



# THE PEOPLE'S LIBERATION ARMY IN THE NEW CENTURY

13-14 NOVEMBER 2008  
SINGAPORE



# THE PEOPLE'S LIBERATION ARMY IN THE NEW CENTURY

**CONFERENCE REPORT**

**A CONFERENCE SPONSORED BY  
THE S. RAJARATNAM SCHOOL OF INTERNATIONAL STUDIES**

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**S. RAJARATNAM SCHOOL OF INTERNATIONAL STUDIES,  
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This report summarizes the proceedings of the conference as interpreted by the assigned rapporteurs and editor appointed by the S.Rajaratnam School of International Studies, Nanyang Technological University. Participants neither reviewed nor approved this report.

The conference adheres to a variation of the Chatham House Rule. Accordingly, beyond the paper presenters cited, no other attributions have been included in this conference report.

## EXECUTIVE SUMMARY

On 13-14 November 2008, the S. Rajaratnam School of International Studies (RSIS) organized a conference on the theme of “The People’s Liberation Army in the New Century.” Several factors are contributing to rising interest in and concerns about the Chinese People’s Liberation Army (PLA) and therefore drove this conference. For one thing, ongoing rapid economic growth in China has permitted Beijing to pump substantial financial resources into the military sector at a phenomenal rate (nearly 20 percent increase per annum), allowing the PLA to embark on various ambitious modernization programs. Second, the Chinese military is still largely an opaque institution. Although we have seen some efforts on the part of China to make the PLA more transparent to the outside world in recent years, there are still many Chinese defence activities – such as strategic intent, military spending, future modernization, etc. – that remain obscure. Finally, there have been several new developments within the PLA that warrant closer study, including the transformation of the PLA into a modern 21st century military – in turn, affecting such areas as doctrine, force structure, arms procurement, personnel, recruitment and training – shifts in the Party-government-military dynamics, the growing role of the PLA in policymaking when it comes to national security and defence, and the military’s emergence as a key player when it comes to international affairs and diplomacy.

The first panel addressed recent institutional developments within the PLA as an institution, with presentations on changing Chinese strategy military doctrine, PLA organizational reforms, and recruitment and training. Of particular note were PLA’s efforts to institute a “dual-track” approach to modernization – ‘mechanization and informationization’ – which in turn would be implemented through a new concept of integrated joint operations (IJO). Under IJO, inter-service responsibilities would be more cross-cutting, fighting units would be modular and capable of performing multiple functions, and operationally would involve nonlinear deep strikes from multi-dimensional and dispersed platforms, in all-weather, day and night missions.

The next two panels addressed recent PLA force structure modernization efforts, specifically looking at the country’s ground forces, air force (PLAAF), navy (PLAN), nuclear and missile forces (the Second Artillery), and the PLA’s emerging space-based capabilities. In general, the speakers found that the PLA was making across-the-board progress in upgrading forces and expanding overall warfighting capabilities, although some services (naval, space-based, and missile assets, in particular) demonstrating more impressive – in terms of rapidity and strategic significance – advancements when it came to force modernization.

Panel Four focused on various economic issues relating to underwriting PLA force modernization. It was noted that the Chinese defence budget has grown significantly over the past decade (more than 500%), but that much is still unknown as to possible extra-budgetary spending or the valuation of such funding in Western purchasing power. Other speakers noted that reforms within the Chinese military-industrial complex – such as efforts to inject market-oriented management into armaments production, to press for civil-military integration in defence research and development, and to reinvigorate the country’s science and technology base with extra funding – are starting to reap dividends in terms of new and better types of weaponry coming out of local arms factories.

The final panel addressed several special issues concerning the emergence of the PLA as a key player in non-traditional defence areas, including support in domestic disaster relief, contributions to international peacekeeping and contingency operations, and the PLA’s growing role in military diplomacy and security cooperation.

The conference closed with remarks made by one Chinese participant who observed that when it comes to the subject of the PLA in the new century, we should consider three issues: what will not change within the PLA, the status of Sino-U.S. relations and its impact on regional and international security, and how might we better study the PLA? He further cautioned that even though Chinese and non-Chinese observers may use the same terms, the meaning of those terms and their inherent logic is often quite different.

## OPENING REMARKS



The conference on 'The People's Liberation Army in the New Century' was opened by Richard Bitzinger, lead conference organizer, who introduced Dr. Ron Matthews, Deputy Director of the Institute of Defence and Strategic Studies at the S.Rajaratnam School of International Studies.

Ron Matthews welcomed the attendees to the conference by noting that only through a greater understanding of the reforms and development that the Chinese People's Liberation Army (PLA) is going through, can we better understand the extent of PLA's impact on the broader geo-strategic landscape. The contextual background for understanding PLA modernization is China's impressive economic growth, which has resulted in the growth of national defence budget at double-digits annually. This increased defence outlay would invariably bring changes in the force structure of the PLA. Advanced weapons systems will be linked to a new doctrine emphasizing joint operations, leading to changes in the size, organization, and command and control structure of the PLA, which is being adapted to meet the new circumstances.

However, Matthews underlined that the PLA modernization program do not exist in a vacuum and it is creating anxieties in the countries of the region. Military contingencies in the Taiwan Strait remain an important driver for the current modernization plans, albeit only for the short-term. An analysis of China's military acquisitions and strategic thinking suggests Beijing is also generating capabilities for other regional contingencies.

He noted that to understand the trends in the PLA and their wider ramifications in the region, the conference would raise and discuss a wide spectrum of questions, including: How should PLA institutionalize the process of investing and sustaining its military capabilities in the new century? Will the PLA be able to carry out the reforms, especially in the joint force arena? Will it be able to support the weapon systems acquired from foreign sources? Can it be successful in seeking sovereignty of supply? How will it reassure the world that enhanced PLA capability poses no threat? And, finally, the nature of the future role that China will play in East and Southeast Asian regional security, and what will be the impact of China's increasing defence capabilities?

In raising and discussing these issues, the conference tries to address the current and future course of PLA growth. Matthews concluded by making a preliminary observation that the PLA in the new century represents a positive force in promoting regional cooperation and stability in the Asia-Pacific region.

# SESSION 1

## Introduction to the PLA

### PLA Strategy and Doctrine



Nan Li's presentation highlighted the new developments in PLA's operational doctrine and strategies. He explained these developments through delineating the evolution of operational doctrine and strategies, pointing out the differences between the pre-2002 joint operations (JO) and the post-2002 integrated joint operations (IJO), and finally highlighting the drivers for these changes and future implications.

Li categorized the evolution of PLA's operational doctrine and strategies into five periods, spanning from pre-1979 'People's War' to current 'Local War Under Informationized Conditions.' By 1997, military planners in China had recognized 'leapfrogging development' as a strategy for military modernization to avoid lagging behind the advanced militaries again for a generation. In 2002, the Central Military Commission (CMC) adopted the policy of 'dual-track' modernization – termed 'mechanization and informationization' – which would be implemented through the new concept of 'integrated joint operations.'

Although JO and IJO have certain similarities, such as involvement of more than two services and operations under a unified command, major differences exist in their strategies and implementation. The structure of JO is vertical, narrow, and high, and is based on an ad hoc combination of several smoke

stack-shaped services, whereas IJO is flat, broad, and low, with the primary actors being integrated systems comprising of operating units and operational elements. Services in JO are highly specialized and separated, whereas in IJO service boundaries are blurred. Moreover, in IJO, units are modular, capable of performing multiple functions. Finally in operational effects, for JO it is at the unit level, while for IJO it takes place at the systemic level.

Li further pointed out that under JO coordination is largely pre-planned and based on a service-oriented division of labour, whereas under IJO coordination is random, initiative-based, mutually interactive, and continuous. The differences between JO and IJO are also evident in terms of levels, depth, and timing of operations: In IJO, these involve precision air strikes in support of ground forces, nonlinear deep strikes from multi-dimensional and dispersed platforms, and all-weather day and night operations.

In identifying the drivers for such a shift from JO to IJO, Li highlighted three factors: leadership transition from Deng Xiaoping to Jiang Zemin and consolidation of Jiang Zemin control over the PLA; development of China's military research and learning; and finally, the desire to promote the institutional interests of the PLA. These changes provide a conceptual roadmap for the future direction of China's military modernization, which involves investment in various subsystems including C4ISR (command, control, communications, intelligence, intelligence, surveillance, and reconnaissance), information networking with common standards, precision-guided munitions, digitized platforms and other technologies, such datalinks. However, there is a caveat to this analysis, in that this modernization is highly dependent on continuous access to financial resources, the ability to access and integrate advanced, highly disparate technologies, and the capacity to overcome organizational resistance.

## Chinese Military Organization



Srikanth Kondapalli, in explaining the transformation that is being implemented in the PLA, presented an overview of China's military organization. He elaborated that the organizational structure of the PLA resembles a pyramid with the CMC at the apex and including various other functional and force structures including the Ministry of National Defence and various general departments, the PLA Ground Forces, Air Force (PLAAF), Navy (PLAN), Second Artillery, various Military Regions and Districts, and military academies and colleges. Kondapalli noted that as the organizational structure influences the combat capabilities of an armed force, the PLA from the mid-1980s has in turn initiated the process of reforming and reorganizing its elaborate organizational structure in an effort to transform its strategy of warfighting.

Kondapalli noted that domestic reforms and global trends in the so-called Revolution in Military Affairs (RMA) have triggered a major transformation within the PLA organizational structure over the last two decades, resulting in several structures being revamped, merged or shut down. The PLA structure has undergone several institutional changes over its lifetime: from guerrilla-type organization of 1930s, to Soviet-type organizational structure from the 1950s, to more recently (especially after the Gulf War of 1991) adopting the goal of creating a flexible, modular and rapid response functional structure. In making PLA suitable for 'informationized warfare,' party congresses and White papers have issued guidelines that include integration of services and arms, battlefield digitization, and just-in-time logistics.

In spite of the progress achieved in transformation, the PLA is still beset with several problems including inter-departmental and inter-service rivalries, insufficient integration of forces, bureaucratic hurdles, and lack of initiative at the local levels. Kondapalli concluded that although the PLA is definitely moving forward, progress in transiting towards an RMA has been sluggish. He noted that China wants to prepare the PLA to contest for power at the Asian levels initially and sets its sights globally in the long term.

## PLA Recruitment and Training



Dennis Blasko's presentation on the PLA recruitment and training covered various aspects and issues involved with the selection and training of the conscripts and non-commissioned officers (NCOs). He started by giving an overview of the different types of PLA training, including combat and non-combat training, specialty technical training, tactical training, etc. He noted that the PLA's 1998 Revised Military Service Regulations introduced new elements into the training of the recruits as well as squad leaders.

Blasko also gave a detailed description of the various stages and timelines involved in the recruitment and training of the conscripts. After the CMC and State Council issue conscription orders, the various military regions recruit around 500,000 new conscripts every year, maintaining an approximate ratio of 40:60 split between urban and rural areas. Since 2001, around 10,000 college students also entered into the PLA and returned to colleges after two years of service; the PLA compensated their service through paying their college expenses. Although this is a new trend, quantitatively it is still insignificant.

A similar trend is being seen in the NCO corps. An increasing number of college students are becoming NCOs usually as technical specialists. This is a departure from the usual practice of selecting NCOs from among conscripts at the end of the second year of conscription. Although NCOs are normally trained at NCO schools through both on-site and off-site training, some of them are sent to officer academies to train in tasks that were, until a few years ago, assigned to the officer cadre. Beginning in 2008, NCOs have been receiving qualification certificates after the competition of the training.

Blasko concluded by posing some questions, whose answers would affect the modernization and warfighting capabilities of the PLA: (1) can PLA attract new recruits with skills appropriate for its modernization and will the changing social conditions in China cause 'individual differences' that might create compatibility issues; and (2) is two years of training sufficient to prepare the conscript fight a war under informatized conditions and whether emphasis on obtaining professional certificates lead to 'teaching for the test' and inhibit innovation; and 3) is the current funding levels for the PLA adequate for modernization plans?

## Discussion



The discussion was initiated with a question on how to characterize the low number of college students opting for military service and whether it can be seen

as a failure on part of the PLA. Dennis Blasko replied that he would not see it as a failure, and he noted that the more important question would be how many of the new recruits are conscripted and how many volunteered. A related issue that was noted in the discussion was affects of one-child policy, which would have social implications and thereby the affecting personality traits of the conscripts.

Next, the discussion focused on the sources for and process of integration of new ideas in the PLA. Nan Li noted that initially it was assumed that the ideas flowed in a top-down manner; however, recent reports indicate that junior staff officers are also involved in the process, i.e., bottom-up. Although the major resource for new military thinking has typically resided within the Academy of Military Sciences, other organizations, including the media, public opinions, and educational institutions, are also playing a role in formulation of these ideas.

Finally, the importance of military culture and funding for PLA modernization was reiterated. It was noted that PLA implementation of its modernization plans would depend not only induction of new weapon systems and continued access to sufficient funds, but also the introduction of new organizational and institutional structures aimed at overcoming an entrenched anti-IJO military culture.



## SESSION 2

### PLA Force Structure Developments #1

#### Force Structure Developments: Ground Forces

Dennis Blasko examined the various aspects of the PLA ground forces including structure, recent non-traditional security missions, and several training highlights. He noted that Chinese ground forces are pursuing a modernization program in all parts of the country, not just in the units opposite Taiwan. The main objective of this program is to create a smaller, more technologically advanced force capable of participating in the PLA's deterrence, warfighting and non-traditional security missions. These changes are being accomplished through the dual processes of 'mechanization and informationization.' Mechanization includes the transformation of 'motorized' infantry units to 'mechanized' units equipped with wheeled or tracked armoured personnel carriers and self-propelled artillery. Informationization includes upgrading of existing equipment and introduction of new advanced systems, training of personnel to operate and maintain these systems and operational aspects of information and electronic warfare.

Blasko noted that since 1997, ground forces structure has been modified by deactivating, transferring, and restructuring of numerous Army units and by adding, expanding, or transforming a limited number of units into specialized units, such as Special Operations Forces, helicopter regiments, etc. In addition, the number of 'main force' ground units has been reduced from 100 manoeuvre division and 20 manoeuvre brigades to about 35 manoeuvre divisions and 41 manoeuvre brigades; currently, mechanized infantry and armoured divisions and brigades comprise almost half of the total number of manoeuvre units. Blasko noted that these changes further underscore the general rule that PLA divisions are smaller in manpower and fire power than their western counterparts. Moreover, most PLA is still composed of a mix of high, medium, and low technology equipment, and that this composite structure has an impact on training and logistics and armament support. It was also highlighted that the increase in number of brigades requires new emphasis on battalion level command, which in turn may result

in increase in staff at battalion headquarters and changes in PLA education system.

In the recent years PLA involvement in the non-traditional security (NTS) missions included a wide range of operations beyond disaster relief to include anti-terrorism, reaction to sudden incidents, peacekeeping operations (PKOs), public health safety, economic and financial security, etc. In addition to the pre-planned operations such as Olympics and PKOs, 2008 has also required PLA to undertake three other major unexpected NTS missions: deployment during ice and snow storms in early 2008; involvement in the post-March 14th stability operations in Tibet; and rescue services after the earthquake in Sichuan in May 2008. The last NTS mission involved not only units from all Military Regions and all services but also saw probably the longest extended air management operation sever conducted by the PLA. This deployment was conducted according to PLA joint doctrine, albeit without offensive weapons, and included essential support from local governments and civilian companies. The unexpected and scheduled NTS missions cut into the PLA's planned training program for 2008. However, PLA conducted two major trans-regional exercises involving long-distance deployment; this was unprecedented for the PLA ground forces in a single year.

In evaluating PLA modernization, Chinese publications have consistently noted the two 'cannot suits,' that is, the PLA's ability to fight an informationized warfare, and its ability to fulfil the historical missions. Blasko concluded that this assessment is consistent with PLA doctrine and suggested that the PLA leadership understands its shortcomings and may not be as 'hawkish' about the use of military force as it is often assumed by foreign observers. Finally, Blasko noted that although there is an increase transparency in issues related to PLA, he underlined three fundamental questions that require answers to increase the transparency and reduce the suspicion: number of active and reserve personnel in PLA; number of officers and NCOs; and size of the budget for each service or major command.

## Force Structure Developments: Air Force



Ron Huisken provided an overview of the evolution, structure, and recent developments pertaining to the PLAAF. He traced how PLAAF, subordinate to the PLA, has evolved from a force once considered to be little more than a kind of long-range artillery, to an independent force with a strategic mission defined as integrated air and space operations, along with simultaneous offensive and defensive operations. Huisken noted that this new mission orientation included the traditional emphasis on strategic air defence, along with new emphasis in building an integrated air defence capability and renewed effort in strengthening the air-support operations to ground forces.

Huisken gave an account of various aspects of the PLAAF structure along with the recent developments in the induction of new indigenous as well foreign procured aircraft and weapon systems. He noted that although China's capacity to design and build modern combat aircraft and related weapons systems is developing rapidly, it remains shallow and incomplete and hardly cutting edge. Despite recent successes in inducting advanced combat aircraft, these numbers remain small compared to overall PLAAF force structure; the new generation aircraft: J-10, Su-27, and Su-30 fighters, for example, constitute just over 10% of the combined PLAAF/ PLAN combat aircraft force. In aircraft armament, new emphasis is being placed on air-to-surface and antiship missiles for a multi-layered area denial and anti-access capability. In spite of these changes, the PLAAF is still devoid or limited in certain key systems and capabilities: over-the horizon targeting, airborne warning and control, electronic intelligence and reconnaissance, aerial refuelling, space systems etc.

In forecasting the evolution of PLAAF over the next decade, Huisken stated that some key factors should be taken into consideration: Beijing's commitment to develop military capabilities that will preclude states having coercive capacity against China; acquisition of military capability will remain subordinate to the national economic development; preference for self-reliance in the national defence arena; and, in case of shortfalls in indigenous efforts, capabilities would be acquired from abroad.

China possesses a massive military-technological and industrial capacity that has developed substantially over the last two decades, albeit with certain limitations for the future growth. These limitations include primacy for economic development and caution in protecting the narrative of peaceful rise. In spite of these limitations, Huisken concluded that the PLAAF is on the path of becoming a comprehensively modern service. Moreover, as a rising power, China does not necessarily have to surpass the current hegemon, the United States, as it may be sufficient for the former to simply complicate and raise uncertainties for the latter in potential contingencies or conflicts in the Western Pacific.

## Force Structure Developments: Navy



You Ji discussed the PLAN's maritime strategy and the ongoing force restructuring. He noted that the PLAN restructuring is core of Chinese naval transformation with a concrete goal of turning the navy's light structure into one of that suits deep ocean operations, emphasizing restructuring rather than structure, as the former is a dynamic concept in realizing the evolving naval strategy and in embedding new capabilities.

If current trends continue, China can attain its objective of building a true blue-water navy, with the specific ability to operate beyond second-island chain, by 2020.

Although the current naval strategy has extended the PLAN's combat mission from coastal defence to that beyond first- and second-island chains, Ji noted that this does not change the nature of PLAN being a regional and defensive force. The PLAN lacks some key assets including carriers, strategic bombers or overseas bases that assist in global presence. However, the modernization efforts from the 1990s could enable PLAN to shift from a posture of defensive defence to defensive offence. This shift is increasingly possible with some transformational measures such as combat doctrine (amphibious campaigns, missile strikes), force restructuring (ocean going fleets), and weapons programs with asymmetrical capabilities.

Ji noted that to overcome the inadequacies in its light force structure, the PLAN is undertaking the following

measures: increasing the number of large major combatants as well as specialized combatants, especially in anti-submarine warfare and area air-defence capabilities; increased emphasis on network-centric warfare; addressing inadequacies associated with logistics; strengthening submarine force; and new emphasis on naval strategic nuclear arm.

These restructuring efforts have clear objectives with priority for establishing ocean-going battle groups, which would be tasked with sea control and sea denial missions. These battle groups would be supported by long-range aircraft and nuclear submarines, and possibly with aircraft carriers. In addition, the introduction of new large combatants has enabled the PLAN to form several fast response units capable of launching campaign-level battles within first-island chain.

## SESSION 3

### PLA Force Structure Developments #2

#### Force Structure Developments, Strategic Forces



Scott Harold, speaking on behalf of paper-writer Evan Medeiros, stated that the Second Artillery (nuclear and missile forces), one of the most dynamic parts of the PLA, has been expanding and modernizing its force structure in the last 15 years. The Second Artillery's

conventional missile capabilities are critical in deterring Taiwan moves towards de jure independence, whereas its nuclear capabilities are critical to China's national security interests: deterring nuclear aggression and preventing coercion. The presentation provided a discursive primer on the Second Artillery's modernization through addressing pertinent questions pertaining to its current doctrine and capabilities.

The Second Artillery is an 'independent branch' of the PLA with responsibility for China's ground launched ballistic and cruise missiles – both nuclear and conventionally armed. It differs from other branches of the PLA in three important aspects: (1) while other services are reducing their numbers and size of units, the Second Artillery is actually expanding in size and capabilities; (2) it has always been the most secretive and least transparent part of the PLA; and (3) it controls China's nuclear forces.

The Second Artillery has a clear distinction between nuclear and conventional missions. Its nuclear missions involve counter-strike or retaliation, with an implicit assumption that China will absorb a first strike and only then retaliate. China's 2006 National defence White Paper for the first time specified that Beijing pursues a 'self-defensive nuclear strategy,' which comprises of 'self defensive counter-attack' and 'limited development' of nuclear weapons. The conventional missions are more numerous and their execution is far more 'joint' in orientation. These missions involve 'joint firepower attacks' in support of three joint campaigns: a firepower campaign; an island landing campaign; or a blockade campaign.

Harold and Medeiros identified the following trends that characterize modernization in the Second Artillery's force structure: increasing emphasis on mixed nuclear and conventional force; preference for solid-fuelled missiles; shift from fixed or immobile launchers to mobile launchers—at both land and sea; preference for reloadable launchers; and efforts to develop a diverse missile arsenal. He further highlighted the key aspects of procurement in the Second Artillery. For conventional missile forces, the trends are: rapid growth of short-range ballistic missiles forces, increasing diversification in the missile systems, and efforts to develop a medium-range ballistic missile with an antiship strike capability. The nuclear missile force differs in these trends: modernization is more gradual and incremental; deployment of DF-31 and DF-31A only recently, marking the advent of a truly mobile nuclear strike capability; future deployment of five new Jin-class nuclear-powered ballistic-missile submarines (SSBNs) would require a degree of cooperation between Second Artillery and the PLAN; and efforts to develop counter-measures against missile defences. In spite of these modernizations, Second artillery faces challenges in doctrine-capability relationship, command and control issues, and technological advances.

Harold and Medeiros concluded that more than that of the PLAN and PLAAF, the modernization and expansion of the Second Artillery has the potential to affect regional military balances in the Asia-Pacific – where distances matter. Thus, the growth of the Second Artillery's forces and their accuracy and lethality will garner the attention of military planners in this region and correspondingly influence other

nations' assessments of China's strategic intentions as a rising power.

## China's Space Program and its Military Implications



Eric Hagt presented the various aspects of China's space program, covering a wide range of celestial activities, and their military implications. The space program includes China's lunar-exploration program (Chang'e), manned space missions (the Shenzhou program), space exploration, and a full spectrum of satellite technology and its application. Although manned space program has dual-use potential, it is only the satellite program that has direct relevance to China's military space capability.

In the past few years, most attention has been focused on China's counter-space activities (e.g., kinetic energy ASAT, laser development, co-orbital technologies, etc.). While their development is important, it has often led to an exaggeration of China's capabilities in these areas and often overlooking the area where China has invested most heavily and made the most technological progress: battlefield situational awareness and force enhancement. These capabilities include photoreconnaissance (around 2-meter resolution with near real-time intelligence); weather support (highly sophisticated Fengyun series); maritime surveillance (Haiyang series, with limited capability); ship tracking (indigenously developed advanced synthetic aperture radar satellite); space-based intelligence (limited capability); C4I (fairly robust communication satellites); navigation/ positioning (the Beidou series); and integrated GPS/GLONASS and TERCOM systems for precision targeting. In addition,

China has made substantial progress in microsatellites, moving rapidly from international cooperation to indigenous designs; for example, microsats offer numerous military advantages: mobility, affordability, and quicker launch preparation time.

According to Hagt, China has yet to formulate a doctrine, or a national defence strategy for space warfighting. In addition, currently the operation and organization of space assets is highly divided and decentralized, with the structure resembling Russian model of integrated system. Hagt noted that three issues guide Chinese thinking in conflict in space: (1) America's refusal to negotiate international treaties to prevent space weaponisation, as well as its continuing NMD and aggressive space doctrine and weapons programs; (2) America's reliance on space results in both power and unique vulnerabilities, posing both a challenge and an opportunity for China; and (3) the legal and sovereignty parameters that bound any conflict in space. Hagt concluded that the China maintains a hedging posture in space activities. A change in this posture would be reflected in China developing or making changes in the following: doctrine; organizational structure; further ASAT testing, and testing of autonomous proximity manoeuvres.

## Discussion (Sessions 2 and 3)

Comparing PLA ground forces with the US Army, Dennis Blasko noted that the current transformation in the PLA involves more components than the US transformation of 1970s and 1980s. Moreover, he noted that two main differences mark the transformation process in the two armies: PLA is undergoing this process with far less financial resources than the US Army and the latter implemented its doctrinal changes with combat experience.

Next, it was observed that although the Libing-2008 and Lianhe-2008 military exercises were not a reflection of the ongoing modernization, they definitely mark a movement forward as the exercises involved trans-regional deployment. Blasko noted that he is amused by the amount of self-criticism found in the PLA publications. The leadership is aware of the great distance PLA has to go to become a modern fighting force. He also noted that these evaluations can also be observed in other services, albeit to a lesser extent.

Referring to the military exercises, You Ji asserted that they are kind of experiments to test indigenous datalink systems and verify whether data transmission systems can achieve real-time battle field transparency, command and control, and information flow.



*Richard Bitzinger and Mark Stoker*

The discussion on the PLAN focused on naval aviation, foreign port facilities, aircraft carrier, and doctrinal evolution. It was noted that although the technical aspects of PLAN aviation are distributed through out the force, the operational command is under the direct control of the respective fleets. You Ji pointed out that the PLAN would not establish port facilities in Cambodia or other parts of Southeast Asia in order to avoid concerns arising within the ASEAN. China's priority was always over the waters east to Taiwan. Although aircraft carriers would assist in squeezing Taiwan's air-defences by 400 kilometres, You Ji doubted whether the PLAN could field a carrier in the near future. However, he sees a more prominent role for submarines, especially nuclear powered submarines. He also noted that China prefers a non-military strategy to deal with the issue of Taiwan, and that the military option is more of a hedging strategy.

On the issue of the PLAN's interest in Indian Ocean, Nan Li explained that historically PLAN focused on near coastal defence, initially due to attacks from KMT and latter from the concerns of an amphibious landing operation by the Soviet Union. This strategy shifted to the near seas defence i.e. control over Yellow Sea, East China Sea, and South China Sea. Although PLAN now focuses on far seas operations, Li noted that it is more an aspirational than an operational concept. He also underlined that the operational scenarios for near-seas defence are more specific than extended sea activities.

Srikanth Kondapalli agreed that currently PLAN's interests in Indian Ocean are more of aspirational nature. Nevertheless he had stated several instances of China's interest in the Indian Ocean. Gwadar port's depth was increased from 11 meters to 14 meters, enabling possible docking of Chinese submarines and other higher displacement vessels. In December 2000, Maldivian and Chinese defence ministers signed an agreement for establishing a submarine base near Male. Although no progress was reported, if established the base will be 1,200 kilometres to Diego Garcia and 700 nautical miles to Lakshadweep, India. China's increasing oil imports from Angola, Sudan and Nigeria seems to have necessitated PLAN to focus more on Indian Ocean, especially in the context of recent reports of Chinese submarines probing activities in Bay of Bengal and Indian Ocean. Kondapalli also discussed China's new submarine base at Hainan. According to his assessment the base is more to cater to regional deterrence than for global because a recent test of the JL-2 submarine-

launched ballistic missile (SLBM) has shown that the missile could not reach more than 4,000 kilometres, less than expected range of DF-31 range.

Eric Hagt noted that China's growing space capabilities has created a dilemma for the PLA. Although America's reliance on space results in both power and unique vulnerabilities, the PLA due to increasing reliance on battlefield awareness is also treading the same path, which makes it increasing vulnerable to disruption of space based systems. Reports indicate that PLA was instructed not to be itself informationized, but fight an information war; however, China is moving towards itself becoming informationized. Responding to a question, Hagt gave an assessment of the ASAT test conducted by China in 2007. He noted that it was a sophisticated test with closing speeds of almost 10 kilometres per second. However, the current technical capabilities of China in this field are limited and the system can not be operationalised without further testing.

## SESSION 4

### Defence Economics

#### Chinese Defence Spending



Mark Stoker opened the session by asserting that is no agreed methodology in the calculation of China's defence expenditure which varies between two to ten times the declared figures. The lack of transparency and budget data about certain aspects of PLA funding is a reminder of the limits on how far any budget analysis should be used to evaluate Chinese military

priorities, strategies and capabilities. Whilst there may be no definitive way to calculate 'true' Chinese defence expenditure, it is possible to identify trends and make assumptions from those trends.

For example, the 2004 Defence White Paper highlighted the following five points to explain the growth of the official defence budget:

- Increases in salaries and allowances for military personal
- The introduction of a social security system for military personnel
- Funds for the structural and organizational reform of the military
- Increasing investment in 'high-calibre talent' within the armed forces
- Moderate increase in equipment procurement aimed at 'promoting the leapfrog development of weaponry'

In 2001, a zero-based budgeting initiative was introduced to the defence ministry. Under this scheme, all military units are obliged to calculate their anticipated requirement for the coming year from zero, rather than taking the current year's budget and simply adding an additional percentage as had been the system previously. However, whilst the official budget is a useful tool for measuring the general trend in Chinese defence expenditure, it is less helpful for making comparisons with other countries for two principle reasons; the problem of exchange rates and the fact that the official Chinese defence budget does not include all the military-related expenditures that would be found in Western countries.

One of the main challenges in calculating Chinese defence spending and a reason why so many estimates conflict with each other is often due to the problem of exchange rates. At the official market exchange rate, the 2006 Chinese defence budget measured US\$37.2 billion. However, using its own purchasing power parity (PPP) rate, the Chinese defence budget would quadruple from US\$37.2 billion to US\$134bn. Stoker warns that such a naïve application of PPP rates to the defence sector would be misleading.

Information that China has submitted to the United Nations on its military spending in the last two years have included a breakdown of the official budget into three core categories. However, no allowance has been made for the following major military accounting items that are thought to exist outside the official budget:

- Procurement of weapons from abroad
- State subsidies to the defence industry
- Income from weapons sales
- Some research and development (R&D) programmes.
- Funding of paramilitaries

In conclusion, Stoker argued that Chinese defence spending at about 2.4% of its GDP does not appear onerous and so long as the economy continues to produce high economic growth, there is no reason to believe that military spending in China will not continue to grow. However such has been the colossal growth of the official budget that the annual debate about the true level of Chinese spending and the fixation of some to calculate a figure for the purpose of international comparison appears less meaningful than it did a few years ago.

## China's Defence Industry: Reform Toward Civil-Military Integration



Arthur Ding noted that a major step in reforming the Chinese defence industry was the setting up of the Commission of Science, Technology, and Industry for National Defence (COSTIND) on May 10, 1982. COSTIND reflected a significant change of development priority. It implied a switched priority of procurement from an emphasis on nuclear to conventional weapon systems. The influence of the General Services Department (GSD) in the R&D of defence science, technology and procurement would also rise.

China made another round of organizational restructuring in the 1990s focused on three aspects. The first was to establish the General Armaments Department (GAD) under the CMC by merging the test/evaluation and rocket launching units of the former COSTIND, Equipment sub-department of the GSD, and arms exports units. The GAD was responsible for the integration of the research/development, test/evaluation as well as the acquisition and procurement of the PLA. The second aspect was to re-orient COSTIND's role to that of a civilian government agency responsible for the overseeing of arms production and defence industry enterprises under the principle of separation of government and enterprise and for helping defence industry conversion. The third change came to the defence industry enterprises. In order to promote competition and efficiency, each of the five conglomerates which included the nuclear, ordnance, aviation, shipbuilding, and space industries were divided into two relatively equal group enterprises.

A further round of changes was made in the 2000s. The first one was to downgrade the status of COSTIND from ministerial to a bureau level institution (BOSTIND). The head of BOSTIND has vice-minister status and is also the concurrent head of the Ministry of Industry and Information Technology (MIIT). The current role of BOSTIND is the coordination of the production of major weapons and the improvement of the capabilities of the core defence industry. The second was to remerge the two aviation groups, China Aviation Industry Corp. I (AVIC I) and China Aviation Industry Corp. II (AVIC II) into a single China Aviation Industry Corporation. The merger of these two aviation industry groups is significant. In order to catch up with the Western aviation industry, all resources of the Chinese aviation industry were concentrated. This will also serve as a test barometer for the further reform of other defence industry groups.

Ding concluded that after several rounds of defence industry reform, certain outcomes can be identified. The overall size of the defence industry has been reduced, core R&D production facilities have been identified with resources poured in, greater civil-military integration has been achieved and progress made in defence science and technology (S&T) development. However, the overall achievement remains uneven and the key question – ‘would the organizational restructuring work as the political leadership expected?’ – remains unanswered.

## Chinese Defence Technology Acquisition and Assimilation



Kathleen Walsh asserted that China’s contemporary defence technology development relies on the following

domestic factors and global dynamics that are interlinked and interdependent:

- Continued rapid economic growth
- Increasing investment in S&T and R&D programmes
- The successful ‘Go West’ programme
- Expanded institutional reforms
- Independent innovative capability
- Continued international arms supply and demand
- Persistent globalization

She added that the Eleventh Five-year programme (2006-2010) which focuses on S&T as a driver of accelerated economic development, Harmonious Development, a nation-wide expansion of its ICT backbone and domestic technology innovation continues to be a priority. The medium to long-term S&T plan hopes to increase China’s R&D investment from the current 1.4% to 2.5% of GDP. Other goals of the plan include raising technological input to economic growth to 60%, limit the dependence on foreign technology to less than 30%, raise the traditional scientific indicators such as research citations, invention patents and number of science and engineering graduates, international exchanges to accelerate learning and the creation of an innovation-orientated society and indigenous innovation.

Part of China’s evolving advanced economic and technological development strategy consists of focusing on regional rather than competing clusters. Low-end technology clusters are being moved to the Central low-tech corridor while high-end technology clusters are moved to the Eastern High-tech corridor. China also hopes to take advantage of foreign investment that will lead to indigenous innovation. They want not only to reverse engineer but how to build and market products leading to indigenous innovation.

An example of such a strategy implementation can be found in the ship-building industry. The three regional shipbuilding clusters in china are found in the Bohai Rim, the Yangtze River Delta and the Pearl River Delta. These regional clusters are able to take advantage of the modular system of construction as well as globalization dynamics. Moreover the two main Chinese shipbuilding firms, China State Shipbuilding Corp (CSSC) and China Shipbuilding Industry Corp (CSIC)



are divided into two separate north/south spheres that compete in a complementary positive way.

In conclusion, Walsh believes that because of market leverage, foreign companies will continue to be in China. These foreign companies will bring in advanced forms of technology transfer that will enable genuine indigenous innovation. However, technological access, SBI trends, labour, productivity, resource and commodity availability, market instabilities, competition for state funds and quality control remain as key challenges to indigenous innovation.

## Discussion

It was generally agreed that there is no fool-proof way of calculating the Chinese defence budget. Concerns were raised about the level of R&D spending, defence subsidies and Chinese arms purchases and sales in the Chinese military budget. However, it was noted that since 2004, arms purchases from Russia consist only of aircraft engines and were significantly lower than previous years. In addition, Recent Chinese arms sales such as the FC1 fighter to Pakistan were often at loss-incurring 'Friendship' prices. It was concluded that Western logic in the interpretation of Chinese defence spending could prove to be self-feeding and there is a need for a new model.

## SESSION 5

### Special Issues in PLA Studies

#### PLA's Participation in Disaster Relief



Ding Dou provided a review of the PLA's rescue works in the following three areas:

- Historical context
- The function of PLA rescue works
- The evolution from custom to legal institution

He noted that since the founding of the PRC in 1949, the PLA have been involved in emergency rescues and disaster relief on more than 420,000 occasions, mobilized more than 23 million men, organized some 10,000 plane journeys, evacuated and rescued more than 12 million people and transported several hundred

million tons of material out of perilous conditions. PLA rescue practice since 1949 involves disaster relief in earthquakes, floods, forest fires, droughts, ice and snow, typhoon and hurricanes, shipwrecks and epidemics.

According to Ding, the three main functions of PLA's rescue works are as follows:

- Maintaining the PLA's fighting capabilities in peacetime
- Promoting the CCP's prestige in peacetime
- It is an important method to deal with non-traditional security

In addition to the preparation for a possible conflict with Taiwan, the PLA is now focusing on strategic army deployment and transportation in the role of disaster relief operations to ensure social stability. The PLA's rescue operations have also extended overseas to recent relief operations in the Indian Ocean, Pakistan and Indonesia.

Since the founding of the PRC, the PLA's participation in disaster relief could be regarded as a moral obligation.

The PLA's relationship with the Chinese masses could be likened to the mutual love between fish and water. This moral obligation makes it difficult to assess the PLA's role and responsibility in its rescue works which is lacking in institutions. The milestone in the legal institutionalization of the PLA's rescue works was the approval of the 'Regulation of Military Participation in Disaster Relief' in June 2005. The above regulation is an important manifestation of the rule of law in military affairs.

In conclusion, as a result of the legal guarantee provided by the regulation, the PLA's capabilities in rescue works look set to be improved. In order to improve response-time and effectiveness, China's CMC has recently established a professional emergency disaster relief force. This not only improved the effectiveness of disaster relief and alleviated the effectiveness of disaster relief but also reduced the loss of troops engaged in disaster relief operations.

## The PLA in China's Military Diplomacy and Security Cooperation



Xu Hui noted that although the concept of military diplomacy was first introduced in the White Paper on China's National Defence in 1998, the PLA has been engaging foreign military diplomacy in a systematic way since the founding of the PRC. The history of the PLA's military diplomacy can be classified into the following five periods:

- 1950s: Characterized by the alliance with the Soviet Union and frequent military cooperation and communication with socialist countries

- 1960s-1970s: Active provision of military assistance and support to newly independent countries in Africa and Asia
- 1970s-1980s: Thaw in Sino-U.S. relations
- 1980s-1990s: Establishment of military cooperation and communication with different countries but not alliances
- 1990s-present day: Multi-dimensional, multi-tiered and wide-ranging pattern of military diplomacy

Xu Hui further identified the major areas of China's military diplomacy. For China, media management and the publication of Defence White Papers are means to promote transparency and reduce misunderstanding. The establishment of military ties with over 150 countries and military attaches offices in 107 countries represents a rapid development in the dimension of strategic communication with the PLA's counterparts. In the realm of academic exchanges and education cooperation, the PLA has been increasingly active in the sponsorship and participation of international symposiums and workshops. Over 500 military personnel have been dispatched to study in more than 20 countries and over 2,000 military personnel from more than 140 countries have studied in Chinese military academies. China has also become more proactive in attending combined military exercises, particularly its willingness to conduct combined military exercises with its neighbours.

In the area of strategic consultation and confidence building, China has established regular, high-level defence dialogues and security consultations with virtually all of its major partners, bringing together senior-level military and defence officials to convey strategic concerns and exchange views on security affairs of mutual interest. In addition, China has actively developed regional security cooperation with neighbouring countries to counter non-traditional security threats through institutions such as the Shanghai Cooperation Organisation (SCO) and Association of Southeast Asian Nations (ASEAN). The last decade has also witnessed China's increasingly positive attitude towards the issues of arms control/non-proliferation, disaster relief and peacekeeping operations.

In conclusion, China's military diplomacy has made major achievements in enhancing mutual understanding, mutual trust and friendship; deepened international security cooperation and contributed to world peace and security. However strategic suspicions, China's limited military capabilities and lack of experience have constrained China's military diplomacy.

## Significance and Challenges of PLA's Participation in UN Peacekeeping Operations



Fu Xiao laid out the four basic principles that guide China's participation in UN peacekeeping missions:

- Participation in peacekeeping missions should be determined within the intention and framework of the UN
- All peacekeeping operations should be under the leadership of the Security Council
- No peacekeeping operations should be conducted in areas without necessary conditions
- A holistic approach should always be applied

Since its first peacekeeping mission in 1990 (UNTSO), the PLA has dispatched 10,816 personnel on 18 different UN peacekeeping missions. The two main forms of PLA participation in peacekeeping operations

involve the dispatch of non-combat support units and that of military observers and staff officers. The main function of the support units is to provide engineer support, transport support and medical support. Whereas the main roles of the military observers and staff officers are the verification and supervision of the implementation of peace agreements and disarmament, rebuilding of national armed forces and the restoration of social order.

Participation in UN peacekeeping operations enhances the PLA's capabilities in dealing with comprehensive threats and international conflicts. Such opportunities may be used to learn from its counterparts, developmental trends in peacekeeping and military affairs. Peacekeeping operations offer the Chinese military an opportunity to see the world as well as a chance for the world to know more about the Chinese military.

China's participation in peacekeeping operations facilitates the implementation of its international responsibilities and obligations. It also enables China to play a stabilizing role on both the regional and global stage which is consistent with China's pursuit of world peace and security. As such, greater Chinese participation in UN peacekeeping missions will benefit both global and regional security as well as China's national interests.

There are however certain challenges that have to be addressed. Chinese laws and regulations that govern peacekeeping need to be improved. The training of peacekeepers has to be strengthened; particularly in foreign languages, psychology, combat skills and the history and culture of mission regions. Last but not least, in order to perform well in its peacekeeping missions, China needs to strengthen its cooperation with other countries and expand its exchanges with foreign militaries.

## Discussion



*Li Mingjiang*

Li Mingjiang, conference co-organizer, opened the second day of the conference by introducing the final panel, comprising specialists from China. Confidence building between China and Japan was an issue raised by many of the conference participants. It was commented that Japan would like to have better relations with China. However, it was felt in certain quarters that Japan needs to better understand China. The main traditional challenges faced by China are secessionist threats in Tibet, Xinjiang and Taiwan and the PLA does not foresee any threat of foreign invasion. Indeed, the cultivation of a cooperative relationship is a priority for China and the use of military force a last resort. Chinese defence diplomacy seeks to improve

communication between counterparts and aims to pave the way for the development of security on both land and sea. Chinese military diplomacy is not perceived in terms of soft power but rather enhancing communications and building mutual trust.

Another key issue was the PLA's role in international peacekeeping and HADR. It was commented that the frequent participation of the PLA; particularly its best combat units in HADR has substantially impaired its combat readiness. It was recommended that paramilitary units that specialize in such operations be established under a centralized PLA or civilian command. It was also noted that China has a responsibility towards the preservation of peace and international security. China has the capabilities and more importantly, the willingness to play a bigger role in international peacekeeping and HADR operations.

In his closing remarks, Lu Dehong of CFISS observed that when it comes to the subject of the PLA in the new century, we should consider three issues: what will not change within the PLA, the status of Sino-U.S. relations and its impact on regional and international security, and how might we better study the PLA? He further cautioned that even though Chinese and non-Chinese observers may use the same terms, the meaning of those terms and their inherent logic is often quite different.

# CONFERENCE AGENDA

DAY 1: 13 November 2008

8:45am – 9:00am: Introductory Remarks:  
Dr. Ron Matthews, Deputy  
Director, Institute of Defence and  
Strategic Studies, RSIS

9:00am – 10:45am: Session 1:  
Introduction to the PLA  
(Chair: Ron Matthews)

- PLA Strategy and Doctrine:  
Nan Li (NWC)
- Chinese Military Organization:  
Srikanth Kondapalli  
(J.Nehru U.)
- PLA Recruitment and Training:  
Dennis Blasko

11:00am – 12:30pm: Session 2:  
PLA Force Structure  
Developments #1  
(Chair: Bernard Loo)

- Force Structure Developments,  
Ground Forces: Dennis Blasko
- Force Structure Developments,  
Air Force: Ron Huisken (ANU)
- Force Structure Developments,  
Navy: You Ji (UNSW)

12:30pm – 2:00pm: Lunch

2:00pm – 3:30pm: Session 3: PLA Force Structure  
Developments #2  
(Chair: Richard Bitzinger)

- Force Structure Developments,  
Strategic Forces:  
Scott Harold (RAND)
- China's Space Program and  
its Military Implications:  
Eric Hagt (CDI)

4:00pm – 5:30pm: Session 4: Defence Economics  
(Chair: Richard Bitzinger)

- Chinese Defence Spending:  
Mark Stoker (IISS)
- China's Defence Industrial Base:  
Arthur Ding (IIR)
- Chinese Defence Technology  
Acquisition and Assimilation:  
Kathleen Walsh (NWC)

5:30pm: End of Day 1

DAY 2: 14 November 2008

9:00am – 10:30am: Session 5:  
Special Issues in PLA Studies  
(Chair: Li Mingjiang)

- PLA's Participation in  
Disaster Relief:  
Dr. Ding Dou (Peking U.)
- The PLA in China's  
Military Diplomacy and  
Security Cooperation:  
Sr. Col. Xu Hui (College of  
Defence Studies, NDU)
- PLA's Participation in  
Peacekeeping and  
Stabilization Operations:  
Fu Xiao (China Foundation  
for International and  
Strategic Studies)

- Discussant:  
Lu Dehong  
(China Foundation for  
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Strategic Studies)

11:00am – 12:00pm: Session 6: Conference  
discussion and wrap-up:

12:00pm: End of Conference

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## **ABOUT THE S. RAJARATNAM SCHOOL OF INTERNATIONAL STUDIES, NANYANG TECHNOLOGICAL UNIVERSITY**

The S. Rajaratnam School of International Studies (RSIS) was inaugurated on 1 January 2007 as an autonomous School within the Nanyang Technological University (NTU), upgraded from its previous incarnation as the Institute of Defence and Strategic Studies (IDSS), which was established in 1996.

The School exists to develop a community of scholars and policy analysts at the forefront of Asia-Pacific security studies and international affairs. Its three core functions are research, graduate teaching and networking activities in the Asia-

Pacific region. It produces cutting-edge security related research in Asia-Pacific Security, Conflict and Non-Traditional Security, International Political Economy, and Country and Area Studies.

The School's activities are aimed at assisting policymakers to develop comprehensive approaches to strategic thinking on issues related to security and stability in the Asia-Pacific and their implications for Singapore.

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