border incursion or to a significant internal security event. To support either of these potential situations, the PLAAF would rely heavily on air defense forces and intra-continental (within China’s borders) lift. In order to achieve air superiority, the fighter forces require either a qualitative or a quantitative advantage over those of neighboring countries. A quantitative advantage, however, is more likely to generate competition from other states than qualitative increases would. In terms of their long-range bomber force, a bomber can reach beyond the second island chain is unnecessary, and would actually give rise to a security dilemma. Holmes’ references to naval reach describe a rapid, light reaction force that acts as part of a joint RRF.<sup>53</sup>

### Non-Air Force Factors

Holmes does not describe the external factors of forward basing or space capabilities. Given the internally focused nature of this case study, the PRC would migrate to moderate strategies that would diffuse potential security dilemmas. Forward basing agreements would run counter to these moderating strategies. Qualitative advances in China’s naval capabilities and in

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<sup>52</sup> Robert Zoellick, “Whither China: From Membership to Responsibility?: Remarks to National Committee on U.S.-China Relations,” *Journal Title* (September 21, 2005): 2, [http://www.ncuscr.org/files/2005Gala\\_RobertZoellick\\_Whither\\_China1.pdf](http://www.ncuscr.org/files/2005Gala_RobertZoellick_Whither_China1.pdf) (accessed April 2, 2010).

<sup>53</sup> Holmes, 18-25.

its space programs would generate national prestige, which is central to any discussion of internal security.

**Table 2.2 Summary of Holmes predictions**

Holmes – Defensive Realist Local War (internal/proximal conflict) requiring sustained projection	
Input variable	Desired evolution
<b>AF Factors</b>	
Long-range strategic bombers	No increase-capable of combat beyond 2 <sup>nd</sup> island chain
Aerial refueling tankers	Quantitative increase-capable of sustaining combat operations w/in 1 <sup>st</sup> island chain
Advanced fighter aircraft	Qualitative increase-advanced air-ground capabilities—air to air engagements are responsibility of AAA and SAMs—1 <sup>st</sup> island chain reach
Long-range heavy transport	Quantitative increase-provide intra-theater lift
<b>Non-AF Factors</b>	
Forward Basing	No increase-fear of security dilemma
Naval Reach	Qualitative increase-extend operational reach to 2 <sup>nd</sup> island chain/secure trade routes
Space	Qualitative increase- source of domestic reassurance

By comparing the two predicted sets of criteria to the actual observed acquisitions during this time, the models serve as validating agents for their respective authors' predictions. The differences between the two models also serve as differentiators for each theory. To make these comparisons, acquisition data for these criteria follows.

## **PLAAF Acquisitions**

In 1989, two significant events changed how the PRC viewed the world. First, the fall of the Soviet Union led China to reassess the balance of power, noting that it favored countries with ties to the United States. Second, following the Tiananmen Square protests in 1989, the PLA budget increased significantly. At the time, the Central Intelligence Agency believed that, "...the military has become an influential player in Chinese politics, and the military's...budget may

increase markedly as the price of its support.”<sup>54</sup> With an average PLA budget of 6.5 billion USD from 1985-1989, the PRC increased military spending to \$11.3B USD in 1990.<sup>55</sup> These spending increases supported the CIA’s hypothesis of the PRC rewarding the military for its support during the Tiananmen Square crisis.

Adding to domestic and international issues, “...Chinese political and military leaders had been shocked at the high-tech military technologies and capabilities of the US...during the Gulf War...”<sup>56</sup> China recognized that airpower shifted from the roles of tactical supporting fires and strategic nuclear deterrence to ones of more pronounced operational effects. The PLA took stock of the situation and determined that the United States military underwent a revolution in military affairs between the Vietnam War and the first Gulf War with Iraq. As the PLAAF Lieutenant General Liu Yazhou explained:

The US had global interests, and hence broad war areas. That made it essential for its armed forces to fight long-distance wars, to be able to be deployed promptly, strike precisely and maintain absolute mastery of the sky. Among all parts of the US armed forces, only its air power could match those requirements.<sup>57</sup>

For the PLA, DESERT STORM represented warfare between a Soviet-based military against a Western military. Unfortunately, for the PLAAF, access to Western equipment and training ceased as a result of the Tiananmen Square incident.

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<sup>54</sup> United States Central Intelligence Agency, “Document 10: China: Situation Report, June 10, 1989,” in “The U.S. ”Tiananmen Papers,” ed. Michael L. Evans, special issue, *The National Security Archive* (June 4, 2001): under “4th Page of PDF”, <http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB47/doc10.pdf> (accessed March 30, 2010).

<sup>55</sup> Hochul Lee, “Balance of Power and Economic Interdependence in the Post-Cold War Northeast Asian International Relations: An Empirical Study”, Paper presented at the annual meeting of the American Political Science Association, Aug 28, 2002, [http://convention2.allacademic.com/one/apsa/apsa02/index.php?cmd=Download+Document&key=unpublished\\_manuscript&file\\_index=1&pop\\_up=true&no\\_click\\_key=true&attachment\\_style=attachment&PHPSESSID=a49247ee5dfa5c1c9fb129b9053c3855](http://convention2.allacademic.com/one/apsa/apsa02/index.php?cmd=Download+Document&key=unpublished_manuscript&file_index=1&pop_up=true&no_click_key=true&attachment_style=attachment&PHPSESSID=a49247ee5dfa5c1c9fb129b9053c3855) (accessed March 30, 2010).

<sup>56</sup>Ibid.

<sup>57</sup>Liu Yazhou, “China-America: The Great Game; Interview with Lt. Gen. Liu Yazhou,” *Heartland - Eurasian Review of Geopolitics* (1/2005): 12.

## **PLAAF Evolution 1991-1995**

During the first period of PLAAF evolution, which spans from 1991 to 1995, the PRC made substantive investments in the PLA. After 1991, the PLAAF changed its fundamental employment strategy from one of Soviet-style, overwhelming mass to one of Western-style, emphasizing precision strike.<sup>58</sup> The PRC negotiated the acquisition of 3<sup>rd</sup> generation fighters (SU-27s) and advanced air-to-air missiles with Russia. This acquisition began the PLAAF's attempt to move beyond an obsolete mass-based air force to one capable of precision employment. The tables that follow incorporate data from the International Institute For Strategic Studies' annual publication The Military Balance and from Global Security's Web site reports on PLA inventories.

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<sup>58</sup> Yazhou, 12.

Table 2.1. PLAAF inventory 1985-1995<sup>59</sup>

	Platform	Equivalent Aircraft	1985	1990	1995	First Island Chain	Second Island Chain	Year of Inventory
Number of Airframes	<b>Bombers</b>		<b>620</b>	<b>470</b>	<b>500</b>			
	B-5	Il-28	500	350	380	Yes	Yes	1968
	B-6	Tu-16	120	120	120	Yes	Yes	1969
	<b>Attack</b>		<b>500</b>	<b>500</b>	<b>500</b>			
	Q-5	MiG-19	500	500	500	No		1970
	Su-30MKK	Su-30	--	--	--	Yes	Yes	2000
	<b>Fighter</b>		<b>4130</b>	<b>4000</b>	<b>4050</b>			
	J-2	MiG-15	500	--	--	No		1952
	J-5	MiG-17	400	400	400	No		1964
	J-6	MiG-19	3000	3000	3000	No		1964
	J-7	MiG-21	200	500	500	No		1980
	J-8	F-4F	30	50	100	Yes	Yes	1988
	J-11	Su-27	--	--	46	Yes	Yes	1992
	<b>Tanker</b>		--	--	--			
	HY-6	Tu-16	--	--	--	Yes	Yes	1969
	<b>Transport</b>			<b>25</b>	<b>35</b>			
	Il-76	Il-76	--	--	10	Yes	Yes	1991
	Y-8	An-12		25	25	Yes	Yes	1972
	AEW		--	--	--			N/A

### PLAAF Evolution 1996-2010

In 1996, the third Taiwan Straits Crisis led to another boost in PLAAF emphasis. After shows of force by the PLA to intimidate Taiwan separatists, the United States brought the *Nimitz* and *Independence* carrier battle groups into the Taiwan Straits. Following its thwarting of China's coercive approach, the PLA adjusted their calculus of U.S. support to Taiwan. The fact that the United States was willing to support Taiwan to this degree meant that if China planned to take Taiwan by force, it was likely to face U.S. military opposition. "Thus the PLA is planning for war

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<sup>59</sup>Global Security, "PLAAF Equipment," GlobalSecurity.org, <http://www.globalsecurity.org/military/world/china/plaaf-equip.htm> (accessed March 31, 2010). In combination with IISS data from the *Military Balance*, issues 1985- 1995.

against the United States, with implications for both the domestic politics of China's U.S. policy and for PLA hardware acquisitions.”<sup>60</sup>

**Table 2.1. PLAAF inventory 1996-2010<sup>61</sup>**

	Platform	Equivalent Aircraft	1995	2000	2005	2010	First Island Chain	Second Island Chain	Year of Inventory
Number of Airframes	<b>Bombers</b>		<b>500</b>	<b>320</b>	<b>216</b>	<b>82</b>			
	B-5	Il-28	380	200	94	--	Yes	Yes	1968
	B-6	Tu-16	120	120	120	82	Yes	Yes	1969
	<b>Attack</b>		<b>500</b>	<b>450</b>	<b>408</b>	<b>193</b>			
	Q-5	MiG-19	500	508	408	120	No		1970
	Su-30MKK	Su-30	--	38	73	73	Yes	Yes	2000
	<b>Fighter</b>		<b>4050</b>	<b>2500</b>	<b>1252</b>	<b>1100</b>			
	J-2	MiG-15	--	--	--				1952
	J-5	MiG-17	400	--	--				1964
	J-6	MiG-19	3000	1800	--				1964
	J-7	MiG-21	500	500	400	768	No		1980
	J-8	F-4F	100	150	153	288	Yes	Yes	1988
	J-10	F-16C	46	--	62	120	Yes	Yes	2004
	J-11	Su-27	--	48	116	134	Yes	Yes	1992
	<b>Tanker</b>		--	<b>6</b>	<b>10</b>	<b>10</b>			
	HY-6	Tu-16	<b>35</b>	6	10	10	Yes	Yes	1969
	<b>Transport</b>		<b>10</b>	<b>82</b>	<b>38</b>	<b>35</b>			
	Il-76	Il-76	25	14	13	18	Yes	Yes	1991
	Y-8	An-12	--	68	25	17	Yes	Yes	1972
	AEW			--	<b>4</b>	<b>8</b>	Yes	Yes	1982

## Summary of Input Variables

The PLAAF gained its first six **tanker aircraft** in 1996. From 1996-2010, the PLAAF added another four airframes. In 2005, China placed an order with Russia for an additional eight

<sup>60</sup> Robert S. Ross, “The 1995-1996 Taiwan Strait Confrontation: Coercion, Credibility, and Use of Force,” *International Security* 25, no. 2 (Fall 2000): 112-14.

<sup>61</sup> Global Security, “PLAAF Equipment,” GlobalSecurity.org, <http://www.globalsecurity.org/military/world/china/plaaf-equip.htm> (accessed March 31, 2010). In combination with IISS data from the *Military Balance*, issues 1995- 2010.

IL-78 tankers; as of 2010, China is awaiting delivery. The choice of additional IL-78s represents a qualitative improvement for the tanker fleet, numbering just ten. Additionally, China is not purchasing replacements for the Y-8s.<sup>62</sup>

Of the two variants of **long-range bombers** owned by China, the prop-driven B-5 retired from the inventory in 2005. The remaining B-6s are undergoing a transition from direct attack missions to standoff cruise missile delivery missions. The overall bomber force decreased from around five-hundred in 1990, to eighty-two in 2010. These eighty-two aircraft represent a modest qualitative gain.<sup>63</sup>

China has invested heavily in a domestic production capability of **heavy transports**. To date, these aircraft have yet to enter PLAAF inventory. China's inventory of heavy transports numbers around forty. China is awaiting the delivery of thirty additional IL-76s that were part of the 2005 purchase from Russia. China has shown a desire for qualitative increases in its transport fleet with modest quantitative gains.<sup>64</sup>

From 1990 to 2010, the number of **fourth generation fighters** improved both quantitatively and qualitatively. The addition of the indigenously produced J-10, in 2005, bolstered the presence of the Su-27 and Su-30MKKs, raising the fleet from the initial lot of thirty-seven Su-27s to well over three hundred in 2010. China's desire for fourth generation fighters is both qualitative and quantitative.<sup>65</sup>

While China has several naval refueling agreements, there are no basing agreements for **PLAAF airbases**, and the PRC stated, very publicly in 2010 that, unlike the U.S., they do not

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<sup>62</sup> Cordesman and Kleiber, 88-89.

<sup>63</sup> International Institute For Strategic Studies, *The Military Balance, 2010: Chapter 8: East Asia and Australia*, Issue 110. (London: Routledge, 2010), 404, <http://dx.doi.org/10.1080/04597220903545874> (accessed February 12, 2010).

<sup>64</sup> Ibid.

<sup>65</sup> Data Derived from comparing IISS Military Balance data from 1985-2010.



seek to establish foreign military bases.<sup>66</sup> Likewise, the number of aircraft available to deploy to outside of China decreased as the total inventory dropped from over 4000 aircraft in 1990 to 1617 in 2010.

From 1990 through 2010, the PLAN sustained a steady growth of **Principle Surface Combatants**. Over this twenty-year period, the fleet of Surface Combatants rose from fifty-five to eighty. The number of Destroyers also grew from eighteen to twenty-eight. The number of submarines actually decreased from ninety-two to sixty-five.<sup>67</sup> Overall, the quality gains exceeded the modest quantity losses.

Beyond China's manned **space** program, the PLA's weaponization of space made headlines in 2008, with its demonstration of anti-satellite (ASAT) capabilities.<sup>68</sup> By demonstrating this capability, the PLA knowingly displayed an ability directly threatening countries dependent upon intelligence and communication satellites. Chief among these are the United States and Russia.

In addition to the kinetic ASAT capability, the PLA continues to develop a ground based ASAT capability utilizing Chemical Oxygen-Iodine Lasers and Free Electron Lasers, (commonly referred to as COIL and FEL systems).<sup>69</sup> These high-powered lasers provide an offensive capability against low earth orbit satellites. LEO satellites are generally intelligence gathering,

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<sup>66</sup> "China not to establish overseas military base", *China Daily*, March 4, 2010. [http://www.china.org.cn/china/NPC\\_CPPCC\\_2010/2010-03/04/content\\_19521428.htm](http://www.china.org.cn/china/NPC_CPPCC_2010/2010-03/04/content_19521428.htm) (accessed April 10, 2010).

<sup>67</sup> Data derived from IISS Military Balance reports 1985-2010.

<sup>68</sup> China confirms satellite downed, *BBC News*, January 23, 2007. <http://news.bbc.co.uk/2/hi/asia-pacific/6289519.stm> (accessed April 19, 2010).

<sup>69</sup> Hui Zhang, "Capabilities of Potential Adversaries," FAS.org, <http://www.fas.org/resource/10072004164453.pdf> (accessed April 2, 2010).

global positioning, or space-based radars.<sup>70</sup> These developments represent significant gains in qualitative and quantitative criteria.

**Table 2.3 Summary of observed variables.**

Input variable	Desired evolution					
	Rand		Holmes		Observation	
AF Factors	QUAL	QUAN	QUAL	QUAN	QUAL	QUAN
Long-range strategic bombers	Increase	Increase	Increase	No Change	Increase	Decrease
Aerial refueling tankers	No Change	Increase	Increase	No Change	Increase	None
Long-range heavy transport	No Change	Increase	Increase	No Change	Increase	Decrease
Advanced fighter aircraft	Increase	Increase	Increase	Increase	Increase	Increase
Non-AF Factors						
Forward Basing	No prediction		No prediction		No Change	No Change
Naval Reach	No prediction		Increase	No Change	Increase	Increase
Space	No prediction		No prediction		Increase	Increase

### RAND-based PLAAF vs. Holmes

To determine the accuracy of the prediction and the reliability of the models, two levels of analysis are performed. The first level is a comparison of each of the predicted criteria. The second level is a comparison of the model against the observed data.

The **RAND** study described the criteria the PLAAF stated it would have to fulfill if it desired true power projection capability. The efforts described by the 1992 PLAAF included power projection enablers (tankers, transport, C2 aircraft) as well as attack aircraft (fighters, bombers, electronic warfare aircraft) that could all perform sustained operations beyond the second island chain.<sup>71</sup> In the RAND report, the PLAAF concluded that **quantities** of power projection aircraft would allow them to achieve a USAF 1991-level of dominance.<sup>72</sup>

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<sup>70</sup> Hui Zhang, “Capabilities of Potential Adversaries,” FAS.org, <http://www.fas.org/resource/10072004164453.pdf> (accessed April 2, 2010).

<sup>71</sup> Allen, 104.

<sup>72</sup> Ji, 113. Ji indicates the PLAAF, in 1995, sought a four to one ratio of PLAAF to Taiwan fighter aircraft. The 2009 DoD Military Report warns of 490 combat aircraft within striking range of Taiwan. The 2010 IISS figures for Taiwan credit them with 477 combat aircraft. The desired four to one force ration

Over the last twenty years, the PLAAF has evolved into a formidable border protection force. The highly capable fourth generation fighter fleet with a skilled complement of operators presents a vexing problem to the United States and neighboring states. Its capabilities, however, suffer from a quantitative lack of AEW, aerial refueling tankers, and long-range transport, making sustained offensive operations beyond the first island chain doubtful.<sup>73</sup> Compounding this problem of power projection is China's lack of forward airfields. Even if China were to obtain tankers and long range, heavy transports, they lack staging bases.

An offensive realist China failed to materialize during the period from 1990 to 2010. Massive quantities of power projection aircraft were not developed. Chinese expansionism did not result in a hegemonic status for the PRC. The air force criteria actually went contrary to the PLAAF desires as described by RAND.

The PLAAF (based on the RAND description) assessment did not account for strategic intentions. The ability to transform and modernize an entire air force is not a function of simply manufacturing more aircraft. An air force is a costly institution meaning that acquisitions and employment philosophies serve the strategies of policy makers, not necessarily military theorists.

Utilizing the offensive realist criteria to describe a worst-case PLAAF in the year 2010 and beyond, the PLAAF's evolution should have stressed the acquisition and development of aircraft capable of performing sustained operations out to the second island chain, among these, long-range bombers, tankers, and airborne command and control. Additionally, the volume of inflight-refuelable aircraft needed to increase to match regional conflict requirements. An offensive realist China seeking regional hegemony would enhance the PLAAF's capabilities to support simultaneous PLA and PLAN operations. Ultimately, an expansionist China would

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mean that the PLAAF needs at least 1000 additional fighter aircraft to secure victory inside of the first island chain.

<sup>73</sup> DoD, Annual Report to Congress: Military Power of the People's Republic of China 2009, VIII.

require the PLAAF to have a quantitative advantage over the Indian Air Force with at least enough strength to deter Russian interference.

**Holmes'** position of China as a defensive realist predicted that PLAAF assets would generally seek **qualitative** increases instead of quantitative ones. Power projection for Holmes' exists to support the mission of defending China's sovereign territorial claims. Demonstrable forms of sophisticated military lethality serve to deter conflict and serve to strengthen national prestige.

Holmes' general categorization of China's defensive realist approach aligns more closely to the observed data than the RAND categorization. Holmes' predictions still overestimated the force structure the PLAAF ended with in 2010. China's economic growth has continued to grow from when Holmes' wrote her monograph through 2010. Economic factors are therefore not significant factor in difference between her model and the observed data.

Holmes does not account for China's participation in a multitude of international operations, ranging from Sudan to East Timor.<sup>74</sup> Though Chinese participation has yet to include combat forces, the increasing number of multilateral training exercises and 2010 PLN deployments show a pattern of outreach that negates Holmes's assertion of defensive realism, particularly the security dilemma aspect. Instead of developing the PLAAF to the point at which it presents a regional threat, China decided to engage regional partners to diffuse pretenses of hegemonic aspirations. By allaying neighboring countries' fears, China avoided the security dilemma and demonstrated a preference for Liberal Institutionalism.

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<sup>74</sup> International Institute For Strategic Studies, *The Military Balance, 2010: Chapter 8: East Asia and Australia*, Issue 110. (London: Routledge, 2010), 404, <http://dx.doi.org/10.1080/04597220903545874> (accessed February 12, 2010).

In 2004, David Shambaugh published an article for the *Journal of International Security*, describing China's rise in East Asia, entitled "China Engages Asia: Reshaping the Regional Order." One of his key conclusions was that "...there is scant, if any evidence of the PLA developing capabilities to project power beyond China's immediate periphery."<sup>75</sup> The basis for this conclusion was an analysis of China's military capabilities in 2004 by Dr. David Shambaugh. Shambaugh observed:

- "China lacked long-range bombers.
- The PLAAF still lacked a mature airborne command and control apparatus.
- In-flight aerial refueling suffered from a lack of tankers and no demonstrated capability thereof.
- While the PLAN was constructing naval battle groups with the ability to project power, there were no acquisitions of military bases or strategic basing agreements for the PLAN or PLAAF."<sup>76</sup>

As further support of Holmes's assertion of China's defensive realist nature, Shambaugh writes, "...the PLA has not adopted a doctrine that would guide such a forward force projection capability—the PLA's doctrine of peripheral defense is not one of forward projections."<sup>77</sup> Holmes' exclusion of the liberal institutionalist elements explains her over estimation of the PLAAF force structure.

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<sup>75</sup> David Shambaugh, "China Engages Asia: Reshaping the Regional Order," *International Security* 29, no. 3 (Winter, 2004/2005): 85-86.

<sup>76</sup> Shambaugh, 85-86.

<sup>77</sup> *Ibid.*

### Section III, Analysis, Recommendations, Conclusions

While the case studies explore predictions of the PLAAF based on offensive and defensive realist international relations theories, the inadequacies of simply applying a model to a predicted country omits strategic context. What both cases demonstrate is that by excluding other PLA branches and the strategic agenda of China neither case study accurately explained the PRC's grand strategy. While Holmes defensive realist position yielded better results than the PLAAF (RAND-based) projection, these results still did not account for the reduction of the bomber fleet, the growing navy and space programs.

If two case studies considered the PLAN and space programs in their studies, the results would shift closer to an offensive realist strategic agenda. This is why the strategic intention is important. By examining the liberal institutionalist behaviors during from 1990 to 2010, a very different conclusion emerges.

Between 1990 and 2010, China's contribution to worldwide peacekeeping operations numbered more than 8000 personnel. According to Dai Shao'an, vice-director of the Peacekeeping Affairs Office of the Ministry of Defense, "If requested by the United Nations, and if we find that sending peacekeeping forces will be conducive to the peace and development of local people, we will be glad to play a role in saving people from suffering."<sup>78</sup>

In January of 2009, China deployed two destroyers and a supply ship to the Gulf of Aden to participate in international anti-piracy operations. The commander of the PLAN commented, "It's the first time we go abroad to protect our strategic interests armed with military force."<sup>79</sup>

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<sup>78</sup> Su Qiang and Le Tian, "Peacekeeping - a rising role for China's PLA," *China Daily*, July 24, 2007. [http://www.chinadaily.com.cn/china/2007-07/24/content\\_5442172.htm](http://www.chinadaily.com.cn/china/2007-07/24/content_5442172.htm) (accessed April 10, 2010).

<sup>79</sup> Agence France-Presse, "Chinese Navy on Historic Anti-piracy Mission," *Defense News*, December 26, 2009. <http://www.defensenews.com/story.php?i=3878183&c=ASI&s=TOP> (accessed April 3, 2010).

This shift in policy lends credence to the approach of liberal institutionalism, as China is now participating in an international policing operation.

This deployment also draws a distinction between the ways in which China interprets its national interests. With respect to the deployment of military forces to support International Security Assistance Forces, the PRC refused, replying, “China never sends troops abroad.”<sup>80</sup> The only support China provides to UN peacekeeping missions is in the form of non-combat soldiers. China has economic and ideological reasons to support stability operations in Afghanistan, but doing so would come at the cost of subordinating its troops to United States command. The PLAN deployment, on the other hand is a bilateral agreement, which allows China to operate autonomously while supporting an international organization.

### **The case against offensive realism**

Two factors keep the lethality of emerging air and sea platforms from signaling the advent of an offensive China. First, the locations of PLAAF bases array them in such a way as to defend the vast eastern coast of China (See Figure 5). This basing scheme is consistent with China’s Offshore Active Defense strategy, providing the PLAAF with access to the first island chain via coastline bases. Likewise, these bases form a defensive ring around Beijing, with their highest concentration overlapping the nations’ capital.

The second factor preventing an offensive interpretation of the PLAAF relates to the power projection ideas from within China. If China defines its power projection capabilities via the Offshore Active Defense strategy of the PLAN, then the aircraft sourced to the PLAN describe how China views its operational reach. In 2010, the PLANAF (PLAN Air Force)

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<sup>80</sup> Melinda Liu, “How China Could Quietly Play A Key Role In Afghanistan,” *Newsweek*, Dec 1, 2008, 3. <http://www.newsweek.com/id/170320> (accessed April 3, 2010).

commanded 290 aircraft. Of these, IISS estimated that sixty-six were transport aircraft and fifty-six were either retired or in the process of decommissioning. Accounting for these subtractions, the PLANAF has 118 true combat aircraft.<sup>81</sup> If China sees its future as a great naval power then the lack of PLANAF assets telegraphs a lack of expansionist goals.



**Figure 2. People’s Liberation Army Branch basing.**<sup>82</sup>

A final point against the PLAAF as a source of regional power projection is its response in 2008 to an earthquake measuring 8.5 on the Richter scale. The lack of internal mechanisms and

<sup>81</sup> International Institute For Strategic Studies, *The Military Balance, 2010: Chapter 8: East Asia and Australia*, Issue 110. (London: Routledge, 2010), 402, <http://dx.doi.org/10.1080/04597220903545874> (accessed February 12, 2010).

<sup>82</sup> International Institute For Strategic Studies, *The Military Balance, 2010: Chapter 8: East Asia and Australia*, Issue 110. (London: Routledge, 2010), 379, <http://dx.doi.org/10.1080/04597220903545874> (accessed February 12, 2010).



institutions within the PLA led to a United States-led multinational effort to alleviate the mounting humanitarian crisis. Because of the remote location, PLAAF assets had the primary responsibility of transporting aid workers and supplies to the affected regions. Here is where “...China’s shortcomings in this area highlight big gaps in its airpower.”<sup>83</sup> China has no higher national interest than maintaining internal stability and the security of its population. When called upon to demonstrate this ability, the PRC accepted United States military aid to fill capabilities that are essential to power projection. The PLAAF’s inability to serve China’s internal needs demonstrates just how far removed they are from wielding an expeditionary force capable of threatening global security. If the PLAAF were capable of projecting sustained combat capability to the first island chain in an offensive manner, then the presence of the United States should not be a requirement for a domestic event.

## **The Future of the PLAAF**

The 2009 version of the DOD report to congress, “*Military Power of the People’s Republic of China*” exemplifies the reluctance of military analysis to incorporate strategic intention as a moderating element of how China defines its national interests.

The first section of this report articulates China’s grand strategy. The authors present a very nuanced view of this strategy as a complex blend of the historic and modern approaches. The historic elements of this strategy describe Deng Xiaoping’s philosophy, “...observe calmly; secure our position; cope with affairs calmly; hide our capacities and bide our time; be good at maintaining a low profile; and never claim leadership.”<sup>84</sup> Those supporting a defensive realist

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<sup>83</sup> Nirav Patel, “Chinese Disaster Relief Operations: Identifying Critical Capability Gaps,” *Joint Force Quarterly* no. 52 (1st quarter 2009): 113-14.

<sup>84</sup> DoD, Annual Report to Congress: Military Power of the People’s Republic of China 2009, 1.

China cite this philosophy. Hidden capabilities and waiting for a hidden event imply veiled expansionist aspirations.

The modern elements that update this strategy incorporate Hu Jintao's "Harmonious world" policies, advocating increased Chinese participation in the international system. Linking these points to flourishing economic and resource interests provides a high degree of support to liberal institutionalism as a significant influence in China's grand strategy.

Logically, this report makes the case for a defensive realist China that acknowledges the benefits it receives from actively participating in the international system. The military analysis section that follows the grand strategy section ignores most of the strategic conclusions to derive its own position on Chinese military activities. Instead of a position of defensive realist with liberal institutionalist underpinnings, the military analysis assumes a defensive realist position with an offensive realist eventuality.

The authors support their *aggressive* defensive realist conclusion with the same logic that compares assets and missions to derive strategic intention. In one section, the authors state that China, "...does not have the number of tankers, properly equipped combat aircraft, or sufficient training to employ this capability for power projection."<sup>85</sup> In the same report, the contradictory position states:

Analysis of China's weapons acquisitions also suggests China is looking beyond Taiwan as it builds its force...Airborne early warning and control (AEW&C) and aerial-refueling programs would permit extended air operations into the South China Sea and beyond.<sup>86</sup>

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<sup>85</sup> DoD, Annual Report to Congress: Military Power of the People's Republic of China 2009, VIII.

<sup>86</sup> DoD, Annual Report to Congress: Military Power of the People's Republic of China 2009, 28.

In the case of the PLAAF in particular, a single paragraph describes the scope of PLAAF activities over the last year. This paragraph covers two topics. The first is the expansion of the PLAAF into offensive and defensive, over water. The second topic is that the PLAAF, "... has a leading role in the 'Joint Anti-Air Raid' campaign. The authors conclude that these developments add to the "...ambiguity of offense and defense in PLA theory."<sup>87</sup>

The tenor of this report leads its audience to believe that China is actively seeking expansion via air, sea, or space and will exploit any unchecked pathways to obtain it.

This report, like previous predictions, fails to incorporate strategic intentions into its analysis of China's military. The result of their analysis, much like current U.S. foreign policy toward China, is contradiction between the description of the strategic context and the predictive estimate.

### **Areas for further research**

The PLAAF's structure and employment strategies convey a defensive realist approach on behalf of the PRC. What is unknown at this time is how the PRC intends to protect its growing reliance on natural resources. Many authors conclude that the PLAN will naturally grow along China's resource paths. This accounts for littoral passageways only. Tremendous investments in developing areas expose China to risk. In 2010, when China's economy is on the rise, this risk is minor. If, in 2020, China's economy begins to turn downward, this risk could magnify as China relies on high rates of return. Leading to the question: *At what point would China commit combat troops to protect its national interests?*

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<sup>87</sup> DoD, Annual Report to Congress: Military Power of the People's Republic of China 2009, 13.

A second line of inquiry should address the schism between nationalist, offensive viewpoints inside the PLA that recently surfaced. PLA colonels and generals authored four books in the last 5 years advocating a range of offensive-minded positions that are unabashedly anti-American and anti-Western. *Is this a natural voice of dissent to the PRC's foreign policy or does it represent a growing resentment toward the West?*

## **Recommendations for US Policy Changes**

Highlighted in this monograph is the lack of a consistent approach to analyzing the PLA power projection capability. The U.S. military system utilizes material assets and geographic positioning to identify potential threats. Analysts do not constrain these physical realities with strategic tendencies. *A consistent PRC strategic agenda must be applied across military and interagency strategies and policies.* The ability for each military service to interpret its own China threat leads to inaccurate and exaggerated assessments that disregard the bigger picture.

If each service performed its own analysis (using the DOD-approved strategic agenda), and then combine their estimates with interagency data, a superior product would emerge. This process should fall under the purview of a joint, interagency board that ensures that China's military predictions are the product of capabilities, limited by the PRC's grand strategy.

Finally, this joint, interagency steering board should review the current body of military analysis to ensure the strategic agenda element is given an appropriate role in the development of U.S. military strategies.

## **Conclusion**

From 1990 through 2010, the U.S. failed to predict how the PLA would evolve. The two presented case studies, along with the 2009 DOD report to Congress provide examples of an underlying flaw in the field of military analysis. This flaw stems from an improper methodological approach. Predictions based purely on capabilities, without regard to strategic

intention assume no capacity limits, therefore can, and often do err in very large ways. By applying increasing potential to Chinese capabilities with no context, U.S. assessments default to an offensive realist view of China. Specific to the PLAAF, the implications of a growing fleet of fourth generation fighter aircraft hold two potential meanings. To those studying the strategic intentions of China, they represent a natural replacement for forty-year old fighters that add to national prestige. To current U.S. military analysts, the increased lethality represents a force that can defeat Taiwan and potentially skew the entire regional balance of power. These conflicting conclusions lead to ambiguous policies and inappropriate U.S. military strategies.

At first glance, the relationship between strategic intention and actual asset inventories may seem only modestly significant. The reality is despite significant increases in lethality what analysts are failing to consider is the limitation of options manifested in a smaller, more lethal force. The move from Chinese air force of over 5000 aircraft to one of 1617, approximately 500 of which are *modern*, changes the range strategic employment options available to the PRC. China's territorial boundaries did not decrease over this time. Likewise, China's relationships with its Asian neighbors did not produce an increase in formal alliances or pacts of non-aggression. Given these responsibilities of territorial defense and deterring presence with one fourth of the previous fleet, China's PLAAF does not have the airframes to support offensive operations without sacrificing national security responsibilities.

After twenty years of modernization efforts within the PLA, the PLAAF is still unable to demonstrate an expeditionary capability that could destabilize regional or global balances of power. Despite a booming economy and surpluses that could be applied to military priorities, the PRC central government has not committed to enhancing China's global reach. The PLAAF identified these concerns in 1980, and has yet to make demonstrable gains in the realm of long-range, heavy transports and aerial refueling tankers. The rapid reaction forces and the reorganization of the PLAAF increased the central government's ability to respond to events in China and on its periphery. The fact that USAF provided substantial airlift support in the

aftermath of the 2008 earthquake in China demonstrates the immaturity of even this domestic initiative, created in 1998. The analysis in the study concludes that China's demonstrated approach to international relations from 1990 to 2010 was defensive realism with growing evidence of liberal institutionalist participation.

Despite similar conclusions in the first section of the report, the military analysis in the 2009 Military Power report continues to associate PLA advances as having an ominous offensive purpose. The DOD's contradictory conclusion reaffirms the author's thesis that the U.S. military cannot understand PLA modernization because it ignores China's strategic context. The implications of not accounting for strategic agenda hold significance beyond China. The dangers of not understanding the motivations behind a military's evolution are universal.

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