CHINESE MILITARY MODERNISATION:
SOME IMPLICATIONS
OF DOCTRINAL CHANGE

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This sub-thesis is my own work and all sources used have been acknowledged.

I would like to thank my parents and all those who encouraged me to keep at it.

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### Bibliography
At the time of preparing this thesis there was no indication that events surrounding the mid-1989 pro democracy protests would take the violent turn that they did. As a result, this work should be viewed primarily in the context of the consistent efforts towards the goal of military reform during the last decade.

Observers suggest that the June crackdown reinforced the ascendancy of conservative elements with one identifiable result being the increased attention paid to shoring up both political indoctrination and Party control amongst the ranks. Despite the perspective provided by a period of one year there is still some confusion as to the long-term impact of a conservative backlash on reformists within the PLA.

While this is true, it is argued here that the depth and strength of the reform process that had gathered momentum to 1989 represents a change that can only be slowed - not wholly reversed. In the context of the leadership's reaction of June 1989 and subsequent events the military reform process should be seen as following trends identified below. At the very least, the open door has exposed many within the PLA to foreign equipment, procedures, and attitudes that have already made an impact.

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INTRODUCTION

There are a number of reasons why an examination of the defence modernisation efforts of the People's Republic of China have been of particular interest to analysts since the late 1970's. This has had much to do with what could be termed the broader context of China's economic modernisation in conjunction with an important shift in the way Beijing has come to view its strategic environment. This interest has also resulted because of the potential that China has displayed in the past for rejecting hard-won gains in the face of domestic political turmoil. The capacity must be seen to exist therefore for real resistance to military reform that can not be traced to the obvious limitations imposed by the sheer size of the armed forces or the limitations of the defence budget. The focus of this study is the long term tension that has accompanied efforts to modernise the Chinese armed forces. It is contended that the last decade has witnessed fundamental change, the underlying themes of which have already made their impact and will continue to do so despite practical and political constraints.

In contrast to the more highly charged atmosphere (in terms of threat perception) that dominated the 1960's especially, the past decade has witnessed the evolution of a much more relaxed security outlook. This takes into account an improved relationship with the Soviet Union and an accurate assessment, on the part of Beijing, that Moscow's energies are directed elsewhere - especially towards its faltering economy. This recognition of a changed relationship was to some extent, given expression by Mikhail Gorbachev's Vladivostok Speech of 1986 (repeated in 1988 at Krasnoyarsk). Other key elements included improved regional relationships and, in general, an acceptance on the part of China's leadership during the 1980's
that the country's modernisation process required a stable security environment.

In tandem with the shift in security outlook, another important influence on the direction of China's defence modernisation are the internal reform pressures that extend beyond military concerns - and indeed are placed before the People's Liberation Army (PLA) in the context of the "Four Modernisations". Beijing recognises that efforts to improve the country's agricultural, industrial and technical sectors must be paramount if the economy is to be successfully modernised. In essence this has driven defence upgrades further down on the national development agenda. The challenge has been to re-focus the energies of the PLA along the lines of a shift in defence doctrine that takes the above fundamental pressures into account. At the same time, the continuing requirements of providing a credible deterrent are not to be forgotten.

In keeping with this requirement, modernisation of each service as well as improving the capacities of the defence-industrial base remains an important goal for the PLA.

These improvements have taken place within a framework that addresses the above concerns and pressures by moving from the increasingly inappropriate doctrinal framework of Mao Tse Tung's People's War to the declaratory policy of "People's War Under Modern Conditions". These are the "modern conditions" of a change in security outlook, a change in domestic priorities towards economic modernisation and, importantly, a gradual change in the military's capabilities.
While the observer will find evidence of a real improvement along these lines, this study will take into account the tension that exists between declaratory policy and the constraints of modernising such a huge armed force. Certainly reducing overall size of the combined services is an important first step, but this is just the beginning in the face of continuing technological backwardness and the up-hill battle professional attitudes must wage against the continued presence of ideological dogma that formed such an important part of Maoist People's War. Despite this evident tension and these constraints, it will be suggested here that the underlying course of policy has been set and that the force structure improvements already evident are not likely to be reversed. One likely result will be a China that has a much improved scope for a more forceful regional foreign policy should Beijing wish to exercise it. Again, the changes in each service arm will address how this might be so along with some indication as to the constraints (of both equipment and human attitudes) acting against this reform.

To place these changes to defence capabilities and doctrine in perspective, it will be necessary to explore the key tenets of People's War. Particular attention will be paid in the opening chapter to a recognition of the conditions that influenced the formation and operation of this doctrine. Important elements to consider here include - the political role of the "Party Army" in both the pre-1949 and Cultural Revolution periods, as well as early indications of reform pressures that clashed with the ideological fervour of the mid-to-late 1960's. By extension, an examination of "modern conditions" will serve to demonstrate the need for a shift in doctrine away from People's War that was recognised in Beijing from the late 1970's. This, along with an overview of the change in security outlook, is the subject of the second chapter.
The final chapter examines in detail recent force structure changes within the doctrinal framework of People's War Under Modern Conditions (PWUMC). The PLA's drive to create a credible deterrent force, capable of limited power projection (even within budget constraints), is documented here. These recent changes are essentially the end result, at the grass roots level, of the shift in doctrine. The success that the PLA has had represents a substantial departure from Maoist doctrine and is testimony to the seriousness with which modernisation has been approached by the PLA.
Chapter 1
BACKGROUND TO CHANGE

1.1 A Maoist Legacy

One way of approaching an analysis of the impact of Maoism on concepts linked to China's national defence is to consider Mao's thought as embodying a practical programme for revolutionary action coupled to national defence. The essential basis of this programme can be divided into two strands - the military doctrinal element, and the equally important political support/management factor.

Within these two broad factors one finds the beginnings of a role for a "party army" with the ability (if not the sole task) to mobilise the people for a fluid, mobile war. Key to the successful prosecution of these different forms of warfare was the stress on large-scale political mobilisation of the population, the drawn-out or protracted nature of the conflict with a better-equipped opponent. When investigating the origins of Maoist military doctrine it is then important to demonstrate an awareness of the link between the principles guiding an armed forces' strategy and tactics, and those with a central role garnering mass support. The base assumption recognised by the Chinese Communists when considering the need for effective revolutionary organisation, was that "political power grows out of the barrel of a gun", a lesson learned following a dramatic Kuomintang (KMT) - Chinese Communist Party (CCP) split in 1927. It was also a lesson forging the political and military roles of the CCP’s Red Army closely together, and one that would give rise to some internal conflict over the best role for the "party army".
An analysis of the key Maoist writings that serve to illustrate the origins of "Peoples War" should be regarded also, within the context in which they were written. The significance of the CCP retreat to isolated rural base areas from 1927 through to the Long March of 1934, and the Yenan base period during the Anti-Japanese Civil War, lies in the fact that from the experiences of these phases Mao was able to formulate and articulate his revolutionary and military outlook and build these into systematic doctrines. In the years before the Long March (1934), Mao had also been able to establish himself as a key figure in the "Chinese Workers and Peasants Revolutionary Army".

The early "party army" was a force comprising local bandits, peasants and KMT deserters who had joined Mao in supporting a failed uprising in 1927. This misadventure was essentially a rout at the hands of better equipped and organised Nationalist forces. It was also an important learning experience for Mao in that he was forced to consider that longer-term organisation, not short term revolution, was going to ensure the CCP's survival and ultimate success.

Military Writings in Context:

(i) Sun Tzu - A Traditional Antecedent

Tan Eng Bok traces three essential constituents of Chinese military thought of which the Maoist contribution is but one. It is suggested here that in considering Maoist military thought (and one way of doing this is to examine his key military writings from 1927 to 1949), the ancient tradition exemplified by Sun Tzu (but also the Soviet influence of Marxism-Leninism) is relevant.(2)
Sun Tzu drew on an intellectual tradition that emphasised the principles of mind over matter, thought over weapons, and doctrine over bare strength. The cultural trait of "man over machine" can be seen to have its roots in such considerations with the corollary that "war in Chinese traditional acceptance, does not constitute an end in itself, but fits into a greater design dominated by politics". (3) In a further section, Sun Tzu emphasises the strategy of winning battles without fighting and forcing the enemy into protracted operations;

"The skilful leader subdues the enemy's troops without any fighting; he captures their cities without laying siege to them; he overthrows their Kingdom without lengthy operations..." (4)

The opponent is thus denied a quick victory. The defensive element of guerilla strategy also has its traditional antecedent in that winning without fighting is seen to favour deception, (5) and to encourage an offensive only when local conditions are such that the guerillas enjoy a tactical numerical advantage and local political (as well as logistical, intelligence) support;

"If equally matched, we can offer battle; if slightly inferior in numbers we can avoid the enemy; if quite unequal in every way, we can flee from him." (6)

The guerilla tradition of ancient Chinese military doctrine is taken on board as even a cursory dance at Maoist military writings demonstrates. People's War however, came to mean more than guerilla operations. Indeed such operations were supplemental to mobile and positional warfare - concepts discussed in writings that emerged from the mid-1930's.
In keeping with the task of longer-term organisation (not short term social revolution) for survival, Mao addressed this important question in the 1928 article "Why Is It That Red Political Power Can Exist In China?". The Red Army was to have a key role in this survival, and although guerilla warfare's small unit operations were being finely honed, Mao was aware that regular forces were also needed -

"If we have local Red Guards only but no regular Red Army then we cannot cope with the regular White forces (KMT), but only with the landlord's levies." (8)

Rural revolutionary base areas were an integral part of the CCP's revolutionary organisation. The establishment of these areas by armed force and their maintenance by the same means against successive encirclement campaigns, was an accepted necessity. Coupled to this was a strong Communist party organisation which practiced "correct" policy by close observation of, and involvement with, the peasantry in the "liberated zones". (9)

Mao's early thinking along the lines of military and political organisation for survival, can be seen to have also been shaped by intra-Party disagreement over the role of the military. For Mao the defence role of the Red Army was obviously important but only in conjunction with a body of principles shaping the military establishment and its relationship to society. The Red Army's essential "multifunctionality" must be remembered as stemming from early base area politics (working with the peasantry) and being extended and systematised according to concrete experience as the years progressed. (10)
Along these lines, the army had a role in a number of non-military tasks, sometimes equated with "nation-building". Political control of the military to facilitate this saw Mao influence a division of labor between military commanders and political commissars with the commissars taking on an ever-widening range of tasks including personnel administration, schools, libraries, theatres, sports, literacy classes, economic production etc. (11) Political cadres were directed from the 1929 Kutien Conference, to countersign all military orders and indeed to consider themselves as co-commanders of military units. This can be seen as forming the roots of a basic tension within the army over the relative power of commanders versus commissars, as well as within the Party between the modernisation/professionalism advocates and conservatives wishing to retain the "man over machine" tradition.

Such disagreements acted to call the unity of the Red Army into question. (12) Indeed the "moderates" were often recorded as criticising Lin Piao's First Army Group, either directly or indirectly, as being too fanatical in following the "men over weapons" line. It was claimed that,

"The comrades in the Fourth Army [of the First Army Group]...neither understood nor wanted to understand the role of modern weapons..." (13)

This had apparently led them to -."..throw the sights of the anti-aircraft guns into rivers and take the neutralising substance out of gas masks". (14)

To argue that Mao was only concerned with political direction over military prowess would be incorrect. It should be recognised that one served the other in Maoist thinking and that the military's close involvement with the masses through non-military tasks as well as the organisation of a mass militia force were seen as complementary. The need for mass support for
military success is an important element of People's War, and was a view reflected in another important work, written by Mao in 1930 - "Single Spark Can Start A Prairie Fire". (15)

Here, the secret to garnering mass support was the dispersal of units to practice guerilla warfare, although even here Mao cautioned against wholesale reliance on dispersing forces if popular support could not be guaranteed -

"It is better not to divide our forces when this purpose [winning over mass support] cannot be attained or the division of forces would lead to defeat and to the weakening of the Red Army..." (16)

However, when dispersal of forces is possible, the tactics to be followed included dividing units to "arouse the masses" but concentrating them to deal with the enemy. Often this would form part of a campaign of "luring the enemy in deep" at first, until Red Army forces could retaliate on secure ground. The essence of this form of warfare was captured by the dictum "The enemy advances, we retreat; the enemy camps, we harass; the enemy tires, we attack; the enemy retreats, we pursue". (17) This form of warfare brought the fight to the enemy, only on the guerilla's terms with any hint of an opponent regrouping to go on the offensive, being met by forces that would blend back into the countryside.

It can then be seen that by the time of the Long March retreat to Yenan, the Red Army's experiences in defending the tentative gains of communism provided a wealth of practical experience upon which to draw.

(iii) Active Defence in a Protracted Conflict

These lessons were distilled in what could be said to be the more significant expositions of Maoist military doctrine - the 1936 "Problems of
Strategy in China's Revolutionary War" and especially "On Protracted War" (1938).

The later work, "On Protracted War," reflected Mao's belief in the midst of the conflict with Japan that any militarily decisive operations were likely to be undertaken by regular units. Although outlined in previous writings, this work brought together and clarified the three stages of protracted conflict central to Maoist military doctrine. These consisted firstly, of the Red Army's strategic defensive to the Japanese force's strategic offensive. Briefly this phase was said to consist of the enemy forces moving rapidly towards its objective and being confronted by a Red Army employing mobile war tactically - that is, fluid movement by units under a centralised command. The second stage, "strategic stalemate", is where the enemy is forced to protect its occupied territory by tying-up a portion of its invading force in fixed positions - the enemy has been "lured in deep". Protecting lines of supply and communication becomes a greater problem as these stretch.

In such situations, active defence (jiji fangyu), a defence of forces involved in offensive operations tactically but on the defensive strategically, was said to come into its own. The enemy (in this case the Japanese, but the KMT was "substituted" post-war) was fighting on exterior lines (wai xian) in being dispersed and on the offensive. Such forces controlled considerable spaces and communication lines within that space had to be protected. The Communists, however, were said to be fighting largely on interior lines in the first stage of a protracted war - this being characterised by concentrated forces on the defensive and controlling less space, but with the added advantage of quick movement between defensive points. The attacker was slow to redeploy its forces with their longer supply lines.(18)
Mao in "On Protracted War" saw the advantages in using both combat on exterior and interior lines. Offensive warfare on exterior lines was seen as necessary to ensure victory, but the interior lines strategy centering on base areas was also necessary as offensive battles were to be short, with a "bolt hole" of retreating to a base area. While on the offensive, "...main force units were to utilise the essence of mobile warfare outflanking, encircling, and attacking the enemy while he is on the move - in order to turn defensive warfare into a war-winning strategy".(19)

The stages then progressed through a "strategic stalemate", where guerilla war comes into its own to harass the enemy's rear echelon, to the final stage of the "strategic counter-offensive". In theory, this involved a greater emphasis on positional warfare to recover and hold lost territories by subjugating major urban centres. This had the effect of favouring more conventional unit structures and tactics. However, until this point was reached, the fixed battle was largely ignored in favour of mobilising the revolutionary masses in the countryside.

This then encapsulated conventional wisdom when it came to guidelines for national defence from the 1930's through to the foundation of the People's Republic of China (and beyond). While constituting an official view, there were in evidence a range of opposing views as well which surfaced at different stages of the new nation's history. The analysis to this point has attempted to explore the key tenets of the Maoist "Military Art" (a term encompassing strategy and tactics) as it developed and adapted to changes in circumstance. This is illustrated by the concepts of an enemy's strategic offensive or defensive as different strategies and tactics apply.

The test for the observer currently is to assess what Military doctrine dictates for "Military Art" today, and how much the Maoist precepts have been revised to take different circumstances into account. Mao exhorted
his followers to "seek truth from facts", but he was also concerned that professionalism and "the purely military viewpoint" could downgrade the political role of the Red Army. This role was to become no more obvious than during the domestic turmoil of the Cultural Revolution.

(iv) Early Doctrinal Guidance for a People's Navy

Concepts of "maritime guerilla warfare", drawn upon heavily in the 1950's, were reinforced by the "Young School" of Soviet naval strategy (dominant until the early 1960's).(20) Essentially a rejection of the "blue water navy" concept, (which was seen as an offshoot of imperialist ambition) this school advocated a coastal defence. Coupled to People's War this had the practical effect of creating a navy that consisted predominantly, of small torpedo gunboats, diesel-electric submarines and limited-range land-based air cover.

Tactics employed clearly illustrated their Maoist heritage. They included - rapid concentration of forces for surprise night attacks, close quarters combat bolstered and encouraged by political indoctrination, and a "man over machine" disdain for advanced technology.(21) The fundamental elements were then a tactical offensive within a strategic defensive that aimed to "turn China's coastline into a great wall of iron".(22) It gave rise to an emphasis on respecting the enemy tactically and thus making the best use of the "green curtain" at sea - "the reefs, cloud, fog and waves which correspond to trees and crops and other such cover on land...".(23) Deception was then to work in the defender's favour as it so often did against a more powerful enemy on land.

The "enemy" identified through the 1950's and 1960's as the U.S. 7th Fleet but also its "lackeys" (Nationalist forces) and from the 1960's the Soviet Pacific Fleet - was accepted as technically superior. Cultural Revolution
hysteria, and Young School traditionalism however, encouraged the continuation of the coastal defence posture. The Maoist contribution was especially pervasive and resistant to change. Naval missions were to protect the coastline, not project power. When offensive operations were necessary, they were to be "like a bayonet charge at sea" in that "It was not technique, but politics, the thought of Mao Tse-Tung, that counted."(24) Even the 1974 operation to retrieve the Paracel Islands from South Vietnamese forces, was interpreted in some quarters as sufficient proof of the doctrine's utility against a "large" and "modern" RVN Navy.(25)

From 1976 to 1978 a period of uncertainty followed throughout which it became clear that the navy's role was to change, even though ritual criticism was still reserved for any who rejected Maoism.(26) This change gathered momentum from 1978/79 with a stated emphasis on "combined arms" training in multithreat environments, and on the need for younger and better educated naval officers.(27)

1.2 Early 1950's Modernisation and the Cultural Revolution impact

In order to fully appreciate the impact of the political developments (from the early 1960's) on the People's Liberation Army (PLA) it is necessary to examine briefly the state of the armed forces in the 1950's and what came to be expected of them at this time. The Maoist military model was accepted as supremely suited to the revolutionary milieu from which it had emerged,(28) but as will be suggested, events of the 1950's and the responsibilities of safeguarding a new nation dictated that the PLA rationalise its organisation and procedures. To a large extent this represented the shelving of People's War as an operational concept (29) as well as the foundation for the development of a modernised army.
Jencks identifies a "professional trend" in the new PLA from 1950 onwards, the key elements of which included large-scale demobilisation (especially of regional and local guerilla units) even before the conquest of Hainan Island was completed. The push was on to create a more streamlined ground force, but also to devote more attention to the air and naval arms of the PLA. In this vital area of equipment (component) modernisation, the Soviet connection was central under the 1950 Treaty of Friendship and Co-operation and extended from small arms and artillery transfers, to combat, bomber and transport aircraft. The means to develop and produce their own military equipment were also fostered and it seemed that within a relatively short space of time, any gap between Chinese military capabilities and the mid-1950's state of the art, would be much less obvious.

Much of this activity was closely involved with the Chinese intervention in Korea from October 1950 which, for a number of reasons was to constitute an important learning experience for the PLA as well as a lasting influence on the shape of this early attempt to modernise. The initial enthusiastic contribution of the CPV ("Chinese People's Volunteers") in pushing back UN forces was quick to lose its momentum as these forces consolidated their positions and began a co-ordinated retaliation using air, ground and naval forces in concert. Mobile warfare along Maoist lines had also incorporated the element of re-supplying one's force from the enemy, but this was clearly not possible against a well organised and entrenched opponent which in turn could ensure that Chinese supply lines (already stretched by the initial penetration down the peninsula) were under constant aerial bombardment.

One of the first "products" of this intensive practical experience of modern warfare was the clear recognition of the importance of an improved logistical capacity and greater firepower. These came to be seen as of more
direct relevance to the conduct of the war than any inspiration to be derived from the efforts of the political commissars accompanying the CPV.

The "commanders versus commissars" duality was thrown into sharp relief in Korea where the commissars' traditional recruiting and intelligence gathering roles were of little use amongst a non-Chinese population.(33) The PLA's overall commander in Korea, P'eng Te-Huai, was clearly aware of these and other deficiencies. Joffe suggests that the informal decision taken by professional officers to return to a "single commander" system and largely ignore the commissars must have received the tacit approval of the PLA's high command.(34) Such attitudes tended to reflect a desire for the formation of a more professional fighting force capable of prosecuting a modern war.

The Soviet influence can also be traced to the encouragement of the formation of a professional officer corps from the mid-1950's. A factor receiving more attention in keeping with this was the proliferation of military academies with attendance becoming a prerequisite for advancement in any of the three service arms.(35) Other changes to emerge from the Korean intervention included the introduction of conscription (a contrast to the PLA's "volunteer" tradition) as well as cutbacks in the peasant militia in favour of an organised reserve system along Soviet lines.(36) This final example provided, arguably, the sharpest contrast to the thrust of pre-liberation Maoist precepts. In being a combination of military strategy and social policy, People's War consisted of "political programmes for the motivation of social forces and military programmes for the application of these forces to armed struggle".(37) As such (and as discussed in the previous section) People's War presupposes an army with mass support, well-represented by a peasant militia ready to drown an invader in a "human sea".
A shift in political events occurred from the mid-1950s however, just as the reforms of China's armed forces began to take effect (to create a modern conventional army backed by support units and defence industries). A culmination of the criticism of the CCP and its ideology following the "Hundred Flowers" campaign coupled to the elitist attitudes exhibited by rank-conscious PLA officers, had led Mao to become even more sensitive to PLA adherence to Maoist orthodoxy.

The Cultural Revolution and the Army

Re-enforcement of the study of Maoist teachings as well as intensive PLA involvement in non-military work, formed a part of the armed forces drive to ensure the re-ascendance of Mao to the top political echelon (following "Great Leap" failures). Although the PLA under Lin Piao provided a basis of support within the armed forces, it was chiefly the political commissars and other confirmed Maoists who had been disadvantaged during the 1950's modernisation drive that represented the bulk of this support.(38)

This period's impact in the longer term included the residual effects of lost defence production time, de-emphasis of technical education and expertise, and the denigration of professional military values (as exemplified by a regular officer corps). In the short term, the PLA's role in the intra-Party "shake-up" led to constant re-deployment of regional and main force units to "support the left".(39) This dramatically illustrated the heightened political role of the armed forces.

Constituting a marked change in direction from the previous decades' attempts to modernise, the PLA had been directed to abandon ranks and distinctive uniforms. Directives emphasised the supporting role that the PLA had to play, to the young student radicals (Red Guards) aiding Mao in the consolidation of his position. Problems arose amongst the turmoil.
however, when local garrison forces began to support local Party officials against the undisciplined excesses of the student radicals. It was partly for this reason that the supposedly more politically reliable main force (corps) forces were ordered to separate the antagonists and assume political control in the provinces. Having few ties to the local Party bureaucracies, corps units were deemed more likely to "support the left". Being committed to largely political (and public order) tasks, these units were then subject to the sort of random re-location undertaken by regional commands. Important exceptions included units deployed in areas of high perceived threat such as the North Korean border, the Fukien front with Taiwan and the Sino-Soviet border (especially in the North-east). Nelsen observes on this point:

"Peking's political control over its main forces and its military regions was strong enough for it to select its corps on the basis of military expediency". (40)

Extreme adherence to Maoist precepts stressing active political participation on the part of the "People's Army" was not allowed to divert attention from the need to safeguard sensitive areas as well as strategically important R+D. China's nuclear weapons programme was allowed to develop through a period that required most to be "red and expert". On balance however, following the Maoist line in Peoples' War and emphasising greater attention to political indoctrination over military training for modern warfare had an undeniably stultifying effect on PLA development, one that was not likely to begin to be rectified until Mao's influence was weakened.
ENDNOTES

3. ibid
5. Tan En Bok, Op Cit, p 4
6. Sun Tzu, Op Cit, p 16
7. Mao Tse Tung, Selected Military Writings, (Foreign Languages Press, Peking, 1963), p 9
8. ibid, p 12
9. ibid, p 13
10. Harris, Op Cit, p 81
13. ibid, p 261
14. ibid
15. Mao Tse Tung, Op Cit, p 63-73
16. ibid, p 71
17. ibid, p 70
19. ibid
20. Joffe, Op Cit, p 90
24. ibid, p 41
25. Muller, Op Cit, p 201
26. ibid, p 203
27. ibid


29. ibid, p 13

30. Jencks, Op Cit, p 46

31. "People's Liberation Army" refers to ground, air and sea elements of the armed forces

32. Jencks, Op Cit, p 47

33. ibid

34. Joffe, Op Cit, p 9

35. Jencks, Op Cit, p 49

36. ibid


38. Jencks, Op Cit, p 53

39. ibid

Chapter 2

THE DIRECTION OF MILITARY Modernisation

2.1 The Wider Context of National Modernisation

Although initially finding a place as third of the "Four Modernisations" (behind agriculture and industry, but before science/technology), national defence was dropped quickly to the fourth position. The politics of modernisation has tended to place the advocates of military modernisation at a disadvantage, in that their proposals are often expensive and need to await infrastructure reorganisation elsewhere. (41) It will be shown also, that the lower the perceived threat (a more benign security environment), the lower the priority to defence and especially to the creation of the sort of professional fighting force that is an anathema to hard-line Maoists. It is proposed here to undertake a brief analysis of the political context of modernisation in post-Mao China with attention paid to its impact on the PLA and the formulation of a "new" doctrine guiding its activities.

The first phase of the modernisation drive came from 1976-78 under the auspices of the "neo-Maoists" under Hua Guofeng. Anxious to maintain the legitimacy of his power base, Hua and his supporters were careful to avoid direct criticism of Mao, instead focussing on the "Gang of Four" who were accused of sabotaging the true wishes of Mao. (42) Constant references were made to the supposed wishes of Mao and Zhou En-lai, to modernise in the early 1970's only to have their directives thwarted by the "Gang" (43). The PLA was claimed in 1977, to have always been the focus of legitimate attempts to modernise;

"Chairman Mao at once stressed putting politics in command and pointed out the importance of becoming proficient in technical and professional work..." (44)
Such attempts however were supposedly overwhelmed by the combined negative impact of Lin Piao and the "Gang":

"The gang allowed nobody to mention improvements or work on improvements. According to its reactionary logic, we should not have atomic bombs, make new weapons or equip our PLA units and militia forces with new weapons". (45)

A watershed for the pragmatists under Deng came with the Third Plenum (of the Eleventh Central Committee) in 1978, which saw Hua replaced as Chairman of the Party's Military Affairs Commission (MAC) and his days "numbered" in the premiership and party leadership posts. The end-result here was a new emphasis on a longer-term developmental strategy under the title of "Socialist Modernisation". (46)

Reinterpretation of history led to official condemnation of the period from the "Great Leap Forward" to 1978 and an acceptance of Maoist failings as having a detrimental effect on national development. The inevitable negative reaction from within the CCP from those who owed their positions to a previous adherence to Maoism (and indeed who had gained their positions during the Cultural Revolution), did however dictate that Deng tread carefully and avoid direct confrontation. In keeping with this, Deng consolidated his position by the time-honoured method of maneuvering supporters into top positions and conservatives onto the retirement list. Both the Secretary-General of the MAC (Yang Shangkun) and the PLA Chief of Staff (Yang Dezhi) were noted supporters of Deng as was the Minister of Defence Zhang Aiping, (formerly the head of the Science and Technology Commission for National Defence). (47)
Each were said to accept that the military's place in the "Four Modernisations" means that substantial economic development must take place first with a "trickle-down" effect benefiting the military. Zhang voiced the new orthodoxy when he stated,

"Modernisation of our national defence must be based on our national economic construction... [The PLA must] carry out...strict budgeting within the scope allowed by the limited amount of funds allocated by the state..." (48)

However it has been stressed (perhaps to "sweeten the pill" for military commanders) that weapons procurement and development is not to be frozen but maintained steadily. By working within its fourth place, future funding for defence modernisation will increase and technological breakthroughs will be made more available for national defence. The budget allocation for defence has been cut however, from 15.3% (of total State expenditure) in 1982 to 10.5% in 1985, 9.4% in 1986 and 8.9% in 1987. (49) It is difficult however to assess the real costs of defence in socialist economies and China's case is no exception. While defence spending has declined in terms of GDP (12% in 1978, 5% in 1989) (50) and in total State expenditure, this must be qualified by noting that the defence budget is presented as a single category within the state budget. It does not indicate defence-related expenses incurred by other ministries and, thus, that the defence burden is shared by other economic sectors.

On the contrary, modernisation's impact on the increasing efficiency of military administration could account for the official figures. (51) Streamlining plus manpower cuts may permit "substantial" modernisation within a budget declining in real terms. Even so, the point has been made
that the defence outlay does seem to be declining, even taking manpower reductions into account over the last decade. (52)

The Soviet Union

A reassessment of the nature of the threats faced (in the early years of the 1980's) illustrated a more complex approach. This has taken into account, Soviet ventures in Afghanistan, the resistance encountered by Moscow in the Third World towards her so called "imperial ventures" and dissension in Eastern Europe. (53) Beijing is clearly aware of the pressing nature of two key domestic problems faced by Moscow - the economy and her minority nationalities as well as the Kremlin's desire to relax tensions in the Far East. This last point is of course, related to the hopes Moscow entertains, of developing the economic infrastructure in this area - hopes that were reflected in the 1986 Vladivostok Speech delivered by Gorbachev.

Emphasising the Soviet Union's role as a Pacific power, this speech constituted a major policy statement as well as an "olive branch" to the Beijing leadership. A willingness also, to cooperate in joint development projects along the frontier such as water-management power schemes along the Amur River was suggested by Gorbachev, to coexist with the "understanding and respect" ordinary Soviets had for China's modernisation drive. (54) Moscow is unlikely to be expecting the degree of enmeshment that occurred in the last decade with Sino-Western (especially Sino-American) economic relations, but it is clear that efforts had been undertaken on both sides to expand commercial, scientific, and cultural relations. (55)

These advances in easing tensions are not insignificant. The Soviet military buildup has continued in spite of the Vladivostok initiative however (although the undertaking to withdraw from Afghanistan has been honoured to the extent of troop withdrawals). Varying reports place Soviet
ground force levels at upwards of 57 divisions (43 of these east of Lake Baikal).(56) These forces under the Far East theatre command, represent about one-fourth of the total Soviet ground forces and have been updated by recent qualitative additions. These include - "increasing their firepower, manoeuvrability, protective power and battlefield defence capability, in addition to chemical warfare capability".(57) The Chinese are also taking into account, recent augmentation of Moscow's Far East theatre nuclear, naval and air strike forces.

More than 170 mobile SS-20's have been deployed in the Far Eastern theatre since 1977, mainly along the northern Mongolian border and covering China, Japan and much of the region.(58) Nuclear-capable strategic bombers such as the "Backfire" are now also deployed by the Air Force and Naval Aviation in the Far East. Their numbers (approximately 80)(59) represent a significant addition to Soviet regional air strike potential. Sub-surface strike forces (the Delta in SSBN is a recent addition) are in significant numbers and 30% of all Soviet SLEMs are on Pacific Fleet submarines.(60)

China must also consider that one-fourth of the Soviet airforce (including the MIG-29, Sukhoi "Frogfoot") is deployed in the Far East comprising some 2,200 combat aircraft.(61) Vietnam is now (and since 1978) doubly significant to Moscow, in providing basing facilities for Soviet aircraft extending their range/presence throughout Southeast Asia as well as key naval facilities.

Finally, Soviet naval forces in the Pacific are a highly visible reminder of Moscow's intention to be seen as a Pacific Ocean power. The Soviet Pacific Fleet is the largest of the Soviet fleets (comprising 800 ships of various types) (62) and has not lacked major additions in recent years. Among those platforms deployed to such bases as Vladivostok, Petropavlosk, Sovetskaya Gavan and Vietnam's Cam Ranh Bay, are VTOL aircraft aboard a
second aircraft carrier, the Delta III SSBN and Kara-class cruisers. In all, 73 principal surface combatants are deployed which provide China's naval forces with a serious challenge.

The above forces could conceivably be utilised against China in a range of scenarios. It is worth qualifying these however, with the observation that the current security environment is perceived as favourable for China, especially given both Moscow and Beijing's desire for greater economic, and other, cooperation to aid the latter's modernisation. The Soviet troop withdrawals from Afghanistan in accordance with the Geneva Accords have been matched by the withdrawal of approximately 260,000 troops from the frontier (with China) "and three quarters of its troops in Mongolia". Vietnamese assurances of withdrawals from Cambodia by September of 1989 were also made.(63) Chinese defence planners are also aware of the inclusion of the SS-20's in the INF Treaty (with these scheduled for destruction). Despite this Beijing must still consider a wide range of threat scenarios involving the augmented Soviet forces as noted above. Such strategic options as borderlands subversion as a prelude to annexation had an historical background from the 1960's. The "raw material" for this option exists in the antagonism between Han and minority peoples,(64) but constitutes less of an opportunity today due to racial assimilation and, especially in the Northeast (Manchuria), massive frontier deployments to cover the industrial infrastructure present there.

Other conventional invasion scenarios have been mooted but must be accepted as involving the risk of escalation to a nuclear level despite NFU pledges. These included operations along similar lines to the successful 1945 soviet push into Manchuria - an operation involving combined arms forces which surmounted formidable geographical barriers. Co-ordinated incursions could involve air, land and sea forces (the latter to provide naval bombardment and sea lift) with a technical superiority offsetting a Chinese numerical
superiority. Uncertainty must be seen to accompany any ground invasion scenario - centering on recent Chinese force structure and organisation improvements as well as the threat of retaliatory nuclear action. If a pre-emptive strike against China's nuclear weapons and facilities is a serious option, there is still the very real uncertainty of the composition of any second-strike retaliatory forces. Dispersal and camouflage may guarantee at least some response. Again, force improvements will be shown (in the third chapter) to have the result of maintaining uncertainty as to which Chinese systems would survive and to their penetrability (of Soviet airspace).

The United States

A similar range of threat is not perceived in the case of the United States, although both Moscow and Washington were seen as in "imperialist collusion" against China in the 1960's. An element of "sophistication" in world outlook was introduced as America began to pullback from Vietnam and make overtures to Beijing from the early 1970's - contributing to the "Three Worlds" theory originally attributable to Mao. The relationship through the 80's was characterised by considerable economic "enmeshment", especially as a result of Sino-American investment through the "Open Door" - note this as evident on surface but problems remain. Important defence related issues (high-level military visits; technology transfer of dual-use and defencerelated technology) have also created a more prominent security dimension to the Sino-US/Sino-Western relationship. Coupled to this China's search for advanced technology to boost export-oriented growth has led her to value US and Japanese joint ventures especially.(65)

Trade Volume comparisons are significant. 1985 trade with the United States totalled $7.7 billion (compared to $1.9 billion with the Soviet Union) although this is not as fast-growing as that with some other Western countries, (especially the European Community).(66) Cultural and
educational exchanges were targeted by Gorbachev in 1986 as one area where improvements could encourage normalisation in the relationship. If so, Moscow has a long way to go to match the nearly several thousand Chinese scholars studying in American universities (and numerous Western institutions) (67) and the educational programmes run by joint-ventures, to familiarise the Chinese with Western equipment and operating procedures.

American forces in the Pacific cannot be said to provide the sort of immediate and continual reminder of aggressive power that the above-reviewed Soviet forces do. This contributes to a situation where - "China's reformers know who threatens them, and recognise that seeking a genuine equidistance [between the superpowers] would entail succumbing to the pressure the Soviet Union has brought to bear".(68)

Constraints on the Sino-US relationship include the latter's close relations with Taiwan, but it could be said that the requirements of modernisation have introduced an element of long-term confidence with respect to eventual unification through peaceful (economic) means. It is certainly not an issue that is being permitted to obstruct Sino-US relations with the implications this could have for China's broadly-based modernisation.

Japan

In completing the Beijing Moscow - Washington - Tokyo "quadrangle", it is useful to briefly consider Japan's importance to China. Some consideration of this fourway relationship is important in that the pattern of interaction between China and these powers "largely determines the strategic choices confronting the leaders in Beijing".(69)
Despite persistent reminders of Japanese occupation, reform minded leaders have generally tried to encourage closer economic ties with Tokyo. While becoming the most important international financial market for China (70), Japanese firms rank behind Hong Kong and the US in relation to foreign investment. Concerns over internal policy stability were perhaps lessened up to mid-1989 may be lessened by the strenuous efforts now undertaken by China to ensure the continuity of "Open Door" policies. However, the security relationship is likely to continue to intrude, especially as China's military modernisation progresses.

To these factors must be added the greater stake that China is seen to have in regional stability to aid her modernisation. Beijing and Tokyo share common concerns over the growth of Soviet military power in the Pacific and indeed the forces tied down on the Sino-Soviet border could be moved even closer to Japan if Chinese-Soviet relations approach normalisation. The fact that China is not about to encourage full rapprochement with Moscow would tend to reinforce this atmosphere of a commonality of interest. For their part, Chinese leaders, while conscious of the spectre of Japanese "militarism", see Japan's "Self Defence Forces" (especially when directly supported by the US) as a significant defence "counter-weight" to Soviet Far East forces - one that at least complicates Soviet contingency planning.(71)

Vietnam

China's relations with Vietnam have been complicated in the past by Beijing's continued support for the Khmer Rouge forces as well as Moscow's continued support for Vietnam. Both commitments have a long history and are unlikely to change for some time.(72)
It can certainly be seen, however, that a number of factors have combined to moderate both Beijing's perception of threat as regards Vietnam and consequently to moderate its policy towards that country. Improved relations with the Soviet Union have had a role here. Moscow should be seen as having little to gain from Sino-Vietnamese conflict, especially given the Soviet's desire to improve upon its strategic position in the Pacific as outlined by Gorbachev at Vladivostok. Ngok Lee suggests that it would be highly unlikely that Moscow would supply the Vietnamese with nuclear-capable strategic weaponry for these same reasons - that it could ultimately undermine Moscow's regional position.(73)

Coupled to this there is the added complication of Hanoi's defensive posture along its border with China which would surely reduce the likelihood that an assault by the PLA would achieve significant gains. In 1979 Beijing learned first hand of the difficulties to be faced in attempting to "teach Vietnam a lesson" for its support for Soviet Union in South-east Asia.(74) Vietnam's subsequent investment in ground forces and air defences at the border is not likely to have made this task much simpler for Beijing in the intervening years. Klintworth suggests along these lines that - "Even if a large-scale ground attack on Vietnam was considered practical, and assuming that it had unanimous leadership support, there is no guarantee that it would succeed".(75)

Finally there is the lessening of the complication provided by Hanoi's invasion and occupation of Cambodia. Undertakings of phased withdrawals in the late 1980's were certainly welcomed although confidence in both the process and its permanence was not universal.(76) Any indications of less than wholehearted support by Moscow for that occupation needed to be balanced by the fact that Moscow will continue to regard its relationship with Vietnam as strategically important.
A remaining (and persistent) problem are the offshore islands and seabed resources of the South China Sea over which the two countries have previously come into conflict. This is certainly one area that has the potential for continued disputes as PLAN capacities are developed with the goal of affirming Beijing's claims in mind. This problem is returned to below in considering the growth and role of a modernised Chinese navy.

These factors, on balance, would seem to suggest that while tensions continue to remain they have lessened somewhat and need to be taken into account with evidence of improved Sino-Soviet relations (and a reduction in the threat Beijing perceives from Moscow via Vietnam). To a large degree then, China's focus on its domestic economic modernisation has, when coupled to improved Sino-Soviet relations, reduced the tension and urgency that surrounded the Sino-Vietnamese relations a decade ago.

2.2 China's Strategic Outlook and Threat Perceptions

It is because Beijing perceives that both the superpowers and Japan (for example) have something to gain for a relaxation of tensions and a boost to scientific, economic, political and cultural exchanges - that threat perceptions have been adjusted.

As the discussion in the third chapter points out, modernisation and the military has focussed upon long term objectives of reform that reach far beyond a simple cut in manpower or improvements to weapons and equipment. A strategic outlook that poses less of a threat has enabled these moves to fundamental reform. In a world that is moving from confrontation to dialogue, Beijing has clearly been involved in making the sorts of decisions that stem from less of a sense of acute vulnerability (vis a vis the superpowers) than from a feeling that "China's present strategic
circumstances are more favourable than they have been since the mid-nineteenth century".(77)

To maintain this favourable environment, China has been careful to pursue an independent foreign policy of "balanced ambiguity" between the US and the USSR. At the same time Beijing sees an advantage in encouraging an easing in US-Soviet tensions for such a climate provides the setting for long term modernisation. In occupying a fulcrum position between the two superpowers, China sees itself as being placed to prevent any one of them from becoming too dominant - in other words China wants its strategic situation to reflect the fact that the world is no longer bipolar but increasingly multipolar.

This shift in outlook outlined above, has been seen to take into account the role that Beijing now perceives itself as playing in the strategic balance. While the threat of imminent conflict has been removed however, Beijing continues to be mindful of the fact that if any threat remains it is from the Soviet Union primarily and from the danger of being drawn into a conflict to its south over Cambodia (although even here the immediacy of any threat can be argued to have diminished). Any urgency associated with a need for a crash programme may not be evident presently but the potential for conflict still remains with the most clearly defined threat coming from the Soviet Union. It is from this outlook that People's War Under Modern Conditions has emerged in the last decade, to take advantage of and lend added direction to military modernisation.

2.3 "People's War Under Modern Conditions (PWUMC): Continuity, Changes, Constraints.

It should be evident that the new military doctrine that has emerged from the competing mix of factors discussed above, will be itself a mix of
enduring realities and flexible adaption. (78) The definition of military doctrine - "the fundamental principles by which the PLA [in this instance] is to guide its actions in support of ... national objectives in the event of ... attack", (79) suggests that military modernisation needs to concern itself initially with those fundamental principles. From these, updated strategy, tactics and important advances in weapons technology and non-material means of modernisation can emerge.

The "fundamental principles" that formed a part of Peoples War doctrine have been illustrated to have an emphasis on mass mobilisation, the use of protracted war (along three phases) and the overall defensive nature of the doctrine. It accommodated tactical offensives within a strategic defensive and could be said to have made a virtue of qualitative weakness. The requirements placed on the military as a result deserve reiteration, and included the need to play close attention to political guidance of the masses to ensure this support base. Technological inferiority was to be compensated for by this reliance on the "human element" which involved the strengthening of the so called "subjective initiative" (political commitment and morale) in the face of a stronger opponent.

Today, there is considerable evidence to suggest that such fundamental principles continue to play a role in the face of this far superior opponent. Threat assessment has tended to place a land attack from the Soviet Union as being the area of China's greatest vulnerability, and debate still focuses on this rather than strategic air or naval attack. (80) It is accepted as central that the Soviets cannot be allowed to have unimpeded access to a position where they can invade to threaten China's northern cities. At the same time however, China is not yet in a position to meet all threats at the border by relying (in these areas) on fixed defences (that are the stuff of positional warfare). In 1945 the Japanese Kwantung Army crumbled under a Soviet onslaught as the Red Army entered
Manchuria, a defeat the Chinese attribute to their lack of in-depth defences and an over-dependence on their logistical base (which was susceptible to aerial bombardment).(81) Lessons drawn from this include the need to prepare such in-depth defences to cover the most likely routes of invasion which are judged to be the key mountain passes guarding access to the populous north-eastern basins.(82) These are known approaches where a combined armour and mechanised infantry assault could be slowed if not halted. The attacking forces are not offered resistance by main force units in this early stage, especially before they reach the southern edge of the Gobi Desert and are confronted by the Greater and Lesser Hingnan Mountains. Indeed the mobile Soviet forces are said to hold the advantage up to this point, on the level terrain they initially encounter.(83)

The aggressor is then, ideally, channelled towards the main force units, lured by the prospect of destroying China's major population and industrial centres and in this way China's cities are bait to the PLA's trap. "Luring in deep" then still plays a role although the PLA is not prepared to give-up these key centres;

"By luring the enemy in deep we do not mean letting the troops go wherever they like but we will force them to move as we want them to; at key places we will put up a strong defence, prevent them from penetrating inland unchecked and systematically lead them to battlefields of our choice so as to wipe them out piecemeal".(84) [My emphasis]

Joffe and Segal see this "modified luring in deep" strategy emerging from doctrinal guidance to be prepared for "modern conditions", as proof of a compromise with older Maoist concepts.(85) The assumption of the ability to take advantage of Soviet supply lines to separate the advance guard from its logistical base, does owe something to concepts formulated during the
"Anti-Japanese War". The enduring reality of a huge poor peasant population then continues to shape defence policy and it would seem that PWUMC reflects this. A defence doctrine must be capable of serving a dual role that of providing credible defence today, whilst also being able to accommodate updated equipment and the military operations in which they will be utilised. The population problem also places some priority on overall economic modernisation, to support the growth (and ageing) of the people. This in turn means less funds available for defence modernisation making the old "men over machine" credo, the only current option for credible defence against ground invasion.

Changes demanded by the characteristics of warfare under "modern conditions" also need to be assessed as they tend to lead to a wholesale departure of the fundamental Maoist tenets in military doctrine. An acceptance of the key role of contemporary technology in making the early stages of a conflict of greater importance is one example.

Here the debate has centred on modern battlefield technology making strategic rear areas unsafe and thus calling the "protracted war" principle into serious doubt.(86) The initial course (and pace) of a war is likely to be greatly effected by the range and accuracy of Soviet nuclear and conventional weaponry. A protracted war relies on secure and steady logistical ties to rear areas, which are also used to assemble reserve forces before deploying them to the battlefront. If rapid, deep attacks on these areas are undertaken initially by an opponent, planners in Beijing cannot rely on a drawn-out conflict to "wear the enemy down". Changes to fit this dilemma include then, a greater emphasis on positional defence at the frontier (especially in the industrial northeast) and the placement of forces at key points to slow a Soviet advance.(87) This is in effect a compromise solution adopted until force structure improvements allow the Chinese greater scope for offensive operations at an early stage.
Other changes are found in the emphasis placed on the fact that infantry forces alone would be insufficient to halt a combined armour/mechanised infantry and air assault of the type expected. The combining of forces (combined arms within services and combined services) is deemed necessary for adequate defence under "modern conditions" as well as proper attention paid to improving logistics by rejecting "The enemy as our best quartermaster" philosophy.(88) The more complex nature of the technology that the PLA must confront, also dictates that they acquire some of their own, especially that associated with effective command and control. Given the demands of training to accommodate the new equipment and tactics, a further demand of "modern conditions" is that the PLA spend more time in training for combat and less in political indoctrination. PLA commanders may still stress that "Chairman Mao's military thinking is the most advanced and powerful ideological weapon of our time ... ", but the above changes in strategy suggest that other changes such as a regular professional and well-equipped army led by a professional officer corps are necessary.(89)

The PWUMC doctrine's flexible (or perhaps transitional) nature is more clearly observed at this point. It can accommodate traditional Maoist precepts to placate the "Long March" conservatives and because the PLA has not yet fully modernised, but it also represents a commitment to improve on this base that ultimately threatens to abandon the traditional precepts in all but name only;

"In leading the work in the army, Comrade Xiaoping has always adhered to the basic principles of Mao Zedong thought. At the same time he is also skilful in closely linking these principles with the new situations, issues and characteristics in army building".(90) [My emphasis]
In keeping with this, it is stressed repeatedly that Deng is

"opposed to the dogmatic attitude of indiscriminately copying Mao Zedong's military thought and disregarding realities [which require the Party to]... unhesitatingly put forward new ideas and work out new policy differences". (91)

A number of trends initiated to accommodate "modern conditions" in warfare from the late 1970's and early 1980's and to provide a reasonably comprehensive defence against ground invasion, represent a genuine attempt to come to terms with the most likely perceived enemy and threat scenarios. The requirements of modernisation are clear, but still the PLA would confront real problems in any attempt to repulse a large conventional force. It is also possible that the "stalling effect" of PWUMC's positional and mobile fighting, may lead to Moscows' decision to rely on the shock effect of battlefield nuclear weapons or chemical-biological weapons.

The definition of security tasks facing the Chinese leadership is an on-going process. It should be clear that common to the changes to be made to national security policy is the requirement for sustained, long-term efforts but impeding these efforts are a range of constraints slowing the process.

Impediments to Policy Change (92)

Domestic constraints to modernising the military include the immense size of the armed forces in absolute terms - a factor which must surely limit the scope of any modernisation effort. Service-by-service efforts to work within this framework will be chronicled below (in the following chapter), but in general terms, the institutional and budgetary burden of supporting
the world's largest ground force, third largest navy and airforce, numerous support arms, as well as a growing nuclear force is considerable. (93)

Even so, it is recognised as a necessary task, one that is slowed by what one observer termed "the two basic constraints to the PLA modernisation drive" - a lack of funds and needed technology. (94) The lack of hard currency available for the military has received treatment above, but the constraint of an inadequate technological base deserves further mention.

Assimilation of high technology is a problem that can trace its origins to the effects of the Cultural Revolution and its disruption of research and development. Coupled to the lack of a technology exploitative culture such weaknesses are manifested today in the nation's defence-industrial sector. Here the paucity of skilled labor has led to uneven development in weapons systems and equipment so that China's offensive nuclear capacity and related space technology is respected globally, while her conventional weaponry is largely outdated. (95) Coupled to this, and underlying all of the above is the conservative mentality of the bureaucracy and elements among the leadership who are comfortable with an army that can field more light infantry troops and weaponry, than any other. Conservative standpoints are also an off-shoot of the degree of autonomy evident in Chinese security planning - autonomy that is reflected in the almost entirely independent defence industrial base, even if it requires reorganisation and technical upgrading. (96)

A final underlying impediment to policy change concerns the predilection of a part of the Beijing leadership, to rely on political and psychological approaches to national security over trying to match an adversary's military power. (97) Improving the technological level of defence-related equipment and making selected purchases overseas all feature in the PLA's modernisation drive, but the politico-diplomatic battlefield can also bring
victories with weakness turned to advantage in closer links with the West. The political approach must be seen as one constraint on those elements within the leadership which clamour for increased funding for military modernisation.

Perhaps the first impression that may be derived from an overview of the new doctrine is the fact that it retains fundamental principles that were central to People's War, while acknowledging the importance of being prepared for modern conditions. Part of this preparation deals with the priority now attached to active defence which favours positional warfare with mobile and guerilla operations playing a supporting role. In this way PWUMC turns the previous doctrine on its head. Modern conditions also dictate familiarity with improved equipment and the training required to use it effectively as the hardware reaches the new combined arms formations.

It has been seen that the reforms process has had to progress in the face of an element of conservative resistance and perhaps the best indication of PWUMC's flexible nature is that it acts to combine both old and new. Here too are a number of clues as to the doctrine's strength and utility. By incorporating tested principals of warfare on Chinese soil, with selective improvements at the doctrine and equipment levels (developed at home and abroad), reformist elements have managed to avoid being seen as bringing China's reliance on foreign sources to an unacceptable level. As is to be demonstrated in the next chapter, domestic R+D has been joined to selected concepts and upgraded technology that have long been utilised by Western-equipped forces. At the level of doctrinal guidance significant advances have therefore been made and have already made their own impact to become firmly a part of China's military modernisation.
ENDNOTES


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Chapter 3

CURRENT IMPACT OF DOCTRINAL CHANGE

3.1 Defence Industries: Strengths and Weaknesses

"Peoples War Under Modern Conditions" dictates that weapons modernisation and modernisation of advanced military technologies (C3I, electronic warfare, PGMs, engine/airframe production) must be coupled to important changes enabling the financial and technical assimilation of these upgrades. Even so, the weapons and equipment the PLA must use and the related support of logistics etc. are important issues in themselves. The question posed here, is that given the requirement of modern warfare on the PLA for combined-arms operations and quick response (as outlined above) - can the defence industrial base support that growth? What are some of the constraints upon it doing so?

From the start a qualification is necessary, Beijing's forces cannot possibly hope to even approach parity with Soviet forces, and this is accepted in China. Joffe observes that "the essence of this [modernisation] strategy ... is to rebuild the PLA for far narrower ends" - that is - to cope with a limited incursion.(99) An added "bonus" is the improved ability to defend against smaller regional powers with Vietnam a key example. However, until the military industrial system can adequately meet even the more "limited" current demands, the emphasis on People's War guidelines is likely to persist. This would be to the detriment of the country's ability to deter, even limited aggression.

Many of the problems faced by China's defence industries today, stem from the Soviet influence on the 1950's attempt to modernise. In the early-to-mid 1950's, China relied heavily on an input of military material
which included the plans and expertise to establish indigenous production lines. While this influence had an enormous positive impact and dictated the pace of defence modernisation, there has been the suggestion that Moscow "purposely withheld the expertise and means to develop new weapons systems". (100) An important result of Soviet aid, came with the rapid expansion of productive facilities during the 1950's especially (but continuing after the Soviet pull-out in 1960, albeit at a slower pace), which provided an excess in manufacturing capacity. (101) This was not a problem while the Soviet threat (and that of the US) loomed large. It was however, to force a re-allocation of priorities when it was deemed that the Soviet threat was longer-term and more limited.

"Under Modern Conditions"

The post-1978 drive to boost economic modernisation was seen by some elements within the PLA as a chance to secure a pre-eminent place for defence industrial modernisation. Justification for this "defence-first" stance hinged upon the apparent "spin-off" benefits for the entire economy and the demands that would be made on science and technology by military industry. (102) The final decision - to tie defence modernisation to economic progress - had a direct impact upon budgetary allocations. This reinforced an overall yearly trend whereby the proportion of GNP devoted to defence production been dropping since the early 1970's. (103) The defence industries (nuclear, aviation, electronics, ordnance, shipbuilding and space) have then, due to restricted funding limiting foreign technology purchases, had to produce a more sophisticated product with fewer resources and within a posture of maximum independence.

Strong demands were then placed on the capacities of the industry that have been inadequately met. Some of the blame for this must be attributed to
Soviet unwillingness to boost China's design-engineering and systems-integration capabilities, perhaps because of traditional Russian fears of a resurgent China uninfluenced by Moscow. The end-result was that Chinese R&D became limited to a few major projects (Jammes suggests just one or two models in each type of major weapons system) and in these, efforts became restricted towards incremental improvements and "reverse-engineering" of selected foreign components. A key example of this is found in the efforts made to provide the PLAAF interceptors with an improved engine. The Rolls Royce Spey turbofan represents one example of Chinese defence industrial capacities. It was hoped that the defence industries could absorb foreign technology without being drawn into an overly dependent relationship with a foreign corporation.

Negotiations for this particular piece of technology had culminated in an agreement stating that the Chinese would licence-build the engines with facilities and technical expertise provided by the systems designers. By the early 1980's the project had stalled however, over a combination of a lack of metallurgical design expertise (an inability to produce an airframe to accommodate the Spey at supersonic flight) as well as related problems in fabricating highly heat-resistant components for the engines. The eight-year effort (from 1975) demonstrated that China's defence industries were still labouring under an inability to do little more than upgrade 1950's vintage Soviet designs, especially in this area of high-performance aircraft. Subsequent Chinese adaptions may indeed represent major improvements over the original, and are a cost-effective option given financial constraints, but it could be argued that this still leaves some major problems in the defence industries unsolved.

Such problems (lack of technical know-how) are coupled to an unbalanced approach to R&D which sees strict vertical integration of the industries
restricting the cross-transfer of research results between enterprises. Research is separated from production in China.\textsuperscript{(107)} New research efforts are seen as important, but the system suffers from an inability to apply the results to the production line. This is due largely to centrally-planned management practices which overlook quality and innovation in the search for fulfilled quotas.\textsuperscript{(108)}

While the Chinese work to overcome such systemic difficulties, the observer can trace evidence of the impact of the modernisation drive on military industry such as the integration of civil and military production. PWUMC incorporates the view that China's security environment is stable while modernisation dictates that broader national economic issues must take precedence. An industry that has been demonstrated to have an excess in productive capacity is an obvious target for diversification. The official line for weapons manufacturers is exemplified by the following statement made in 1985:

"We can say that now is an opportune time for the defence industry to shift its main efforts to the scientific research and production of civilian products ... A strong country with good prospects will surely strengthen the construction of the national defence and help the development of weaponry".\textsuperscript{(109)}

The fact that out of four hundred military enterprises, two-thirds are producing goods for the civilian market, should not disguise the fact that this changeover has not been trouble-free:

"With civilian goods, the [defence] factory must face all kinds of competition, collect its market data, find its own funds and raw materials and then market the products itself".\textsuperscript{(110)}
Despite the fact that because of economic pragmatism some enterprises are now being left to slide into bankruptcy, some managers and workers in defence production enterprises consistently demonstrate a poor knowledge of the market and poor quality control. Many enterprises have problems meeting contracts and delivery schedules, even with the high demand for consumer goods ensuring a ready market.

**Aerospace Industry**

The state of China's aerospace industry contrasts greatly with that concerned with conventional defence production. Advances here hold significance, not only for the Strategic Missile Forces but for the country's growing commercial space programme.

The provision of reliable and relatively inexpensive launch vehicles for Western satellites indicates that much effort has been put into the development of facilities and advanced technology. Through a long period of R&D Chinese technicians have acquired a solid grounding in the design and fabrication of space vehicles, carrier rockets, orbital control equipment, heat resistant materials as well as the production of cryogenic (low temperature) fuels. This fuel is utilised in the new 3-stage CZ-series boosters. Advances in solid fuels also made the 1982 underwater launch of a new SLEM possible.

Important "spin-off" benefits from the aerospace programme include the development of a world standard tracking and transmission network that controls China's satellites and is capable of receiving satellite transmissions in all 29 provinces. Flow-on benefits from the mastery of space camera optics and re-entry film capsule technology for military use, are directed towards weather monitoring and earth resources applications.
Such advances obviously serve to make the space and missile industry a high profile one and need to be considered to balance out the often gloomy picture presented by the other defence-related production industries. These industries of course, tend to benefit from advances in the space technology field as improvements in electronics, computerisation and remote sensing technologies (for example) find applications on armoured vehicles, at sea and in tactical aircraft. Such broad-based efforts are essential if each service is to improve its capabilities. Despite the constraints evident on any quick change to defence industrial capacity it would be a mistake to dismiss this sector, especially when the achievements of its aerospace industry are examined as an example of what can be done given the proper funding and other support.

3.2 Modern Conditions and Professionalism

The trend in China's national defence away from People's War, has had to contend with economic, technical and military backwardness - all elements that helped to give rise the Maoist doctrine which had spawned a light infantry tradition. The factors determining China's timetable for defence modernisation have been found to be a longer term threat environment and the overall constraints of national modernisation. The result is that, within the context of the "Four Modernisations", the downgrading of defence modernisation (especially conventional modernisation), has placed organisational and manpower reform at a premium with weapons upgrades to follow. Indeed, the funds saved by this "regularisation" (zheng gui hua) have become available for hardware and other improvements. (117)

With this in mind, the following elements need to be considered under the heading of "professionalism/regularisation". Education and training for an
"at the gates" defence strategy demonstrates the degree to which the PLA will go in a bid to modify People's War. Logistical strengthening, and the structural reform of military region and Field Army amalgamations, all illustrate something of the military's efforts to support a "people's war under modern conditions". All (suggest Heaton) (118) throw current issues of the problems of military modernisation in China, into sharp relief.

Education and Training

(i) The Military Service Law

The issue of professional military education and training has the tendency to pose a number of broader questions. These include, that of the relationship between ideological and technical values; the role of the military in society; and the pursuit of an effective national security strategy in PWUMC. Military education is also an important vehicle for the socialisation of the PLA's "leading cadres" (officer class), and relates to the broader politics of modernisation.(119)

1984 was a landmark year for the reorganisation of education and training practices, with the promulgation of the Military Service Law. Strictly speaking, the changes that were made at this time were amendments to the original law of 1955, but they were deemed to be urgently needed nonetheless. PLA Chief of Staff Yang Dezhi emphasised the following in explaining the changes:

"Basically speaking, the law [of 1955] is fine and has played an important role in strengthening the building of China's army... ...In the past 30 years, however, the situation has undergone a great change. We must not only build the Armed Forces into a powerful, modernised, and regularised revolutionary army, but must also further strengthen the building of the militia and perfect the system of reserve duty, so that we shall lay a good foundation for quick mobilisation during wartime".(120)
Central to this directive, were a set of measures that effectively set the tone for subsequent efforts to regularise the officer corps. It was stressed that the sort of "leading cadres" necessary to lead a modernised army were those that were "more revolutionary, younger in average age, better educated and more professionally competent". This became somewhat of a "catch-cry" to be repeated constantly as the principle goal to be met by the vastly proliferating military academies.

"We must indeed place education and training in a strategic position by strengthening education and training in military academies, making a success of in-service training and encouraging self-study".

(ii) Military Academies

The growth of the military academies tends to illustrate the sensitive issue of "dicing" with ideological precedent. Mao was never against modernisation per se (his emphasis on the need to acquire nuclear technology for its military and political leverage must be remembered) but it was only to be on Maoist terms. Harlan Jencks saw this reservation most clearly in Mao's unwillingness "to see the emergence and growth of the technical, educational, and managerial elites which always accompany technological development". China's social revolution and all that it meant for the continuing dominance of Mao's thought would be in danger of being compromised. To this end, the Cultural Revolution's denigration of professionalism saw the number of military schools drop from 140 to 40 - "Like education in general in China, military education ground to a halt".
Changes followed quickly from 1978 under Deng, so much so that the Military Service Law, far from initiating a trend, was in fact reflecting previous efforts. By 1980 there were 54 basic-level institutions catering for high school graduate entry to courses of upwards of four years duration. These were both general command and technical schools for officer candidates. The true significance of the catch-cry's emphasis on an overall improved education and technical competence was felt in the arrangements for middle and upper level cadres (up to and including the General Staff). To this end, the official stress on education as the key to promotion was outlined in the Military Service Law and was to be served by a restructuring of the officer school system.

Currently, each service has its own schools at basic, intermediate and advanced levels for the training of entry-level cadres and candidates for battalion, regimental as well as divisional command. The peak institution in this system (at the advanced level) is the National Defence University (NDU) which fosters the study of combined arms/joint-service operations for Group Army commanders. There is a related emphasis on the strategic "think-tank" for the study of Soviet strategic thought, and the lessons of recent Middle Eastern conflicts and the Falklands War. The best students from the academies are invited to remain as instructors and indeed the active encouragement of intellectuals in the PLA is an oft-reported feature of current professional education in China.

Another feature is the incentive provided by the reintroduction of ranks and insignia. These were restored by 1988 and consisted of "Eleven Ranks in Three Classes" - that is, "general, field and junior officers" from Second Lieutenant to First General. Ranks, which were deemed in 1965 to be "feudalist, capitalist and revisionist", are now seen as an important indicator of general military reform. Specifically, they are seen as a
reward for meritorious service and indicate political integrity, abilities and the serviceman's post/responsibility. Defining clearly the position and role of both officers and (ultimately) enlisted personnel is said to encourage concentration and specialisation "so that they can give full play to their skills in modernising the Army". (132) The next task, will be perhaps to pay some attention to the PLA's pay scales, which lag far behind those available to semi-skilled factory workers earning substantial bonuses.

(iii) "Cracking the Iron Rice Bowl" (of Guaranteed Employment)

The policy of promotion on merit, (not seniority) to specified ranks was significant for junior officers as well as veteran cadres in that it represented changes in what both categories could expect from the system. The "up or out" mentality has then led to official pressure for the retirement of senior officers to make way for the academy trained specialists. (133)

The clash between technical and ideological imperatives is strongest here. The "Long March" generation cannot be expected to happily relinquish the status and perquisites that come with permanent positions in the PLA hierarchy. Indeed the efforts of the modernisers to "crack the iron rice bowl" in industry are not so easily duplicated when it comes to military retirement. There is no formal requirement for PLA retirement. (134) Nevertheless, the promotion of younger, better educated cadres hinges on places being made for them, and the overall drive for professionalism hinges on "diluting" the bureaucratic tendency to cling to what is known. This demands generational change and reduction in the political role of the PLA - something that was evident up to mid-1989 and is clearly evident currently. (135) It also requires that the economy be able to support the rapid rise in the numbers of demobilised soldiers. (136)
A current feature of the drive to ease-out the geriatric high and middle-level cadres, is to ensure that there will be adequate housing and on-going employment opportunities for them.\(^{(137)}\) Despite the good intentions, the sheer size of the problem has placed a huge burden on local authorities seeking to transfer and place demobilised cadres. On top of the normal demobilisation process, over 70,000 officers were to be retired from 1986 (although 100,000 were already retired by early 1986).\(^{(138)}\) Current reports indicate that cadres trained in much-needed disciplines (foreign languages, medicine, computer sciences, management) are readily placed in government departments and the private sector.\(^{(139)}\) The majority however, are not faced with a demand for their services and this is likely to become a compounded problem as more personnel are removed from active duty in the coming years.

\(\text{ (iv) Combined-Arms Training} \)

Apart from officer education, the entire body of the services need familiarisation with joint-service operations for the air-land (and naval) battle. This means co-ordination of all arms from the infantry (ideally a more mobile and mechanised force), artillery, ground-based air defence, land transport, communications etc, to the airforce (ground support, interdiction, transport, reconnaissance) and naval units.

Coordinating exercises that demonstrate combined-arms operations is currently placing demands on the academies to produce officers familiar with the characteristics of services other than their own.\(^{(140)}\) Special attention is also paid to exercises predicated on the opponents' use of tactical nuclear weapons,\(^{(141)}\) a possibility that places real demands on equipment designers. For example, the EMP and chemical warfare protected tank comes into its own here, as do decontamination units/practices.
The first large-scale exercises in several years were held in 1978 and have continued annually to familiarise individual units with the demands placed upon them when operating as a combined force. Following a particularly large-scale combined services exercise in 1981, Deng Xiaoping was quoted as observing:

"...These exercises have given us an opportunity to assess our achievements in building modern, regularised armed forces, and have simulated modern warfare fairly well. They represent part of our effort to explore combined operation by the various services and arms under modern conditions". (142)

Within these combined exercises, the emphasis is reportedly upon increasing familiarisation with high technology command and control systems. Automation for combat command has included the deployment of a Chinese-character information processing network (143), as well as portable artillery command systems incorporating micro-computers and laser positioning. (144) Such systems are quickly utilised in exercises when they are ready for deployment (according to recent reports).

**Structural Streamlining**

(i) Manpower reductions

Training and combined arms exercises are important examples of professional reform, but the observer needs to recognise that they form a part of a broader structural reform programme:

"The fundamental goal of the structural reform, streamlining and reorganisation... is to build our Army into a crack force. Without reforming the Army structure, it would also be impossible to improve combat ability". (145)
One factor that has received much attention since 1985, have been the manpower cuts made in order to build a smaller army and avoid the situation which moved Deng to comment in 1975, "We can't say that every division is bloated, but it is definitely true to some extent of the army as a whole". By 1987 manpower reduction had seen the PLA trimmed from 4 million personnel to 3.2 million, a figure accepted as still being maintained. This is despite reports of 700,000 servicemen either as demobilised or redeployed from the PLA in 1987. The bulk of these were in the ground forces and especially the less - well armed and organised garrison forces. A smaller army conforms more closely, to the new military doctrine which envisages positional and mobile defence against a limited attack and as such requires fewer (but better trained) troops than under People's War.

(ii) The New Group Armies

The Group Armies (GAs) are to incorporate under one commander, a fully mechanised formation of infantry (two to four divisions), one or two tank divisions plus support units (engineer, transport elements for example) and air defence. The tank and motorised-rifle formations are to constitute integrated combined-arms teams, and if organised along, or near, Soviet lines would include infantry, tank, artillery, anti-tank and anti-chemical units (to counter Soviet CW) - under a single commander. To facilitate this structural change it is envisaged that thousands of units at regimental level and above would be abolished or merged.

Reorganisation had taken place on paper by 1985, but equipping the new formations with the latest hardware has slowed the process. To date, only three of the planned 22 GA's have been fully equipped. It is envisaged
that coordinated mobile warfare and positional war will be facilitated by
the mechanised forces which are to form the combined-arms teams. The
intention is to meet the Soviet combined forces at the border with a
similar formation and limit their penetration.(154)

Although caution should be used when evaluating GA composition, it is clear
that large-scale reorganisation has taken place. Further rationalisation of
resources (no doubt influenced by economic pressures) has led to the
transfer of large "parcels" of PLA infrastructure to civilian use, as in
the defence industries. The merger of the Railway Corps into the Railway
Ministry and shifting the control of local security troops to a civil
organisation are but two examples.(155)

(iii) "Regularisation" and the Military Regions

Military region amalgamations quickly followed the above changes, to
facilitate a coordinated defence. The Regional Army is currently organised
in 7 Military Regions (MR's) with 29 Military Districts (MD's). In wartime
the frontier MR's are to become "Fronts" or combine into Strategic
Sectors.(156) Reorganisation is supposed to ease command centralisation and
enable the General Staff to coordinate regional forces more
effectively.(157) The Group (or Integrated) Armies are under a centralised
command (in contrast to regional forces) but in time of conflict, both are
utilised in the "Fronts".
TABLE: ESTIMATED GROUP ARMY* DEPLOYMENT

<table>
<thead>
<tr>
<th>Military Regions</th>
<th>GA*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shenyang (North-East)</td>
<td>4 - estimated 1988/89</td>
</tr>
<tr>
<td>Beijing (North)</td>
<td>5</td>
</tr>
<tr>
<td>Lanzhou (West)</td>
<td>2</td>
</tr>
<tr>
<td>Chengdu (South-West)</td>
<td>3</td>
</tr>
<tr>
<td>Guangzhou (South)</td>
<td>3</td>
</tr>
<tr>
<td>Jinan (Central)</td>
<td>2</td>
</tr>
<tr>
<td>Nanjing (East)</td>
<td>3</td>
</tr>
</tbody>
</table>


The integration of forces into GA's and the reorganisation of Military Regions indicate the thrust of current streamlining which aims to maximise efficiency. Certainly in the case of the MR amalgamations, the resulting cut in administrative infrastructure (including hundreds of senior staff officers) is one way to achieve streamlining.(158)

(iii) The Fate of the Militia

The organisation of a Reserve component (not seen since the 1950's) continued this trend (embodied in the Military Service Law) of structural streamlining and professionalism. The Law specified the categories of officers and enlisted personnel eligible for reserve duties. These included all officers and enlisted personnel withdrawing from active duty (unless for debilitating illness); college graduates that "are made to serve as reserve officers", and other technical and professional personnel.(159) The intention would seem to be to create a pool of educated personnel of a higher level of military (and technical) training than the often poorly trained militia forces that the Reserve is replacing.
As with other aspects of defence modernisation, reorganisation of militia forces has been accompanied by official explanations aimed as much to demonstrate the PLA's resolve to meet the conditions of modern warfare, as to send clear messages to Party conservatives. The deputy Chief of the PLA General Staff (He Zhengwen) was at pains to emphasise that;

"...the future war against aggression would be [one in which] the enemy forces, forms and ways of operations and the equipment used ... would all be quite different from the past. It would be too late in such a war for the militia to be organised in the old way, first by mobilising the people, then forming militia ... units, and later upgrading them to the level of regular armed forces".(160)

The service is divided into primary and general units with all demobilised soldiers under 28 years of age in the former and 18 to 35 year old males (without military training) in the second category. This then serves the twin goals (it is suggested) of reducing the number of troops in peacetime, but creating a broad mobilisation base for use in time of conflict.(161) The primary function of the militia in this context is not, then, to fight alongside the regular forces as envisaged in People's War, but to provide the regular forces with manpower as needed.(162)

(iv) Streamlining the Logistics System

Strengthening logistics services is also a goal undertaken in the interests of regularisation. Its importance was recognised in official statements from 1982 especially, when an all-army logistics conference was held. The official line recognises that "...automation, high speed, flexibility and complexity [of modern forces and warfare] ... sets ever more arduous and complicated tasks in ensuring logistics support".(163)
Anxious to avoid the repetition of the supply line difficulties of the Korean War, the PLA had (by 1984) implemented a "comprehensive logistic support system". This consisted of networks covering the supply of transport, medicine and health, machine repair, and communications. (164) The application of computer inventory to the administration of logistics services is one current example of the drive to minimise inefficiencies and observe financial discipline. Another is the establishment of logistics support at headquarters, military region and group army levels, to ensure uninterrupted and rapid resupply for joint-service mobile warfare. (165) It is hoped that this move would tie logistics support in more closely with the Integrated Armies.

The General Logistics Department itself has not escaped streamlining and if the current plans for reform are implemented, it will preside over a system of factories, research institutions, colleges and hospitals that has been "cut by half". (166) While hoping to improve the service that the logistics base can provide, it is inevitable that the financial constraints leave a trimmed Logistics Command unable to perform all its stated functions. In late 1988 the China Daily, reported that from 1989, no new defence construction projects would be undertaken. Only smaller projects such as barracks for soldiers under battalion level and some family housing would be continued in an effort to subordinate this area of logistics work to the nation's economic development. (167)

3.3 Ground Forces and Weapons Modernisation

The important issues discussed above all impact in different ways on the modernisation of the PLA as a whole and have a greater impact on the light
infantry-dominated ground forces. The priority assigned to hardware modernisation has been shown to be behind that of the broader structural reorganisation. Indeed, this fundamental tenet of military modernisation has withstood leadership changes and policy shifts, so much so that Joffe considers it to be the "wellspring" of China's weapons development strategy.(168) Constraints on weapons modernisation do not stop at the level of funding and have been shown to result from a mix of financial, doctrinal and institutional factors.

Weapons and equipment modernisation deserves to be considered separately from the important structural reorganisation that is currently underway. Godwin identifies the combat performance of military hardware and this issue of reorganisation as providing a fundamental dilemma for the PLA: "does its outdated weaponry so restrict its battlefield performance that no amount of reorganisation ... will do more than make a marginal increase in its combat performance"? (169)

"An Irresistible Trend"

The direction of hardware modernisation for ground forces has been set, and it represents a substantial departure from Maoist doctrine. Under Mao, ground forces trained as infantry and became proficient in close-quarter combat, night-fighting and highly fluid guerilla operations. Logistics support consisted of the support of the peasantry and the enemy's discarded material. Communications and intelligence also relied on the support, carefully garnered by the CCP in the countryside.

By the late 1970's the primary combat power provided by ground forces was found in the 136 main force divisions of which 121 were infantry, 12 armoured and only 3 airborne.(170) Since 1979 however, ground force modernisation has made impressive gains within financial constraints that
have weapons renewal taking the twin forms of incremental upgrades of existing platforms and selective foreign component purchases. This development has been guided by a commitment to "follow the road to mechanised and armoured equipment firmly and unswervingly". (171) This commitment is said to be dictated by the "law" that this reform is itself compatible with economic development in the following manner.

Such development is said to, firstly, result from advances in science and technology which are themselves based on the state of the economy and the level of material production. As "this new industrial revolution" advances, so too do the opportunities for increasing the Army's level of mechanisation. (172) "This is really a revolution of the "post-nuclear era"! We should not miss a chance to accelerate the pace of our Army becoming mechanised and armoured in this climate". (173) Secondly, the nature of the modern battlefield is said to make stronger demands on science and technology which, when adapted to the needs of the Army, will cause mechanised warfare to move to a higher plane. Beijing assumes that a mechanised and armoured force will still form the core of a modernised ground force. The combination of various elements in such a force - "will naturally enable the whole force to be doubly effective, and thus capable of fully adapting to the features of modern warfare, which tends to be three-dimensional, combined in nature, in-depth, and omnidirectional". (174)

These developments (towards becoming armoured and mechanised) are also said to lead to reforms in the quality of personnel, education and training, ways of fighting and military theory. Together these factors, along with the simultaneous production of various weapons systems, constitute "an irresistible trend" in being able to better cope with modern war. (175)

In order to work within funding constraints, the principle of incremental modernisation (of existing platforms) in keeping with the directive to
"give full play to the role of existing equipment" is to be followed. It is stressed that "We must adopt advanced scientific technology in nationally transforming existing equipment". (176) The way is then open for selected foreign component purchases to improve existing platforms.

Hardware Improvements within this Framework

The MBT (main battle tank) development programme illustrates the drive to improve upon outdated systems in keeping with the theme of moving towards a more mechanised and armoured force. Improved versions of the 1950's vintage T-54 reflect efforts to upgrade the three major functions of firepower, armour and manoeuvrability.

Specifically, added protection has been developed against hits by armour-piercing (AP) rounds on the side, an improved gun (105mm) was added with Israeli assistance, along with European infra-red and fire-control systems. Israel is also said to have provided technology for an armour-piercing shell capable of penetrating the frontal armour of a Soviet T-72. (177) A current version of the upgrade (T-69/II) is available for export with foreign systems. However, against its likely opposition these upgrades are still outmanoeuvred, outgunned and have not been produced in sufficient numbers to make a difference. (178) Beijing also recognises that it cannot devote scarce funds to just one or two types of weapons system or platform:

"It can be seen that in modern warfare that involves a great variety of weapons, a three dimensional battlefield, and the combined use of various types of weapons, it is lopsided to emphasise the role of a single weapon system". (179)
In keeping with this, other systems have been developed simultaneously with the MBT programme. Efforts to mechanise the Group Armies have extended to the less technologically-intensive areas of APC, light vehicle and transport helicopter manufacture. Offensive systems such as anti-tank guided munitions (ATGM's) have been purchased or copied from existing Soviet designs to correct glaring weaknesses in the face of a Soviet force superiority. Such efforts greatly increase the strike power of the GA's but must be seen to be of limited utility if not matched by broader-ranging improvements. Other advances for tactical defence include improvements in artillery deliverable mines and incremental improvements in the lethality of AP shells (made possible with US assistance).(180)

STANO capability (surveillance, target acquisition and night observation) coupled to improved communications, has received a boost with a satellite surveillance and communications capacity now demonstrated.(181) This is important if the PLA is to become more responsive, integrated and efficient.(182) Strategic and tactical communications are not entirely secure, however, and the capabilities currently demonstrated are all susceptible to jamming and monitoring.(183) Signal flags, couriers and human reconnaissance must still be utilised until such time as the requisite equipment reaches the field. Advances in the Chinese electronics industry hold the promise of rapid improvements however as do related developments in the space industry. The proven ability to place satellites in orbit reliably (and relatively cheaply) is helping China to earn foreign exchange, but also to improve the PLA's chances of monitoring any Soviet buildup along the frontier.(184)

This raises an important point with respect to hardware modernisation. Successful integration of air, air defence, and nuclear forces into a land battle "under modern conditions" requires rapid and continuous
communications along with suitable doctrine and organisation. (185) A great deal of funding and development efforts are employed in these areas but each must still be said to be (by the end of the 1980's) in a state of flux. Despite the slow pace of weapons modernisation, Harlan Jencks suggests that the PLA "may have suitable weapons ... before they have the doctrine, organisation, and C3I necessary to use them". (186)

While resigned to their priority ranking within the modernisation drive (and while being occupied with "non-equipment modernisation") PLA commanders are beginning to chafe at the awkward pace of reform. (187) There are few signs however, that this feeling is strong enough to directly challenge the direction of this reform and its place within overall economic modernisation.

3.4 PLAAF - Strengthening for "modern conditions"

Strengthening the firepower, integration and mobility of ground forces is indeed a crucial exercise if the PLA is to have the ability to counter an invasion by a modern opponent. Planners in Beijing have also had to consider the requirements of air cover for their ground forces to better enable them to meet an adversary that is not likely to attack without its own airpower.

The airforce must be in a position to field the following key platforms, and it is a measure of the task ahead for the Chinese that the PLAAF is deficient in almost all of them. These include: heavy attack aircraft for ground support as well as air superiority aircraft; updated SAM's effective against low and fast-flying aircraft; air to air missiles; armed helicopters; long-range bombers with penetration capabilities, and an effective early warning system (ground/air based). (188) The PLAAF does
field examples of many of these systems, but their capabilities fall far short of those of other regional air forces, let alone those of the superpowers.

**Early Development**

Franz Mogdis considers that the Chinese airforce owed its initial development entirely to Soviet military aid and assistance in establishing indigenous production lines.\(^{(189)}\) As a result it became the most dependent of all of the services on the Soviet connection, especially during the Korean War when the air arms' capabilities were radically transformed. It was then much more vulnerable to the total withdrawal of Soviet assistance in 1960 which limited the aircraft industries capacity to innovate beyond 1950's designs.

By this time however, Beijing had obtained the blueprints and technology to enable them to put both the J-5 (MIG-15) and Shenyang J-6 (MIG-19) into series production. A medium and light bomber capability was provided by the "Hong" series (S and 6 "II-28 "Beagle" and Tu-16 "Badger" respectively) but the emphasis was primarily upon strategically-defensive types.\(^{(190)}\) This led to a priority being placed upon fighter aircraft, as well as radar and SAM development. The aircraft industries capabilities were then tested in the development of a MIG-19 derivative known as the Q-5 (variously known as the Fantan-A, F-6 bis). At the time (late 1960's) it was seen as an impressive example of an indigenous design capacity, incorporating a redesigned airframe, internal weapons bay and conical nose to house a doppler radar. It was to be utilised in a ground support role.

A final example of early fighter aircraft development was the series production of a copy of the early model MIG-21 (J-7). Its limited armament
and equipment was to represent only a small advance over the more
successfully produced J-6 in operational terms however. Many observers
considered that the production line had slowed by the late 1960's/early
1970's. (191) This was partly a reflection of the fact that this aircraft
was more difficult to produce by the labor-intensive means adopted by the
Chinese for the fabrication of early 1950's designs. (192)

The Soviet Challenge for China's Air Defences

The air-land battle poses a number of unique problems for the PLAAF.
Certainly the sheer size of the land mass to be defended presents a
difficult challenge unlike that posed by the defence of point targets (for
example). The defensive resources needed to cover the large number of
military and industrial targets are immense, (193) and yet out of 600
dispersal airfields only around 150 are suitable for jet aircraft and few
could sustain effective operations for long. (194) Also, despite the high
concentration of important targets located in the northeast indicating
likely goals in a Soviet air attack, there has been a pressing need for a
more efficient early warning system to define an immediate threat more
precisely.

Two further aspects affecting air operations over the Sino-Soviet border
include weather conditions and topography. In the first case, considerable
variation in weather conditions and the inhibiting nature of winter in
northern latitudes places strong demands on an air force's ability to
conduct operations in adverse conditions and at night. (195) A force
consisting mainly of aircraft built for daylight (in lacking adequate
radar) and fair weather is likely to be unduly restricted in such
conditions. The topography of the Sino-Soviet theatre also favours the
Soviet air forces. Sweetman observes that most major Chinese cities are
within 60 to 90 minutes flight time from major Soviet or Soviet controlled
bases in Siberia and Mongolia. As major Soviet Far Eastern cities are also close to the frontier, it would seem that both sides would demand secure early warning to boost their force's quick reaction.

It is unrealistic to assume that the Chinese could match the forces deployed by the Soviet Frontal Aviation (FA), but the improvements made to this force's strike-power over recent years illustrate the task ahead for the PLAAF. FA provides all the tactical airpower and is the largest arm of the Soviet air force in numerical terms. It complements the other principal operating arm, long-range Aviation (providing strategic aircraft) and the "Air Defence" arm (PVO Strany) which is the world's largest air-defence force. Other separate arms include the Strategic Rocket Forces and Naval Aviation.

FA has the role of coordinating offensive operations with Soviet land forces and incorporates aircraft that "entirely outclass anything which the Chinese can field in significant numbers". High performance fighter and attack aircraft have been deployed to the Far East which can carry more ordnance for greater distances and deliver it with greater accuracy and less chance of interception (due to extensive jamming devices carried). These advances are represented in the MIG series "Foxhound", "Flogger", "Foxbat" and the Sukhoi "Flanker". Dedicated ground-attack/close-support aircraft are another significant (and recent) addition to the FA. The Sukhoi-25 "Frogfoot" (similar in concept to the USAF's A-10A "Thunderbolt") could have a useful anti-armour role, especially if deployed in concert with the MIL-24 "Hind" helicopter gunship against ground forces inadequately supported by their own air cover.

As offensive weapons platforms have improved, Soviet defensive systems along the frontier and their OMG's organic air defence systems have made the task of halting a Soviet incursion much more difficult. On Soviet
territory Moscow can rely upon a fixed and mobile OTH-B (Over-the-Horizon backscatter) radar at Nikolayev-an-Amur covering northern China.(202) The before-mentioned PVO Strany forces incorporate "more than 5,000 early warning and height-finder radars, over 2,500 manned interceptors and some 50,000 SAMs ... at over 1,000 major missile sites".(203) There is also the ground force's own layered defences consisting of medium-range SAMs, radar controlled guns and man-portable missiles.

As against a PLAAF 4 or 5: I numerical advantage,(204) Moscow can rely on its ease of reinforcement from Western SSR's, general qualitative advantage, and the ELINT and reconnaissance advantage. Soviet forces are present in sufficient strength to hold their own in local clashes if a border-wide conflict emerged. However in the more likely event of their being utilised in offensive action on a limited scale (a punitive raid or to seize territory for bargaining purposes) (205), Soviet air power would have the consistent advantage of "engagement control" thus wearing away at China's numbers and reducing her ground forces vital close support air cover.

**PLAAF Roles for "Modern Conditions"**

A principal indicator of the air force's efforts to fight a war under "modern conditions" is its ability to coordinate with ground forces in the new Group Army (combined service) formations. "Coordination" refers to the support of ground forces via the provision of aerial reconnaissance, battlefield interdiction, localised air superiority, close air support and early warning.(206) The improved mobility of ground forces is likely to become irrelevant if they cannot rely on this support.

Godwin suggests that the PLAAF could be optimised for this role by reorganising along the line of Soviet Frontal Aviation.(207) An "Air Army"
consisting of three divisions of approximately 100 aircraft could be formed to support The Army Group thereby creating a composite force.(208) Secondly, ground-based air defence could be merged with the new Group Army formations, although remaining under airforce control. There is some evidence that this is being done.(209) As for the elderly bomber force, the task of carrying out offensive operations beyond the range of tactical aircraft can be envisaged. However, strategic bombing's emphasis on very high altitude or low altitude missions coupled to high speeds and endurance are beyond the current force's capabilities. A useful role could be found for these Tu-16 and Il-28 copies, as weapons platforms for stand-off missiles thus enabling them to attack beyond the range of local ground-based air defences.(210)

Military airlift is also required, to complement tactical and long-range aircraft and ground defences in a composite force. Some 420 transport aircraft are available along with a sizeable civil fleet incorporating a mixture of Soviet and American designs.(211) Reorganisation of these resources under a Military Air Transport Command under Group Army direction is feasible, but would require an increase in the number of aircraft and in their capabilities (212) - (payload, range, strengthening for heavy military loads etc).

There are then a number of requirements to fulfil if the PLAAF is to become linked to its ground forces to provide an adequate defence of continental China. Coordination of available resources into Frontal Aviation, Long-Range forces, Ground Defence and Military Airlift units provides a preliminary force structure. This in turn "provides the basis for a transition from strategies based upon concepts of people's war to strategies in which combined arms forces are structured to increase the combat effectiveness of available units".(213)
Hardware Improvements within this framework

The Chinese have made strenuous efforts to overcome defects in its air defence inventory. In the area of high speed fighters, Beijing has opted for selected foreign component purchases in what must be seen as the "quick-fix" option. F-7 (MIG-21) upgrades are a case in point.

The export version (F-7M "Airguard") has had incorporated into its avionics suite, a Western-made head-up display, weapons-aiming computer system, air data computer and a new radar. The Chinese have been busy redeveloping the engine to produce more thrust and improving the primary armament (a single cannon) but so far only a limited number have been deployed compared with the MIG-19 derivative.(214) The number of improved versions actually available to the PLAAF is probably limited, in that arms sales for foreign exchange have a high priority. There have also been efforts to move beyond what are essentially 1950's based designs.

The F-8 "Finback", a Mach 2.3 multi-role supersonic interceptor is apparently based on the Soviet MIG-23 and will represent a significant advance in China's air defence capabilities if they can be produced in any quantity. It is said to require a new engine before its performance can begin to approach that of current Western interceptors,(215) and has been under intense development as well a the subject of a US $550 million avionics update along the lines noted above. While it has been suggested that these efforts will make the F-8 fully the equal of the MIG-23 (216), there is the problem of the update being based upon an aircraft supplied by Egypt which in itself was a downgraded export version.(217) The F-8 would also have to deal with more capable Soviet aircraft (developed since the first roll-out of the "Flogger" series) and now operational in the Far East.
Similar problems are encountered among ground attack forces represented by the Q-5 "Fantan". This aircraft's limited radar suite means that it can only deliver its ordnance "in a diving attack from medium altitude against a target that has already been visually identified and located on a first pass". Efforts to improve this aircraft's chances of success and survival have led designers to again seek foreign assistance. In this case, an Italian company (Aeritalia's electronics division) has provided new electronic navigation and fire-control systems, to produce a new export version (A-5M) which had its maiden flight in August of 1988.

Until these can be produced in useful quantities, the F-6 and Q-5 will have to suffice as the backbone of the PLAAF's tactical force. They will continue to be outclassed by Soviet tactical aircraft with the performance to rule out any attempt to force them into an engagement.

No armed helicopters have been reported to date, although recent reports clearly suggest that elements within the PLA see these platforms as an essential addition to a combined formation's inventory. The view that "Crawling on the ground will soon become history ... future battlefields will be dominated by helicopters" has to compete with the official line stating that, "the era of using a single weapon system, or letting a single arm dominate the battlefield, is gone".

An upgraded B-6 (Hong - 6/Tu-16) now has a greater strike potential with the addition of C-601 anti-ship ALCM's. This aircraft equips both the PLAAF and Naval Aviation and with the addition of in-flight refuelling will extend Chinese aircover markedly, which will undoubtedly give some regional countries cause for concern if tensions over the Spratly Islands increase.
Two final (and related) issues involve ground-based air defence and EW radar. The CSA-1 is the only SAM in Chinese service (a copy of the SA-2 "Guideline") and equips 28 Air Defence regiments. It lacks mobility so would be unavailable to cover the more mechanised of the upgraded ground forces at short notice. It is also susceptible to jamming. While this weapon still equips the PLAAF, advances have been made in EW with a new domestically made radar network which can cover the whole territorial air space of the country. It is deemed to be a well organised warning system "close to advanced level in major areas of technology".

Considerable efforts have then been made to improve not only the PLAAF's technological base but the force's organisation and coordination with ground forces. Selective use of foreign technology and expertise have allowed rapid advances but it is clear that these changes need to be made on a broader scale to shake off the technologically backward legacy of the PLAAF's first thirty years.

3.5 Naval Forces: New Doctrine, New Role

People's War was a doctrine formulated primarily for ground forces. Field Army Commanders having experienced success with guerilla and mobile warfare against the Japanese and Nationalist forces were, for the most part, unconvinced as to the Navy's contribution to national security. The development of the PLAN as a coastal extension of the ground forces followed from this view, but was reinforced by the vigorous application of People's War at sea as noted in the first chapter.

Precursors to a New Doctrine

The "changing of the guard" in the political arena is, of course, directly related to the PLA's changing role and force structure. In relation to the
naval forces, there was a perception of a sharper Soviet threat, and not one that consisted exclusively of missile, air and ground forces. The growing threat posed by the Soviet Pacific Fleet, illustrated clearly by the massive naval exercise "Okean 75", enhanced Chinese fears of encirclement.\(^{(228)}\)

In two key indicators of naval capabilities - quantity and quality of hardware and operational open ocean experience - \(^{(229)}\) the Soviet Pacific Fleet is well ahead of the coastal-oriented PLAN. These general deficiencies are perhaps less of a problem for the Chinese if they are content to retain the coastal defence orientation held previously. There are a number of factors however that have merged beyond the threat posed by the Soviet Navy, and which have acted to create a need for naval forces with a greater reach.

The 1970's brought a clearer perception of the path ahead for China's overall economic modernisation. Part of this was some recognition of the importance of coastal and offshore development. A greater emphasis on maritime trade has led to a "sea control" requirement (protecting sea lines of communications (SLOC's) and one of "sea denial" (denying certain sea areas to enemy naval power).\(^{(230)}\)

Beijing's "realisation" that its national interests did not end at its shoreline led to participation in the protracted UN Law of the Sea negotiations from 1973 to 1982. Beijing's participation in the important questions of exclusive economic zones (EEZs), free passage of shipping and the limits of territorial waters illustrated the renewed salience of maritime foreign relations for the Chinese.\(^{(231)}\) Commercial factors also highlighted the growing importance of maritime affairs in China's modernisation. The growth of the country's merchant marine threw the sea
control requirement into sharper relief. The 1970's saw the purchase or construction of ten million dead-weight tons of shipping for the domestic and international market, and a subsequent growth in maritime trade. (232)

The exploitation of oil and gas reserves beyond a country's EEZ was also raised during the negotiations. China's stance on exploiting resources along her continental shelf from the Gulf of Bohai to the South China Sea quickly brought her into conflict with her regional neighbours however. The question of sovereignty over the Japanese administered Senkaku Islands, the Paracel Is. group, and the Spratly Is. group became intertwined with the issue of resources exploitation. (233)

A Greater Regional Role

Statements issued from 1977 illustrated that a navy with a longer reach, could have a role in retaining and/or returning Chinese control to certain irredentist territories. (234) Taiwan was often mentioned in this context. Amphibious landing exercises were conducted in the Taiwan Strait area in 1976 but Beijing has been careful to alternate the carrot with the stick and now stresses peaceful unification. (235) A more complex example of a territorial dispute are the competing claims over the ownership of the Paracel and Spratly Islands. It illustrates the extent to which Beijing wishes to expand her naval presence in East Asia. (236)

Although having to contend with Vietnamese and Taiwanese claims of ownership, the Chinese are now firmly entrenched in the Paracel group which was seized by amphibious forces in 1974. (237) 1988 saw Chinese forces secure their first permanent foothold in the Spratly Island group after a brief battle with Vietnamese troops. Naval and land forces have since consolidated this gain. This follows from an earlier operation where naval
forces conducted a "double-pronged show of force" around the 150 scattered atolls and reefs that make up this Southern Island group.(238) This was a significant exercise in naval presence and force projection. The former being defined as the employment of maritime power "to convey messages of resolve, concern, or support". In this case it was a demonstration of resolve, and a challenge to Vietnam, Taiwan, Malaysia and the Philippines who all claim the island group in whole or in part.

The capabilities demonstrated still serve to highlight a number of areas in which the PLAN remains deficient despite recent advances. Economic imperatives have combined with military capabilities to drive China in the direction of becoming the major naval force in the China Seas but available technology still constrains the PLAN. Vast improvements are needed if Beijing wishes to be in a position to deny regional waters to the Soviet Union in time of war.(239) Even further improvements in weapons and equipment, as well as open ocean experience, are vital if the PLAN is to attain a sustained power projection capability at sea.

Weapons and Equipment: Towards a "Blue Water" capability?

Until recently, there was considerable evidence to suggest that Chinese navy's operational reach justified the tag of having "a very short tether".(240) This was an assessment not totally reversed by the, admittedly impressive, exercises in force projection and co-ordination mentioned above.

Static measurements show the PLAN still influenced by its long-standing coastal orientation. Beijing can still count on the largest small-ship force (missile, torpedo and patrol craft), deployed by any navy. An impressive number of diesel electric submarines are well suited to coastal
operations but apart from five nuclear submarines (Han and Xia class), the
PLAN's sub-surface reach is limited. It is true that the older Whisky and
Romeo-class derivatives are capable of deploying beyond the immediate
coastal environs (2,300 nm and 1,800 nm range respectively) (241) which
means a presence in adjacent seas. However the vulnerability of these units
to ASW detection must be taken into account. Also their service-ability
must be called into question. Of the 84 Romeo and 20 Whisky class listed,
only half of each are said to be fully operational.(242)

The PLAN's principal surface combatants are, all destroyer and
frigate-sized units. Their key weaknesses are variously described as
outdated sensors (sonar, radar), limited air defences (a lack of
radar-directed guns and missiles) and poor weaponry (there is a need for
rapid firing and auto loading guns especially). The Soviet legacy features
here, (as it has been demonstrated to in the ground and air forces). With
few exceptions the PLAN's platforms, weapons and sensors are copies or
variants of thirty-year old Soviet systems.(243) Daniel notes that this is
the case -

"with 95 percent of the PRC's submarines,
32 percent of its major surface combatants,
30 percent of its patrol craft, all of its
mine warfare vessels, approximately 96 percent
of its tactical strike aircraft, nearly all of
its radar and IFF ... systems, and all of its
operational ASUW cruise missiles".(244)

Hardware improvements have been made however, by way of selected foreign
purchases and indigenous design efforts. Some new frigates are now being
equipped with Exocet-type ship-to-ship missiles,(245) and US-built LM2500
turbine engines are to equip a new class of destroyer.(246) The French have
also supplied 100mm gun mounts, fire direction systems and the Dauphin
helicopter that will equip the new Wuhan class ships.(247) A Chinese
developed 3D phased array air search radar was also spotted as early as 1983,(248) and there are suggestions that satellite communications are used to co-ordinate long range exercises.(249)

These are not insignificant advances. They need to be taken into account as evidence of the seriousness with which the Chinese regard the expanding role of their naval forces. Certainly, the improvements made in the amphibious "troop strike" category are significant in a regional context. Also the greater ability of the PLAN's escort vessels to provide for their own air defence means that there is less reliance on limited-range land-based air cover. Current moves to incorporate an in-flight refuelling capability for tactical aircraft would also help to alleviate this problem.(250)

At this point, the Chinese have laid useful foundations, upon which they can build a more capable regional navy with a limited blue-water capability. Budgetary constraints however, have caught up with the PLAN as they have with the other services.(251) While incremental upgrades are evident, the Soviet Pacific Fleet based at Vladivostok and Cam Ranh Bay (as well as the Vietnamese naval forces), continues to improve in quality, and augment its numbers (currently at 73 principal surface combatants and 112 submarines).(252)

While PLAN capabilities improve slowly, the regional reaction to Beijing's greater predilection to flex its ocean-going muscle in support of foreign policy objectives is likely to be negative. The Paracel and Spratly Islands were used as an example of competing national interest in the China Seas. Greater power projection, sea control and sea denial capabilities demonstrated by any nation will gain the attention of competing parties in this instance. It is the navy's potential, even with funding constraints, that will continue as an important issue in this context.
Many observers begin their analyses of China's nuclear forces and policies with a number of warnings. These centre on the difficulty of obtaining a clear picture in the face of Chinese secrecy. Information that is available is often from vague and scattered sources designed for public consumption and, as a result, less is known about the PRC's nuclear forces and strategy than about those of the other nuclear weapons powers. This is a problem that can be compounded by ethnocentrism in strategic analysis - that is, a tendency to interpret Chinese nuclear policies in terms of Western strategic thought. (253)

To overcome this tendency, Segal suggests that one needs to concentrate on Chinese threat perceptions and the inter-related influences of geography, ideology and political institutional guidance. The analysis in the section below is involved in identifying these sources of Chinese nuclear doctrine, which acted to influence the development of nuclear forces in the 1960's. The Maoist influence is significant still, but it must also be recognised, that the downgrading of 'People's War' in defence calculations, has had its own impact.

Early Nuclear Deterrent Development

In examining the beginnings of the Chinese nuclear deterrent during the domestic turmoil of the mid-to-late 1960's the observer needs to take care to separate declaratory policy from deeper motivations/influences. Those statements that became available, were limited to official communiques following the early tests (the so called "detonation statements") as they do provide a useful record of distinct trends in policy. It is useful to remember, however, that Chinese nuclear strategy has complex origins which
demand a closer look at both the sources of strategy and other constraints and motivations that influence declaratory statements.

Key Sources of China's Nuclear Strategy

Segal identifies some of the main sources of Chinese nuclear strategy which together provide at least a basis from which to approach early Chinese attitudes to nuclear weapons.(254)

The geography (physical and human) of China, reveals the world's largest population, a less industrialised economy than those of the superpowers, long sea and land frontiers and a related perception of encirclement.(255) These factors combine to give China "less cause to be concerned with a general invasion of its territory or vulnerability to nuclear war".(256) This is due mainly to the perception that the Chinese people are unlikely to be entirely destroyed as a race in a nuclear exchange; that their agrarian-based economy is less inter-dependent than those of the superpowers and thus less vulnerable to an attack; and that her northern boundaries provide a degree of natural protection. Caution is required in building an analysis on such factors but geographic realities are surely relevant to calculations of threat and cannot be ignored. These factors can be seen to be at work in early Chinese pronouncements on the likely future of nuclear weapons in an attack on the People's Republic-intertwined with the influence of ideology.

Ideological factors have a role also. Certainly this is so in relation to the belief in the inevitability of conflict war between capitalism and communism, the "paper tiger" concept (of nuclear weapons in the hands of the superpowers), and the belief in the absence of a dividing line between nuclear and conventional war.(257) In this last case, any combat is seen as
a continuation of the drive to further communism, only controlled "when the social structure of states are transformed towards communism".(258) The political direction provided behind attitudes towards nuclear weapons is central, considering that the military as an institution has far less control over nuclear strategy in China than in the Soviet Union (for example).

Some of the declaratory statements emerging from Beijing when China began to demonstrate publicly her offensive nuclear capabilities, can be considered in the context of these background sources.

**Early Chinese Attitudes Towards Nuclear Weaponry**

A number of important themes emerge from the early official communiques and can be discerned on two levels. Firstly there is the level of declaratory policies both for international and domestic consumption. Themes evident here included, the development of Chinese nuclear weapons as a vindication of Mao's thought, a consistent No-First-Use (NFU) pledge; a reluctance to engage in the political use of nuclear weapons, and an emphasis on the need for unimpeded R&D in this area.(259)

Vindication of Mao's thought was often reported as behind the R&D successes; "Inspired by Chairman Mao's teaching. It has taken China only two years and eight months to cover the entire course from her first A-bomb explosion .... to the successful H-bomb test".(260) Pollack considers that such statements as these are more a reflection of political in-fighting than a genuine transformation in Maoist attitudes.(261) Despite this the programme was sheltered from Cultural Revolution turmoil and was the recipient of large sums that were continually diverted from conventional force development after 1960.(262) According to Pollack:
"...Modernisation of Peking's national defence capabilities emerged as a sufficiently critical commitment to take precedence over issues of internal political conflict or resource distribution".(263)

On a general level the importance of the programme was ascribed to the threat of "nuclear encirclement" or "blackmail". Firstly the US, then the Soviet Union were cast in the roles of allies in an "anti-China conspiracy, necessitating a Chinese response in defence. A superpower conspiracy theme was important in that it supposedly demonstrated that China's nuclear acquisition was fundamentally different from that of the superpowers in not representing a "tool of aggression".

The "defensive" nature of China's nuclear weapons was also to be demonstrated by the NFU pledge. At this level of public consumption at least, such a pledge is useful in that it has supported China's claim that her nuclear weapons development was initiated to break a superpower monopoly.(264) It tied in with the claims found in the first "detonation statement",

"On the question of nuclear weapons, China will never commit the error of adventurism nor the error of capitulationism. The Chinese people can be trusted".(265)

Accusations of "adventurism" and "capitulationism" were levelled at the Soviet Union after the Cuban missile crisis and seemed to indicate an unwillingness to sanction the use of nuclear weapons "as a resource for foreign policy manoeuvres".(266) Official statements along these lines often drew on the ideological dictum "Despise the enemy strategically, take him seriously tactically" as well as providing a backdrop to that assurance - "The Chinese people can be trusted".
Finally, one of the more persistent themes to emerge during the 1960's was that a Chinese response to nuclear attack (if deterrence failed) would continue to utilise the guerilla war concepts of People's War. Nuclear deterrence as supplemental to conventional deterrence could have both reflected a resurgence of Maoism during the Cultural Revolution and a Chinese nuclear inferiority. In 1960 Lin Piao had announced that -

"To deal with a missile or nuclear war, the most important thing for us to do is to mobilise and rely on the people to carry out People's War". (267)

It came to be stressed repeatedly, that for an enemy to hope to subjugate China a nuclear strike would be insufficient for victory which is said to require an army, regular weapons and occupation. (268) A "bolt-out-of-the-blue" attack, followed by land invasion could be met by corps, regional and militia forces that would be in a position to coordinate a protracted war. The prospect of becoming bogged down in such a conflict was supposed to provide the deterrent.

**Motivations and Constraints**

It is important to recognise however, that behind the declaratory policy and continued outward reliance on People's War, Beijing was fully aware of the significance of nuclear weaponry. In particular the impact that these weapons could have on the foreign policy behaviour of the superpowers, China's regional neighbours and those non-aligned nations further afield, placed some constraints on Beijing.

The NFU pledges; reluctance to use these weapons for political leverage; assurances of "anti adventurism" - all illustrate an awareness of
superpower superiority, and of the sensibilities of regional and extra-regional states. China realised that her nuclear R&D programme could have contributed to a situation where certain regional powers may have felt threatened. Her response was to repeat China's perception of "nuclear encirclement" to justify both the acquisition of these weapons and the official emphasis on their limited utility in any confrontation involving China (269) By the end of the 1960's China could only boast a very limited nuclear retaliatory capacity and as a result stressed the deterrent function of a single detonation, with only vague references to retaliatory scenarios.(270)

Having to operate in conditions of marked inferiority Beijing was apparently at pains to adopt a very low-key approach towards its nuclear arsenal and questions of its use. A strategically defensive posture was evident in statements from 1961 - 1969. The 1961 evaluation of nuclear weapons that "The final conclusion thus rests on man ... We have to avoid the strengths and take advantage of the weaknesses of the enemy",(271) and the 1969 statement "It is imperative to put Mao Tse-tung Thought in command and ... master skills in close-range and night-fighting...",(272) - support this conclusion.

Research and development (of nuclear weaponry) was obviously not dismissed as it continued steadily throughout this period. However, until a secure retaliatory force could be mustered the constraints on China's foreign policy behaviour were still influential. The reliance on the deterrence of a single detonation could then shift to the formulation of concrete retaliatory scenarios, which were not an available option to planners in the 1960's. Even then Beijing had to tread cautiously as the time was not right for radical changes in nuclear doctrine. Jonathan Pollack notes (on this score),
"As...noted earlier, the circumstances under which substantive change in the Chinese nuclear doctrine might occur can only be when China's military vulnerability is perceived by decision makers as qualitatively lessened and when Chinese security from nuclear attack is far more assured".(273)

These issues remain problematic.

**Deterrence Concepts - Some Changes.**

From the first nuclear test the Chinese have relied on a mix of deterrence by denial as well as retaliation. Joffe's observation that the relative weight of these two elements has shifted over time, is tied directly to the fluctuating influence of People's War.(274) Deterring an attack by denying victory to an opponent (and raising the cost of any victory) is an, essentially, strategically defensive posture to adopt. It ties in with the strategic defensive of 'People's War' and has the effect of directing planner's attention to other defensive programmes, such as passive civil defence and air defence.(275) It has been suggested that even the offensive tier (nuclear weaponry) of this denial strategy can be said to reveal a defensive orientation in being dwarfed by the superpowers in both a quantitative and qualitative sense.(276)

Confusion also surrounds assessments as to the degree of reliance placed by the Chinese on deterrence by retaliation. Although, explicit threats of retaliation do not fit with a strategically defensive denial posture, this is not to say that the capability to retaliate has not been deemed to be an important one. Joffe considers that a war-fighting capacity became more important after China acquired an offensive nuclear capability, which in
turn raised a number of important issues such as survivability and accuracy, related to the issue of second strike forces. (277)

Another important (and related) aspect of Chinese nuclear deterrence, is the lack of a requirement for massive numbers in any category of offensive nuclear weaponry. (278) If there is a widespread tendency among Western analysts (on this topic) it is to ascribe a "minimum deterrence" posture to China's quantitative and qualitative inferiority (relative to the superpowers). The discussion in chapter one illustrated the impact of geography, ideology and institutional pressure on this deterrence strategy. It is worth noting however that Chinese leaders seem to reject the key assumptions underlying "minimal deterrence". Among these special criticism is reserved for the idea of a limited nuclear counter attack deterring a stronger nuclear power. (279) Again, like so many official pronouncements on defence issues and especially on nuclear deterrence issues this does little to dispel the uncertainty surrounding Beijing's outlook.

Indeed, ambiguity offers distinct advantages. It introduces a measure of flexibility and does not lock planners into any set path in the development of their nuclear forces. (280)

The policy of "calculated ambiguity" has had particular value for a power like China that has attempted to build an effective deterrent against vastly superior opponents. (281) It has also contributed to an on-going internal debate that, according to Fieldhouse, has yet to be resolved between nuclear 'minimalists' and those who regard the current force structure as an inadequate deterrent (especially in a limited war). (282) This poses a particular problem for an observer wishing to plot a "probable course" for China's nuclear forces in the long-term.
A Force Structure for "Modern Conditions".

Taking ambiguity in policy as given, it is still possible however to observe a sustained effort to improve the nuclear forces retaliatory capability. Indications of this include force structure improvements (especially survivability of weapons and equipment) which in the face of vague official statements, serve as evidence of the priority placed on the nuclear deterrent. As "People's War" had the effect of adding weight to deterrence by denial, so a shift from this overall doctrine has had the effect of placing a greater reliance on a war-fighting/retaliatory capacity. The nuclear forces have always received a constant level of funding, the difference in evidence currently is that this funding is being utilised in such a fashion as to alter the "range" of deterrence. That is, the questions 'How much is enough' and 'which types of weapon', are being reassessed and nuclear weapons are playing a greater role in positional defence at the frontier as well as being able to retaliate beyond the immediate theatre of war, or the region for that matter.

Without a secure retaliatory capacity, the credibility of China's nuclear deterrent must remain in some doubt, despite the advantages of ambiguity. The requirements of survivability remain true for any country's nuclear forces. China is no exception to the rule, but has further to go to ensure that her offensive nuclear systems can co-ordinate retaliatory action. These requirements include dispersal, camouflage and hardening of land-based missile sites along with some consideration of alternative basing modes (for example rail and road mobility). A sea-based deterrent (sub surface) and long-range strike aircraft capable of a quick reaction to warnings of attack (and able to penetrate an opponent's airspace) all provide a retaliatory capability and varying degrees of survivability. When coupled to a secure and efficient C3I network, there emerges a force better equipped to retaliate with reasonable success.
(i) Missiles

China's nuclear force structure has long been made up of a wide range of forces, although quantitative and qualitative limits feature in each category. A relatively small arsenal in terms of warheads (285) is structured in a triad of land-based missiles, bombers, and submarine-launched missiles. Tactical nuclear weaponry also features - a factor that will be referred to below. The majority of the land missile force is in the medium to intermediate range category although the former comprises the CSS-1 (286) which may now be slated for retirement. Of the remainder, there is the CSS-2 intermediate-range (2,500 km) incorporating an indigenous design, single stage, storable liquid system. Modified variants boast solid fuel, MIRV ing and refire capability (287) and have been deployed on mobile launchers to lessen vulnerability to a surprise first strike.

There have been varied reports of up to three ICBM types (CSS - 3, 4, 5) incorporating multiple warheads and in the case of the CSS4 and 5, a MIRV capacity.(288) The CSS-3 is, strictly speaking, a 'limited range ICBM' (7,000km) but represented a development milestone in being both the first missile to be deployed in hardened silos and a precursor to a full-range ICBM.(289) The first true ICBM range missiles capable of hitting any target in the Soviet Union and North America deployed by China are the 12,000 km range CSS4 and the CSS-S (extended range).(290) While these are significant advances, their limited production (there are only 6 ICBM range missiles according to the l1SS) (291) would seem to suggest that the requirements of survivability have made a sub-surface deterrent a more attractive use of limited funds.
(ii) Submarines

Representing perhaps the most promising nuclear R&D programme in terms of secure second-strike forces, the SLBM/SSBN programme has also been the most difficult (and consequently slow moving). The Xia class (Daqingya in China) launch platform was the first purpose designed SSBN to enter service with the PLAN. (292) So far only one is operational, but it carries 12 CSS-N-3 SLBM's (each with one 2MT warhead) which was test-fired in 1982 from the navy's single (conventionally powered) Golf Class SSBN. (293) The lengthy development period was a result of design problems in the boat's nuclear propulsion system and delays in developing a reliable solid fuel for the SLBM.

Problems in sufficiently hardening land-based missile silos, and the 'theatre-only' range of the majority of them (fixed or mobile) are both factors making SLBM's a more attractive option. (294)

Further problems slowing their deployment and operational efficiency include technical deficiencies in ocean mapping, navigation equipment and training, and silent running. (295)

(iii) Bombers

The greater utility of submarines and the more recent land-based nuclear weaponry in providing a secure second strike force would seem to mitigate against further development of the bomber fleet. This does not mean that R&D on strategic bombers has halted (there were reports in 1985 of the commencement of a new design), (296) but the fleet in existence still suffers from either limited range or weak penetration capabilities. The primary nuclear bombers (Tu-16 Badger/Hong-6 and IL-28 Beagle/H5) are both
of 1950's vintage and require jet-capable airfields that are easy targets. A tactical air power role (for nuclear weapons) is said to be provided by the Qiang-5 and F9 aircraft, but again the limited ranges of these are a problem as is the Q-5's reported inability to carry out an attack on the first pass with conventional weaponry.

(iv) Tactical Nuclear Weapons & Significance

The recent introduction of Tactical Nuclear Weaponry (TNW) represented a significant change in Chinese nuclear doctrine with the paucity of such weapons perhaps linked to Maoist strategies emphasis on "drawing in deep" and "hugging" the enemy.

TNW's include: nuclear artillery shells, short-range ballistic missiles (SRBM's) and atomic demolition munitions (ADM's). ADM's and other prepositioned low-yield devices are used to slow an enemy's advance by blocking access over geo-strategic land routes connecting the Manchurian, Beijing and Shanghai regions.(297) As such they illustrate the positional war emphasis of PWUMC. TNW's also introduce a greater element of flexibility. Problems with the accuracy of the missile force has led to a situation where the force could only employ counter-value strikes (against large population and industrial centres). Such a response to a limited attack for example would result in large scale retaliation that China could not match.(298) TNW's serve to enhance flexibility by representing a response commensurate with a limited attack and by enhancing defensive capabilities against an invading force.(299)

Finally the incorporation of existing missile units (of the Second Artillery) into the new Strategic Missile Wing may have been influenced by the added responsibilities "stemming from the projected use of tactical
nuclear weapons". The new organisations responsibilities are not limited to strategic weaponry. It was implied upon the establishment of the wing that "rapid advances in military technology had made it necessary for the PLA to raise its combined attacking ability. Only in this way would it be able to win battles". The deployment of these weapons reinforces the departure from Maoist precepts by assuming that the type of war the PLA is most likely to face will be of a limited nature, not preceded by a massive nuclear attack.

Doctrinal change has had (and is continuing to have) a wide-ranging impact on both organisational and equipment areas of the PLA's modernisation programme. Each of the services, as well as the arms/departments within the services, have a role to play in ensuring the continued momentum of the modernisation drive within the combined constraints of funding cuts, technical deficiencies and foreign perceptions of threat. What should be evident, is that planners in Beijing are directing their attention to the key issues - from defence industries (and problems of vertical integration), to the PLAN's amphibious troop lift capacity and the standard of the ground force's firepower and armour protection. Each provide their own potential obstacles to military modernisation.
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240. Daniel, Op Cit, p 121

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244. ibid, p 119. ASUW (Anti-Surface Ship Warfare); IFF (Identification, Friend or Foe)


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286  CCS; (Chinese Surface to Surface)


288. MIRV; Multiple Independently Targetable Re-entry Vehicle

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CONCLUSION

This thesis opened with the observation that a shift in security outlook has been accompanied by the realisation among the Chinese leadership, that longer term economic modernisation would influence all attempts to modernise the armed forces. In their attempts to modernise within this constraint there has been a considerable development of the PLA's war-fighting capabilities with a focus upon hardware improvements (including technological strengthening), the human element (in an emphasis on professionalism and modern training), and the guiding role of a revised military doctrine. These advances are likely to continue to influence the course of China's on-going efforts to modernise its armed forces.

With the realisation that China cannot afford to rely exclusively on external sources to improve the PLA's technological base, have come efforts to strengthen the military by a balanced intake of foreign technology and domestic research and development. This pragmatism is reflected in Beijing's efforts to improve the country's own defence-industrial base to, as much as possible, facilitate an independent posture. On the ground, the PLA has had to meet the challenge of improving its capabilities within the constraints imposed by outdated weaponry. This challenge is approached via a commitment to the support of a force structure composed of equipment which, along with the training required to operate it, represents a substantial departure from Maoist doctrine. In the air, the PLAAF has not only been the subject of specific equipment upgrades, but it has been set the task of coordinating its units with that of the other arms of the PLA. This coordination itself represents a departure from the previous doctrine. At sea, the PLAN's development has had a not inconsiderable impact on (and is bound up with) Beijing's desire to play a greater regional role. Subsequent advances will reinforce the navy's ability to deploy a force in
the open ocean for extended periods and in doing so the PLAN will become a true "blue water" force despite current budgetary constraints common to the other service arms. Similarly, China's strategic and tactical nuclear force has developed to the point where their potential employment must surely add to the significant deterrent of combined arms operations. The "calculated ambiguity" inherent in China's possession of this nuclear capability, then comes from the uncertainty an aggressor must face over whether Beijing will contemplate their use for frontier defence or for retaliation over the border.

Behind the advances in hardware terms, the analysis has also considered the role of reserve and militia forces, the improvement of which aids the leadership's efforts to trim overall numbers in the PLA. This has allowed the military to match smaller standing forces with improved technology to meet the goal of a leaner more modern fighting force.

Supporting the visible equipment upgrades, the central task of professional training has been argued to have been seriously addressed by the Chinese. This is reflected in the growth in the size and stature of the military academy system and moves to ease the high numbers of geriatric high and middle level cadres, out of the PLA.

This evolving force structure is now tasked with the protection of national interests into the next century, within the guiding framework of a shift in military doctrine. The essence of people's War is retained with the new doctrine ("People's War Under Modern Conditions") still emphasising the importance of the human element as well as the utility of grinding an enemy advance to a stalemate. However the impact of "modern conditions" can also be traced. An acceptance of these modern conditions has lead to the emphasis on active defence which, by stressing positional warfare and the
protection of civil and industrial infrastructure, recognises the need for a different approach to national defence than that offered by the Maoist doctrine. The combined arms formation is the instrument to be used within the new Military Region formations whose amalgamation had aided the coordination of the armed forces. In this way, small-scale guerilla operations no longer form the cornerstone of defence doctrine although they continue to have an important role in stalling a Soviet penetration (still seen as the most likely land-borne threat).

The extent and nature of the requirements of the defence improvement process is such that is unlikely, within the current climate of the "Four Modernisations", to override broader economic modernisation. However as can be seen, the PLA will be in a position to directly benefit from a defence and related infrastructure that will allow significant "spin-off" benefits to be derived.

This thesis has argued that the extent and depth of change currently underway in the Chinese armed forces reflects a substantial shift in circumstances. These include a more realistic and comprehensive assessment of the security environment, as well as an internal push for reform that extends beyond the military to target the nation's huge and inefficient agricultural and industrial infrastructure. Although not as high on the nation's reform priorities, the PLA has definitely benefited from this process is allowed to continue. It is precisely because these efforts have begun to have an impact in the last decade that the military doctrine guiding the PLA as the instrument of China's national interest deserves close attention. In addition it must be accepted (and it has been stressed here) that the reform outlined in this work represents a move beyond the superficial level of hardware and has reflected Beijing's perception that the security environment has permitted longer-term modernisation. A shift
in this perception has precipitated/encouraged the changes evident in the
defence doctrine and it is these reforms of the fundamental approaches to
organisation and training - as well as of equipment - that suggest to the
observer that the process will continue. The outlook for reform of the
defensive and offensive capacities of the PLA is thus essentially
positive - something that could not have been said for the armed forces,
with any real confidence, if the shift from People's War had not been made.
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