UNDERSTANDING CHINA'S MILITARY STRATEGY: A STUDY OF THE PLAAF

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As the air force continues to develop, its functions in modern warfare will continue to increase. It not only can influence and change campaign and battle conditions, but can influence and change strategic conditions.

— Kenneth W. Allen, Glenn Krumel and Johnanthan D.Pollack, *China's Air Force Enters the 21st Century*

National security strategies are embedded in a country's historical experiences and it geo-political perceptions, as they shape a country's view of its security environment, and thereby guide its national security objectives. These strategic security objectives are further expanded by a country's ever growing national interests, and the degree of its engagement with international politics. Capabilities—existing as well as intended—constitute a crucial element of national security strategies, as they guide the operational as well as aspirational component of a military doctrine. Therefore, it can be deduced that national security strategies offer an interplay among historical experiences, geo-political perceptions, expanding national interests and capabilities of countries.

The doctrine of people's war that dominated Mao's China was

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predominantly defensive in nature and relied on defending China from attacks by using large numbers of troops armed with low-tech weapons to overwhelm an adversary through quantity rather than quality of personnel and weaponry.[1] In such a war, the army, along with the paramilitary forces, would work with the populace to engage in both conventional and guerrilla operations to overextend adversary forces. Once this occurred, conventional troops would attack and destroy isolated groups of enemy soldiers[2]. Mao's dictum of 'luring the enemy in deep' did not entail any scope for the air power missions of anti-access, area denial, and forward projection. As such, it can be assumed that during the initial years of its formation, China did not have an effective air power strategy.

The Cultural Revolution (1965-76) and the Sino-Soviet split (1960) further had deteriorating effects on China's defence modernisation. With the launch of Deng Xiaoping's "Four Modernisations" strategy in 1978, defence modernisation was formally recognised as the fourth priority sector in China's reconstruction. The acute interdependence between the priority areas of this strategy for the first time linked China's defence modernisation to its economic progress, and advancement in science and technology. The emphasis on science and technology laid the foundations for Research and Development (R&D) in the defence sector to enable China to achieve self-reliance in military hardware. Post 2003, China's defence sector moved into profit, and is now recognised as one of the most profitable sectors of the Chinese economy[3]. Therefore, it can be deduced that the "Four Modernisations" provided China with a platform to develop a modern warfare strategy.

The Gulf War of 1991 demonstrated to the world the air power advantages of initiative, rapidity, and surprise, and enthused the Chinese with their own need for advanced military technologies, especially combat

1. *Annual* Report to Congress on the Military Power of the People's Republic of China (Washington, DC: Department of Defence, 2006), p. 17.
2. Handbook on the Chinese Armed Forces, 1-7. Here cited from Erik Lin-Greenberg, "Offensive Air Power with Chinese Characteristics: Development, Capabilities and Intentions," *Air and Space Power Journal*, September 2007.
3. *The Military Balance 2010*, IISS.

aircraft and airborne command and control capabilities.[4] Since the 1990s, the air force has been in a phase of rapid development. At the strategic level, the People's Liberation Army Air Force (PLAAF) now aspires to evolve into a modernised strategic air force, capable of conducting offensive air power missions of air-strikes, long-range precision attacks, and strategic projection[5]. In order to achieve its desired objective, the Chinese Air Force has begun deploying third generation combat aircraft, third generation ground-to-air missiles, and a series of relatively advanced and computerised weapons and equipment.[6]

The increasing importance of the air force in China's military hierarchy can also be traced through these political developments[7]: since 2004, the Commander of the PLAAF (along with the Commander of the PLA Navy and Second Artillery) has been a member of the Central Military Commission (CMC), In 2003, PLAAF Lt Gen Zhengn Shenxia became the first air force officer to be appointed as the head of the Academy of Military Science (AMS), In 2006, PLAAF Lt Gen Ma Xiaotian became the first air force officer to be appointed as the Commandant of the PLA National Defence University (NDU), In 2007, Ma became one of the Deputy Chiefs of the General Staff with the portfolio of intelligence and foreign affairs for the PLA. Further, in the last few years, PLAAF general officers have also been appointed to various positions in the General Political Department (GPD) and General Logistics Department (GLD). Hence, they are being involved in developing PLA policies to a greater degree than in the past.

In order to develop a comprehensive understanding of the PLAAF's strategy, this paper shall endeavour to determine the close relationship between the PLAAF's historical foundations, strategic evolution (with

4. Kenneth W. Allen, Glenn Krumel and Johnanthan D.Pollack, *China's Air Force Enters the 21st Century* (Santa Monica: RAND, 1995), Ch.2, p. 32.
5. *China's National Defence in 2008,* White Papers on national defence published by the Government of the People's Republic of China, issued by the State Council, Beijing, www.china.org, January 2009
6. *China's National Defence in 2010,* White Papers on national defence published by the Government of the People's Republic of China, issued by the State Council, Beijing, www.china.org, March 2011
7. Facts for this section are taken from *People's Liberation Army: Air Force 2010,* National Air and Space Intelligence Centre, Wright-Patterson Air Force Base, Ohio.

respect to key security concerns), and its force modernisation.

Air power and precision strikes would be the primary means of conducting warfare, with ground operations playing a secondary role.

LOCATING AIR POWER IN CHINA'S MILITARY STRATEGY

China's current military doctrine is referred to as "local wars under informationized conditions."[8] Under this doctrine, the Chinese believe that the future wars would be limited, regional conflicts, rather than all-out or total wars. Information superiority is regarded as the most crucial element of these wars. Such conflicts will be governed by the following characteristics:[9]

- Such a war will be fought with *highly trained joint forces using mostly long-range, precision-strike weapons*.
- The objective in such warfare is to defeat the enemy by *inflicting strategic and operational paralysis through attacks on his weaknesses*. In fact, *it may be possible to defeat the enemy with one strike.*
- This multi-dimensional war will unfold in all dimensions (air, sea, ground, space, and the electromagnetic spectrum) simultaneously, and *the battlefield will be extremely fluid and dynamic.*
- Air power and precision strikes would be the primary means of conducting warfare, with ground operations playing a secondary role.[10]

Further, according to this doctrine, there are five types of local wars on which the PLA should focus:[11] (1) small-scale conflicts restricted to contested

8. *China's National Defence in 2004*, White Papers on national defence published by the Government of the People's Republic of China, issued by the State Council, Beijing, www.china.org, December 2004.
9. This section draws from Lt. Col Thomas R. McCabe USAFR, "The Chinese Air Force, Air and Space Power," *Air and Space Power Journal*, Fall 2003, September 2003.
10. In December 1995, the Central Military Commission—the Communist Party organisation that oversees the military— concluded that the ground battle was now secondary to the air battle. See Mark Stokes, "China's Missile, Space, and Conventional Theater Missile Development: Implications for Security in the Taiwan Strait," in Susan M. Puska, ed., *People's Liberation Army after Next* (Carlisle Barracks, Pa.: Strategic Studies Institute, US Army War College, 2000), 109. Here cited from R. McCabe n. 9.
11. Allen, et. al., n. 4, Ch.2, p. 29.

border territory; (2) conflicts over territorial seas and islands; (3) surprise air attacks; (4) defence against deliberately limited attacks into Chinese territory; (5) "punitive counter-attacks" launched by China into enemy territory to "oppose invasion, protect sovereignty, or to uphold justice and dispel threat."

A successful resolution of any of these conflicts would critically depend upon rapid power projection, precision strikes, and long-range assaults, and application of an effective air power strategy aimed at achieving air supremacy.

In terms of defence planning, **this conceptualisation of war scenarios translates into three major theatres of operation**: **Taiwan** (to uphold sovereignty); **South China Sea** (to uphold claims on contested seas and islands); and **India** (to restore China's claims on the Indian state of Arunachal Pradesh. Here India forms the only category as China has peacefully resolved its territorial disputes with other neighbouring countries). In all these future conflicts, air power would be the preferred mode of military engagement, as owing to the distance factor and the difficulty of the terrain, it is more time-consuming to move and deploy large ground formulations. **A successful resolution of any of these conflicts would critically depend upon rapid power projection, precision strikes, and long-range assaults, and application of an effective air power strategy aimed at achieving air supremacy.**

As contained in the Defence White Paper 2006, the PLAAF is now moving from territorial air defence to both offensive and defensive operations, and increasing its capabilities for carrying out reconnaissance and early warning, long-range precision strikes, air and missile defence, and strategic projection. All these mission statements entail air combat roles of strategic air defence, close air support, interdiction, strategic bombing, and tactical or strategic airlift.

The strategy of active defence is primary to the Chinese warfare doctrine. Active defence emphasises on "*taking the initiative to prevent and defuse crises,*

It can be concluded that any air power strategy that entails active defence as its basic concept, and aims to achieve command of the air, would be essentially offensive in character.

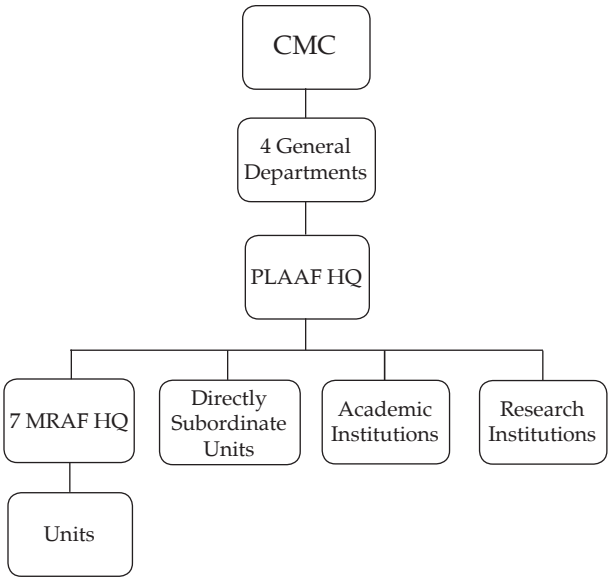
and deter conflicts and wars."[12] A reflection on China's involvement in the Korean and Vietnam Wars, and its attacks on India (1962) and Vietnam (1979) further guide us towards the prevalence of the element of preemption in Chinese strategic thinking. However, it should be noted that the 2010 National Defence White Paper, issued by the Chinese government categorically states that China pursues a military strategy of "attacking only after being attacked."

The 2004 National Defence White Paper declares that China is building its capabilities to *"win both command of the sea and command of the air."*[13] **Therefore, it can be concluded that any air power strategy that entails active defence as its basic concept, and aims to achieve command of the air, would be essentially offensive in character.**

The PLA and consequently the PLAAF use the concept of *campaigns,* to define their roles and missions. A campaign is defined as a series of battles fought under a unified command to achieve a local or overall objective.[14] The PLAAF describes a campaign as "using from one to many aviation, air defence, or airborne units to carry out a series of combined battles according to a general battle plan to achieve a specified strategic or campaign objective in specified time."[15] The basic concept of the air force campaign is "active initiative," which focusses on turning a passive posture into an active posture and defence into offence.[16]

12. *China's National Defence in 2006*, White Papers on national defence published by the Government of the People's Republic of China, issued by the State Council, Beijing, www.china.org, December 2006
13. *China's National Defence in 2004*, White Papers on national defence published by the Government of the People's Republic of China, issued by the State Council, Beijing, www.china.org. December 2004\
14. Wang Houquing and Zhang Xingye, eds., *The Science of Campaigns* (Beijing: National Defence University Press, 2000), especially chap. 1. Cited here from McCabe, n. 9.
15. Allen, et. al., n. 4, Ch. 6. p. 107.
16. Ibid., Ch.2, p. 29.

Fig 1: Organisational Structure[17]



As depicted in Fig. 1, the PLAAF is under the leadership of the Central Military Commission (CMC), and the four General Departments (General Staff Department, General Political Department, General Logistics Department and General Armament Department). The PLAAF Headquarters is the highest leadership organisation in the PLAAF. The headquarters is located in Beijing, and is organised into four first-level departments— Headquarters Department, Political Department, Logistics Department, and Equipment Department.

The PLAAF Headquarters leadership consists of the following personnel:

- Commander.
- Political Commissar.
- Four Deputy Commanders.
- Two Deputy Political Commissars.
- Chief of Staff, who is the director of the Headquarters Department.

17. This section draws from *People's Liberation Army: Air Force 2010,* National Air and Space Intelligence Center, Wright-Patterson Air Force Base, Ohio.

- Director, Political Department.
- Director, Logistics Department.
- Political Commissar, Logistics Department.
- Director, Equipment Department.
- Political Commissar, Equipment Department.

The Headquarters Department is the highest level functional and administrative organisation within the PLAAF Headquarters. Its primary responsibilities include managing air force unit deployments, battlefield development, and combat command. It is also responsible for the PLAAF's organisational structure, personnel management, enlisted force personnel records, intelligence, communications, radar, air traffic control, and weather support, as well as researching air force military theory, and managing education and safety. The leadership of the PLAAF's Headquarters Department includes the Chief of Staff, who is the department Director, and several Deputy Chiefs of Staff. The Headquarters Department's primary **second-level departments** are:

- General Office.
- Directly Subordinate Work Department.
- Operations Department.
- Intelligence Department.
- Communications Department.
- Military Training Department.
- Military Affairs Department.
- Ground-based Air Defence Troops Department.
- Electronic Countermeasures and Radar Department.
- Air Traffic Control Department.
- Military Theory Research Department.
- Pilot Recruitment Bureau.
- Technology Bureau.
- Weather Bureau.
- Flight Safety Bureau.

The Political Department is the highest level functional and administrative organisation within the PLAAF Headquarters for political work. The Political Department is responsible for officer personnel records, propaganda, security, education, cultural activities, civil-military relations, Party discipline, and Party organisations within the PLAAF. The leadership of the Political Department includes the Director and several Deputy Directors. The main **second-level departments** are:

- Headquarters Department.
- Organisation Department.
- Cadre Department.
- Propaganda Department.
- Security Department.
- Discipline and Inspection Department.
- Liaison Department.

The Logistics Department is the highest level functional and administrative organisation within the PLAAF Headquarters for logistics work. Its work includes overseeing transportation, finances, materials and supplies, and medical care. The leadership of the PLAAF's Logistics Department includes the Director, Political Commissar, Deputy Directors, Deputy Political Commissar, Chief of Staff (i.e., director of the Headquarters Department), and the Director of the Political Department. The **main second-level departments** are:

- Headquarters Department.
- Political Department.
- Finance Department.
- Quartermaster, Materials, and POL Department.
- Health Department.
- Military Transportation Department.
- Airfield and Barracks Department.
- Directly Subordinate Supply Department.
- Air Force National Defence Engineering Development.
- Command Department.

- Audit Bureau.
- Real Estate Management Bureau.
- Air Force Engineering and Design Research Bureau.

The Equipment Department is the highest level functional and administrative organisation within PLAAF Headquarters for equipment work, which comprises management, repair, and maintenance of all PLAAF weapon systems and equipment. The leadership of the PLAAF's Equipment Department includes the Director, Political Commissar, Deputy Directors, Deputy Political Commissar, and Director of the Political Department. The **main second-level departments** of the Equipment Department are:

- Comprehensive Planning Department, which also serves the function of a Headquarters Department.
- Political Department.
- Field Maintenance Department.
- Scientific Research and Procurement Department.
- Air Materiel Department.
- Aviation Engineering Management Department.
- Armament Common-Use Equipment Department.
- Air Force Armament General-Use Equipment Military Representative Bureau.

The seven Military Region Air Force (MRAF) Headquarters constitute the second tier of the organisational hierarchy. Each MRAF has subordinate air divisions Surface-to-Air Missile (SAM) brigades or regiments, and Anti-Aircraft Artillery (AAA) regiments, as well as radar, communications, and support units and sub-units.

The next tier consists of PLAAF units. The PLA defines units as organisations at the corps, division, brigade, and regiment levels. For example, air divisions and regiments, SAM brigades, and communications regiments are units.

The final tier includes sub-units. The PLA defines sub-units as organisations at the battalion, company, and platoon levels. Sub-units

can be either permanent, or they can be ad hoc organisations. Examples include communications, radar, vehicle, maintenance, or launch/firing sub-units. The PLA identifies this tier as the "grassroots" level.

From April 1950 to November 1952, the air force opened up 25 navigation routes across the Tibetan plateau; flew 1,282 sorties; and dropped 51 tons of supply.

PLAAF: COMBAT EXPERIENCE[18]

Experiences gained during combat situations are always critical to a military's strategic evolution, and its capabilities development. The PLAAF's combat history can broadly be divided into five broad periods: the struggle over Tibet (1950), engagement in the Korean War (from1950 to 1953), struggles with the Nationalist and US aircraft over the Taiwan Strait (1954-55, 1958, 1995-96) engagement in the Vietnam War (from 1965 to 1969), and the struggle with Vietnam (1979).

THE TIBETAN CAMPAIGN: 1950-52

In January 1950, the Military Commission ordered the PLA to send troops into Lhasa to 'liberate' Tibet.

As a result, the PLAAF established its transportation aviation troops, but only had one unit with 12 C-46 and C-47 transports located in Beijing with the capability to air-drop the supplies. Eventually, the air force deployed six of these aircraft plus four others from the Chengdu region to carry out the air-dropping operations. This unit soon acquired several II-12 transports from the Soviet Union and changed its name to the 13th Air Division. From April 1950 to November 1952, the air force opened up 25 navigation routes across the Tibetan plateau; flew 1,282 sorties; and dropped 51 tons of supply

THE KOREAN WAR: 1950-53

China refers to its engagement in the Korean War as the "war to resist

18. This section draws from an in-depth study of Allen, et. al., n. 4, and Ken Allen, "PLA Air Force Organization", available at http://www.rand.org/pubs/conf_proceedings/CF182/CF182.ch9.pdf

America and aid Korea." China refers to the PLA units that participated in the war as the Chinese People's Volunteer Air Defence Force (formed in 1950 and formally recognised as the fourth arm of the PLA in 1955 and christened the PLA Air Defence Force). The Chinese "volunteers" entered the Korean War in mid-October 1950 to defend China's interests on the frontier of its northeastern industrial base, and to solidify its alliance with the Soviet Union. The PLAAF was one of the primary air forces involved in the Korean War from the Communist side.

During its involvement in the Korean War, the PLAAF suffered major manpower casualties. The losses demonstrated that China needed to overhaul its military structure, and introduce modern concepts of war-fighting in its strategic thinking. Therefore, China's leaders decided to organise the military along the Soviet lines. As a result, by 1954, China established the National Defence Council, the Ministry of National Defence, and 13 Military Regions (MRs): Guangzhou, Chengdu, Fuzhou, Kunming, Lanzhou, Nanjing, Beijing, Shenyang, Jinan, Wuhan, Inner Mongolia autonomous region, Xinjiang autonomous region, and Tibet autonomous region. The number of MRs was reduced to eleven in 1970 and to seven in 1985. The war enabled the PLAAF to establish a command organisation, and to repair and build suitable airfields.

Most importantly, as a result of the structural streamlining, the Air Defence Force was merged with the PLAAF in 1957. The war also enabled the PLAAF to recognise its inability to provide support to the ground forces.

The PLAAF inventory expanded very rapidly, following its foray into the Korean War. By late 1952, the PLAAF had acquired 1,485 aircraft opposite Korea, including 950 jet fighters, 165 conventional fighters, 100 Il-28 jet bombers, 65 conventional light bombers, 115 ground attack planes, and 90 transports. These combat aircraft were largely provided by the Soviet Union.

THE TAIWAN STRAIT CRISIS: 1958

Though the PLA was not able to exert control over the Quemoy or

Matsu Islands, it now had a permanent presence opposite Taiwan as a result of the crisis. Further, the Nationalists no longer controlled the air space over Fujian, and eastern Guangdong.

One of the major reasons for the failure of the PLAAF during the crisis was attributed to the lack of coordination between the fighter forces and the ground-based defence forces.

In spite of this huge deployment, the PLAAF was not able to provide direct support to the ground forces or to gain air superiority.

Despite its developing friction with the Soviet Union, China continued to receive military assistance from Moscow. In 1958, China received its first SA-2 missiles from the Soviet Union.

SINO-VIETNAMESE BORDER WAR: 1979

The PLAAF established two fronts, northern and southern, for the border war with Vietnam. The northern front included the Shenyang, Beijing, Jinan, Lanzhou, and Xinjiang MRs. The southern front was composed of the Guangxi, Guangdong, and Yunnan MRs.

The Chinese stationed approximately 948 aircraft at the 15 air bases in Yunnan, Guangxi, Guangdong, and Hainan. In spite of this huge deployment, the PLAAF was not able to provide direct support to the ground forces or to gain air superiority. As a result, the PLAAF restricted its missions to early warning along the border, helicopter rescue missions, and air transport missions. The PLAAF did not fly any ground attack aircraft or bomber sorties during the conflict.

Further, the Chinese lacked in modern logistics supply mechanisms, and suffered from severe communication problems between the different units because of the deficiencies of the equipment.

The war with Vietnam enabled China to recognise the need for combined warfare operations and training, and to improve the effectiveness of its command and control set-up. Further, the Chinese also realised that the obsolete nature of the weaponry and equipment possessed by their armed forces severely restricted their combat capabilities.

DETERMINING A STRATEGY FOR THE PLAAF

According to Liddle Hart, a strategy can be defined as the "art of distributing and applying military means to fulfill the ends of a policy." In the case of China, these ends can be described as the attainment of its core national security interests[19]. Consequently, the PLAAF describes its responsibilities as safeguarding the country's territorial air space, protecting territorial sovereignty, and maintaining a stable air defence posture nationwide.[20]

The PLAAF has five branches under its command: aviation division, ground-to-air missile division (SAMs), anti-aircraft artillery (AAA), radar and communication[21]. The aviation branch is regarded as the basic tactical unit of the air force. It is composed of fighters, attackers, fighter-bombers, bombers, transports and combat support aircraft.[22] The PLA's airborne troops belong to the air force, but are not considered a branch.[23]

Inclusion of the SAMs and AAA under the PLAAF's responsibilities indicates that the Chinese Air Force is entrusted with the twin missions of aerial combat, as well as ground-based air defence of China. Further, all National Defence White Papers issued by China so far, posit an increased thrust on the development of joint warfare capabilities, as well on establishing a unified command and control system. These developments indicate that the PLAAF is building its capabilities to be able to provide direct or close air support to the ground and naval forces in future warfare scenarios. Though, as mentioned earlier, it needs to be

19. As contained in the Defence White Paper, 2006, China's core national objectives are described as: resisting aggression and promoting national reunification; to defend national sovereignty, territorial integrity and maritime rights of China ; to promote economic growth and thereby steadily increase the overall national strength of China
20. *China's National Defence in 2008*, White Papers on national defence published by the Government of the People's Republic of China, issued by the State Council, Beijing, www.china.org, January 2009
21. *China's National Defence in 2008*, White Papers on national defence published by the Government of the People's Republic of China, issued by the State Council, Beijing, www.china.org, January 2009
22. *China's National Defence in 2006*, White Papers on national defence published by the Government of the People's Republic of China, issued by the State Council, Beijing, www.china.org, December 2006
23. Allen, et. al., Ch. 6. p. 101.

noted that the PLAAF has not provided successful direct support to the ground forces in any of the battles that China has fought till date. Most scholars attribute this failure to the limited capabilities of the Chinese attack and bomber force, and a lack of communication coordination with the ground forces.

Furthermore, establishment of a unified command and control would enable the PLAAF to conduct independent operations by facilitating combined operations within the various branches of the PLAAF.

The air force has an air command under its control in each of the seven MRs of Shenyang (northeast), Beijing (north), Lanzhou (west), Jinan (centre), Nanjing (east), Guangzhou (south) and Chengdu (southwest). A military area command is mainly in charge of formulating programmes and plans for combat readiness and operations of troops in the theatre and for the reserve force build-up of the theatre, organising and commanding joint theatre operations involving different Services and arms, and providing joint logistical support[24]. A closer scrutiny of these MRs reveals that they all are located within close proximity of China's potential conflict zones: Shenyang near the Korean peninsula, Lanzhou in Xinjiang, Jinan near the Yellow Sea, Nanjing near Taiwan, Guangzhou near the Hainan Islands in the South China Sea, and Chengdu near India. It is critical to note that the Chengdu Military Region was involved in the Indo-China War of 1962, though both sides refrained from employing the air force or the navy in the battle.

24. *China's National Defence in 2006*, White Papers on national defence published by the Government of the People's Republic of China, issued by the State Council, Beijing, www.china.org, December 2006.

Fig 2

Source : http://upload.wikimedia.org/wikipedia/commons/e/e9/China_military_regions.jpg

This kind of military planning serves in the development of a rapid reaction strategy in the Chinese military-strategic thinking. Development of rapid reaction forces is also consistent with the strategy of active defence. More importantly, the airborne forces of the PLAAF are trained as 'fist' units or rapid response units that are capable of being deployed anywhere in China within 12 hours.[25] In order to carry out missions in distant territories, the rapid reaction units would need to develop advance airlift and air refuelling capabilities.

25. Allen, et. al., n. 4, Ch.2, p. 30.

As part of the rapid reaction strategy, the PLAAF trains for three kinds of air force campaigns[26]: The **offensive air campaign** employs air strikes on enemy territory to suppress or destroy enemy air defences and to attack both strategic and campaign level targets. The **air defence campaign** seeks to establish air superiority over the war zone through several measures, including deterrence based on denial, resisting attack by targeting hostile intelligence and service platforms, and launching timely counter-strikes against enemy air bases and support assets. The **air blockade campaign** is designed to effect political coercion against the enemy via means such as air strikes that target ports and navigation routes. In addition, the PLAAF has major roles in two joint Service campaigns: the *joint anti-air strike campaign* and the *airborne campaign*.[27]

The PLAAF has major roles in two joint Service campaigns: the *joint anti-air strike campaign* **and the** *airborne campaign.*

Further, according to Teng and Jiang (1990)[28], the air force plans to establish a rapid-reaction force within each theatre of operation. At the operational level, this would entail establishing an aviation division in each battle area. Each division would have three fighter regiments dispersed along the main attack routes, plus one ground attack regiment, one bomber regiment, one airborne early warning aircraft, one electronic counter-measures aircraft, and reconnaissance aircraft. These can change according to the battle situation.

As discussed by Kenneth W. Allen, Glenn Krumel and Johnanthan D. Pollack, as part of the rapid reaction strategy, the PLAAF has developed the concept of deploying its air defence forces according to the concept of **"light at the front and heavy at the rear"** along with the principle of deploying in three rings. Under this principle, the air force states that it should organise a small quantity of its interceptors, SAMs, and AAA as a combined air defence force into "three dimensional, in-depth, and overlapping" firepower rings.

26. Phillip C. Saunders and Erik Quam, "Future Force Structure of the Chinese Air Force," Project Muse, available at muse.jhu.edu/journals/asia_policy/v004/4.saunders.pdf
27. Ibid.
28. Cited in Allen, et. al., n. 4, Ch.2, p. 30.

Maintaining air superiority would be a critical factor in determining the outcomes of future conflicts. In order to gain air superiority in future conflicts, China would need to launch a sustained offensive air campaign against the enemy's capability to wage an air war.

Each weapon system would be assigned a specific air space to defend—high, medium and low. In-depth rings mean assigning each weapon system a specific distance from the target to defend—distant, medium or close. Overlapping rings means organising each weapon system into left, middle or right firepower rings facing the most likely avenue of approach. The elements of the ring should be deployed as follows:

- Interceptor units should be stationed at airfields on the left and right wings along the front tier and in depth, so that they can begin intercepting enemy aircraft as they cross the border and can continue to intercept them as they approach the target.
- The SAMs should be organised into fan-shaped rings, where they can operate independently and can concentrate firepower against attacking aircraft before they reach their bomb release points.
- AAA should be deployed into firepower rings in front of SAM placements, between SAM units, and between AAA and SAM units, to make up for blind spots.

Maintaining air superiority would be a critical factor in determining the outcomes of future conflicts. In order to gain air superiority in future conflicts, China would need to launch a sustained offensive air campaign against the enemy's capability to wage an air war. This realisation has begun to find resonance in the Chinese strategic thinking. An increased thrust on developing capabilities to execute strikes by long range precision guided munitions, and strategic projection reflects that in future warfare scenarios, China plans to conduct strategic paralysis of the adversary by launching precision strikes at the strategic installations/ centres (economic, military and political bases, command centres, communication and transport hubs, and troop concentration) of the enemy. These attacks would serve to delay

retaliation by the enemy forces, and thus provide China with the first strike advantage.

Further, in consonance with the operative military doctrine of "local wars under informationized conditions", the Chinese Air Force would aim to achieve information superiority by the induction of advanced air-surveillance systems into the force. As a move towards this direction, the 2010 Defence White Papers elaborates that the PLAAF has stepped up the development of new types of radar and command information systems.

Strategic projection would enable China to conduct successful area denial operations, and to project power beyond its borders. In operational terms, this can actually lead to acquisition of air bases by the PLAAF beyond the Chinese mainland. Such bases would also enhance China's tactical air capabilities, and reduce the dependence on air refuelling for long-range assaults. However, a closer scrutiny of the National Defence White Papers does not indicate any such immediate plans by the PLAAF.

According to Lt. Col Thomas R. McCabe[29], in future operations, any PLAAF strategy can either stand alone as an independent air force effort or, become part of an integrated joint campaign of surface-to-surface missiles, special operations forces, electronic and information strikes, and attacks by aircraft. The People's Republic of China (PRC) could aim such a campaign at either strategic-level or campaign-level enemy target systems.[30]

Therefore, the objectives of China's offensive air power strategy can be deduced as: defence of strategic territories, acquiring advanced technology to be able to *achieve air supremacy*; *creation of rapid reaction forces* to be able to end the conflict on desired terms; creating capabilities that allow *defence of 'strategic' territories.* Any force modernisation of the PLAAF would be sourced from these core objectives of China's air power strategy.

CAPABILITIES DEVELOPMENT

The Chinese offensive air power strategy intends to exploit air and space power's advantages of initiative, surprise, and rapidity. In order to conduct

29. McCabe, n. 9.
30. Ibid.

successful air operations, the PLAAF needs to develop an effective air intelligence network, including automated intelligence transmission facilities, a unified command and control, an effective airborne early-warning system, and high-tech weaponry, especially precision-guided weapons. Further, the PLAAF intends to modernise the air force along the lines of a rapid-reaction force.

The PLAAF's acquisition of aircraft can be divided into five periods[31]. The first period is derived from China's association with the Soviet Union. At the time of its birth in 1949, the PLAAF possessed a collection of 159 mixed vintage aircraft (remnants of the civil war) and 202 pilots[32]. With the signing of the Sino-Soviet Treaty of Friendship, Alliance and Mutual Assistance (1950), the PLAAF acquired some 3,000 aircraft by 1954.[33] The second period is marked by the disruptions in the Sino-Soviet alliance in 1960, and the Cultural Revolution phase that severely hampered the growth of the PLAAF.

The third period began following the 1979 border conflict with Vietnam. During this period, the PLAAF realised the shortcomings of the F-6 aircraft, and finally terminated the F-6 programme. Simultaneously, China started pumping in money into the F-7 and F-8 programmes. This led China to begin negotiations with the United States, resulting in a foreign military sales contract (known as the Peace Pearl Programme) in the late 1980s to upgrade the fire control system on the F-8II, with F-16 class avionics.[34]

The fourth period occurred during the 1990s. During this period, the PLAAF purchased Su-27s, Su-30s, and Il-76s from Moscow. The Shenyang Aircraft Corporation also began assembling and producing the Chinese-licensed copy of the Su-27, known as the F-11. The PLAAF deployed its first F-11s to an operational unit in 2000[35].

31. n. 17.
32. Air Cmde Ramesh V. Phadke, working Paper on "People's Liberation Army Air Force (PLAAF):Shifting Airpower Balance and Challenges to India's Security," Centre for International Security and Cooperation, Stanford University, 2002
33. Allen, et. al., Ch.3, p. 39.
34. n. 17.
35. Ibid.

The fifth period covers the 2000s. During this period, the PLAAF has deployed Chinese-produced FB-7s, F-10s, and K-8s, as well as modified B-6 bombers capable of carrying air-launched cruise missiles. Although China produces all of these aircraft, most of them either are based on foreign aircraft and technology or include key foreign components, such as the engines[36].

Today, China possesses 1,617 combat aircraft. These include 73 multi-role Su-30MKK aircraft, 116 J-11 (the Chinese assembled version of the Su-27) and some 120 Su-27 air superiority fighters.

Today, China possesses 1,617 combat aircraft. These include 73 multi-role Su-30MKK aircraft, 116 J-11[37] (the Chinese assembled version of the Su-27) and some 120 Su-27 air superiority fighters.[38] The Su-27 fighters, along with the employment of conventional Short-Range Ballistic Missiles (SRBMs), can be used for coercion or intimidation of enemy forces[39]. The Su-30MKK is the first PLAAF combat aircraft that is capable of delivering precision guided munitions in all weather conditions[40]. The Su-30MKK possessed by China are equipped with Phazotron ZHUK-M-S, which enables them to detect a destroyer at 300 km, a railway bridge at 150 km, and a group of moving tanks at 25 km[41]. These capabilities facilitate air-to-ground operations.

The PLAAF also operates more than 120 J-10 aircraft.[42] The J-10 is a multi-role fighter, equipped with aerial refuelling capabilities, which significantly improve its range and flexibility.[43]

36. Ibid.
37. n. 3.
38. n. 32.
39. Ibid.
40. Richard Fisher, Jr. "PLAAF Equipment Trends," Paper presented at the National Defence University Conference, on "PLA and Chinese Society in Transition" 2001, International Assessment and Strategic Centre.
41. Ibid.
42. n. 3.
43. Cited in Phillip C. Saunders and Erik Quam, "Future Force Structure of the Chinese Air Force," Project Muse, available at muse.jhu.edu/journals/asia_policy/v004/4.saunders.pdf\

At present, China possesses, more than 4,500 tactical missiles, comprising Anti-Aircraft Missiles (AAMs), Anti-Radar Missiles (ARMs), and Long Range Cruise Missiles (LRCMs).

The air-ground integrated operations are further complemented by the possession of over 600 SAMs[44] by the PLAAF. In order to conduct successful tactical air operations, the PLAAF is building up its artillery of tactical weaponry. At present, China possesses, more than 4,500 tactical missiles[45], comprising Anti-Aircraft Missiles (AAMs), Anti-Radar Missiles (ARMs), and Long Range Cruise Missiles (LRCMs).

Further, the PLAAF's inventory comprises up to 82 H-6/H-6E/H-6F/H6H bombers. Several scholars are of the view that owing to their vulnerability to modern warfare techniques, the H-6 bombers will be employed primarily as a stand-off platform to deliver cruise missiles from outside the reach of enemy air defence systems.

To maintain information superiority, China is planning to purchase 50 Airborne Warning and Control System (AWACS) planes from Russia.[46] The AWACS would provide the PLAAF with the necessary information dominance to better control and coordinate offensive air campaigns in the future. As per the *Military Balance 2010*, China possesses more than 8 Airborne Early Warning Systems (AEWs). These include the KJ-2000, and KJ-200. The KJ-2000 system has reportedly made significant progress, but the programme was set back by the crash of a prototype in June 2006 that killed some 40 technicians involved in the R&D effort.[47]

The PLAAF is also developing cruise missiles, including air, surface, and ship-launched versions with ranges from 600 to 1,800 km. These are likely to be dual role missiles i.e. nuclear as well as conventional.[48]

44. n. 3.
45. Ibid.
46. *Jane's Defence Weekly*, August 2000; Phadke, n. 33, p. 12.
47. Joseph Kahn, "Crash of Chinese Surveillance Plane Hurts Efforts on Warning System," *New York Times,* June 7, 2006; Michael Sheridan, "China's Hi-Tech Military Disaster: Bid to Copy Israeli Electronics Kills Experts," *London Sunday Times*, June 11, 2006, cited in Phillip C. Saunders and Erik Quam, "Future Force Structure of the Chinese Air Force," Project Muse, available at muse.jhu.edu/journals/asia_policy/v004/4.saunders.pdf
48. *Jane's Defence Weekly*, January 2000, as quoted in Phadke, n. 32, p. 864.

On the training front, the Defence White Papers maintain that the PLAAF is focussing on accelerating the inter-disciplinary training of the personnel to enable them to conduct air operations under conditions of informationisation. Combined arms and multi-type aircraft combat training is also being intensified to improve the capabilities in operations like air strikes, air defence, information counter-measures, early warning and reconnaissance, strategic mobility and integrated support.

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CONCLUSION

China recognises the determining role air power would play in future conflicts. Therefore, at the strategic level, China aims to achieve 'command of the air'. In order to accomplish its objective, the PLAAF is now moving from territorial air defence to development of capabilities to conduct offensive air operations. The Chinese Air Force is also developing its capabilities for strategic projection. A renewed thrust on developing joint warfare capabilities indicates that in future warfare scenarios, the PLAAF would be able to conduct joint operations with the other Services. All these developments indicate that the PLAAF is developing into a high-technology force able to engage most modern air forces.