

CHINA'S NAVAL MODERNISATION: THEORY AND PRACTICE

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Every country focuses on military modernisation too when it is growing economically. However, for some, this process is faster and more aggressive when they face an immediate threat or have a global ambition. China, the new emerging great power in the 21st century, has given high priority to the modernisation of its defence forces. China's defence modernisation is part of the four modernisations drive along with agriculture, industry and science and technology that Deng Xiaoping undertook when he assumed the highest office in the late 1970s. A major objective of the modernisation drive has been to place China in the league of major powers in the international system. The defence modernisation focused initially to thwart an invasion by external powers and lately to project Chinese power in attaining great power status. Modernisation also aimed at enhancing the domestic legitimacy of the Communist Party—which has been the vanguard of the state—and welfare of the people. Protecting the sovereignty of the nation and regaining its old glory by being a military power thus became a high priority for the top leadership of the Communist Party. Throughout history, modern China faced threat from a superior enemy—especially from among the European powers—so victory over a superior power became the hallmark of Chinese strategic thinking.

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Theory of realism argues that when a country faces external security threat it focuses on internal balancing through the process of modernisation of its armed forces and equips them with sophisticated weapons to prevent the threat.

A fundamental aspect of Chinese defence modernisation is that it has been more theory-driven than situation-driven.¹ According to Chinese thinking, theory provides a sound basis for facing the challenges of situational demands. A theory-based situational challenge is a classical Marxist approach to problem solving. Since China had faced security threats from technologically superior powers, theory would help in formulating an optimal strategy to cope with such threats. This, in turn, may lead to a more efficient use of scarce resources for modernising the defence forces. Also, arming

the still technologically backward forces with advanced theory may quicken the formation of combat effectiveness once advanced arms are available. Initially, the defence planners believed that modern arms will be available once the budgetary allocation increases as the country grows economically. For China, a technologically advanced military that lags, in theory, may mean a higher cost in war, as the French and the British militaries discovered during the early phases of World War II.² Winning a war is indispensable for the People's Liberation Army and technological inferiority can be compensated by winning a war based on conceptual innovation and a sound war doctrine. So, from Mao's period, doctrinal aspects have attained the highest priority in Chinese strategic thinking and the doctrine has been modified before formulating a new strategy or a particular policy to respond to a new security situation.

Preventing a threat is the currency of the balance of power. Theory of realism argues that when a country faces external security threat it focuses on internal balancing through the process of modernisation of its armed

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1. Nan Li, "The PLA's Evolving Campaign Doctrine and Strategies", in James C. Mulvenon and Richard H. Yang, *The People's Liberation Army in the Information Age* (Santa Monica, CA: RAND Corporation, 1999).
 2. Ibid.

forces and equips them with sophisticated weapons to prevent the threat. Balance of power theory explains that to prevent the emerging threat, States balance either by building up their own military capabilities (internal balancing), by forming alliances with others (external balancing), or by combining these two forms of balancing.³ Internal balancing is the enhancement of a State's power in response to a potential threat. Through internal balancing, States could obtain countervailing capabilities and thereby attempt to balance the rising threat. Kenneth Waltz maintains that threatened States increase their power

appropriately to ensure their security, albeit not absolutely.⁴ China has faced security threats, both domestically and externally, right from its inception after the prolonged civil war. The Korean War and the subsequent presence of the American military stationed in East Asia was a major security concern during the 1950s. Then, friction in the relationship with the former Soviet Union, followed by the border stalemate in the late 1960s wherein a threat of a major Soviet invasion loomed large over China. Again, after the end of the Cold War, China alleged that the continuation of the forward deployment of US forces, a corollary of the Cold War mechanism, was targeted to prevent China's rise. China claims that it lost 3 million sq km of maritime territory during the period of the 'century of humiliation'; regaining the lost territory is, therefore, considered as being of paramount importance of every Chinese regime. However, its quantitative and qualitative military preparedness has

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3. Christopher Layne, "The War on Terrorism and the Balance of Power: The Paradoxes of American Hegemony", in T. V. Paul, James J. Wirtz and Michel Fortmann (eds.), *Balance of Power: Theory and Practice in the 21st Century* (California: Stanford University Press, 2004).
 4. Kenneth N. Waltz, *Theory of international politics* (California: Addison-Wesley Publishing Company, 1979).

not been sufficient to achieve this objective. Some of the countries with whom China was involved in territorial disputes are allies of the US, therefore, preventing US intervention in a crisis over China's (supposed) legitimate claim of territory would be possible only by gaining local military superiority over the US in the theatre. Since China does not have any military ally to form a regional balancing mechanism against the US, internal balancing has been the only possible way to counter the threat.

Defence modernisation was first introduced by Premier Zhou Enlai in 1973 when China made an inquiry about the British Harrier V/STOL ground attack aircraft and resumed the halted negotiations for the transfer of the British Spey turbofan aircraft engine technology as part of the process of gradual force improvement based upon self-reliance.⁵ Subsequently, Deng Xiaoping assumed a prominent role in the military modernisation process. When Deng got complete authority over the Chinese Communist Party (CCP), he resuscitated the defence modernisation and dispatched numerous delegations to Europe and Japan to study foreign military technology.⁶ In August 1977, the People's Liberation Army (PLA) announced a new doctrine of "People's War Under Modern Conditions" replacing the old Maoist doctrine of "People's War". The new doctrine emphasised modernised defence forces by acquiring modern equipment and technology. However, in the early stages money was a major stumbling block, but the defence planners were convinced that when the economy grows money would not be a problem in future for fulfilling modernisation objectives.

The international situation has also influenced China's defence modernisation programme. The lessons from the 1973 Arab-Israeli conflict—where new technologies were used to gain air superiority or denying air superiority to the enemy—new inventions in defence technology in the United States such as the Strategic Defense Initiative (SDI) or the "Star Wars" programme, and also China's poor performance in the 1979 Vietnam fiasco,

5. Sydney H. Jammes and G. Lawrence Lamborn, "China's Military Strategic Requirements", in *China under the Four Modernizations, Part 1*, Selected Papers Submitted to the Joint Economic Committee Congress of the United States, August 1982.

6. Ibid.

led to the need for a new look in China's war preparedness.⁷ Accordingly, in July 1985, the Central Military Commission, together with the State Council and Central Committee, issued a new plan titled *Plan for Reforms, Streamlining, and Reorganisation of the Military System*. The goal of the reforms was to develop a force with streamlined administration, more flexible command, and greater combat power by reducing the number of personnel, eliminating the level of bureaucracy, downgrading units, and closing some installations.⁸ When the downsizing was completed in 1987, over a million soldiers—roughly 25 percent of the force—had been cut.⁹ Moreover, China gave significant importance to a qualitative change in its armed forces across the spectrum to meet the new and emerging challenges. By the end of the 1980s, the Soviet threat dissipated as a result of normalisation of relations between the two and a new concept of warfare emerged. With China's security environment becoming stable, it was assessed that the new conflict would occur at the local level for a limited period, especially over disputed territory in the southern border of China. Accordingly, China shifted its attention from the north to the southern border, especially the South China Sea. Similarly, the booming coastal region had now become the engine of Chinese economic growth; protecting these regions also became one of the important aspects of China's defence strategy.

Though the end of the Cold War has changed the global security perspective, it demonstrated new challenges for China's security. Most of the security mechanisms built by the US to counter the Soviet threat still remained in the Asia-Pacific region. China felt that the continuation of US deployment of forces in Asia, despite the Soviet threat having vanished, was against a resurgent China.¹⁰ For the Chinese, continued maintenance of US troops in South Korea and Japan was evidence of an emerging containment strategy against China. Similarly, Japanese assertiveness and the modernisation of

7. Taylor Fravel, *China's Military Strategy Since 1949*, p. 163.

8. *Ibid.*, p. 175.

9. *Ibid.*

10. David Shambaugh, "The Insecurity of Security: The PLA's Evolving Doctrine and Threat Perceptions towards 2000", *Journal of Northeast Asian Studies*, vol. 13, 1994, pp. 3-25.

the Japanese Self-Defence Forces (JSDF) under the US umbrella aimed to constrain the space needed for China's revival. All these necessitated an internal balancing strategy of force modernisation—especially for the PLA Navy—in the coming decades.

In its growth trajectory, China has had unfinished existential objectives such as the reunification of Taiwan with the mainland, settling territorial disputes over Senkaku/Diaoyu islands in the East China Sea, and Spratly and Paracel Islands in the South China Sea, and converting China into a maritime power by the middle of the 21st century. To achieve these objectives China wanted to get local superiority over the US naval contingent established in the Western Pacific. In this respect, China's naval modernisation has been focused on building a strong navy by getting control over China's near-seas region (particularly the South China Sea) for enforcing China's view that it has the right to regulate foreign military activities in its 200-mile maritime exclusive economic zone (EEZ); for defending China's commercial sea lines of communication (SLOCs), particularly those linking China to the Persian Gulf; for displacing US influence in the Western Pacific; resolving the Taiwan problem militarily, if need be—all this being aimed at asserting China's status as the leading regional power and a major world power.

MAJOR DRIVERS OF CHINA'S NAVAL MODERNISATION

Although Chinese naval modernisation was evidently initiated as early as 1975, when the PLA Navy's "ocean going proposals" were endorsed by Mao Zedong,¹¹ it got strategic priority only in the 1980s when China shifted its attention to the south. In the initial period of the defence modernisation, the navy was not given importance in the overall national security objectives and had to play a supporting role for the PLA Army. Its main objective was for preserving combat capability and preventing early engagement with the Soviet Pacific Fleet in decisive sea battles in order to endure a protracted

11. Alexander Chieh-cheng Huang, "The Chinese Navy's Offshore Active Defense Strategy", *Naval War College Review*, vol. 47, no. 3, 1994.

war.¹² Lately, China's attention has shifted from land to the sea and the navy has become a strategic service, with the ocean being considered as a theatre for projecting the power of modern China. Major driving forces behind the Chinese naval modernisation are doctrinal changes, changes in the technology of war, regional security environment, and ambition for maritime power projection.

DOCTRINAL CHANGES

Doctrinal reform has been one of the most important elements of the PLA modernisation drive over the last five decades. Military doctrine is a body of published principles concerning the force and the nature of war.¹³ In all militaries, doctrine consists of the basic principles that guide military commanders and their staff in planning and executing the application of military force to achieve specific military objectives. As succinctly described in the US Army's principal field training manual (FM-100-5), "Doctrine captures the lessons of past wars, reflects on the nature of war and conflict in its own time, and anticipates intellectual and technological developments in future times."¹⁴ Military doctrine must also be distinguished from military *strategy*, which in western usage is usually concerned with linking those military objectives to a set of desired political-strategic goals. In the Chinese context, military doctrine is determined at the highest level of political and military leadership, provides both the political vision of the nature of war and the military guidance for the armed forces to follow.¹⁵ Accordingly, the military doctrine has been modified to meet changes in strategic and political environments. In Maoist China, "people's war" was the doctrine of the PLA. Under Deng Xiaoping's modernisation programmes doctrine has been

12. Ibid., p. 11.

13. Ching-pin Lin, *China's Nuclear Weapons Strategy: Tradition within Evolution* (Lexington, Mass.: Lexington Books, 1988), p. 3.

14. U.S. Army Field Manual (FM) 100-5, *Operations*, June 1993. Quoted from David Shambaugh, *Modernizing China's Military: Progress, Problems, and Prospects* (Berkeley: University of California Press, 2002), p. 57.

15. Paul H. B. Godwin, "Changing Concepts of Doctrine, Strategy, and Operations in the Chinese People's Liberation Army 1978-1987", in *China Quarterly*, vol. 112, December 1987, pp. 572-90.

Under Deng's initiative a new slogan of "people's war under modern conditions" was developed after Mao's death. It put old Maoist doctrine into new strategic and technological environments. It brought in the need for modernising the military doctrine.

adjusted to new conditions such as "people's war under modern conditions", "local war under historical conditions", and "local war under modern high technology conditions". Along with the doctrinal changes, the naval strategy has also been modified from "active offshore defence" of the 1980s to "open sea protections" in the 21st century.

Maoist "people's war" focused on protracted war utilising the vast landmass and masses by 'luring the enemy in deep' and striking second, adopting guerilla warfare to defeat the enemy decisively. It was believed that this was the way a victory could be achieved over a technologically superior enemy. Mao had mastered it in the long civil wars and continued it as a war strategy against the threat of Soviet invasion. It emphasised strategic defence, where the initial surprise attack by an opponent is countered by using a combination of offensive and defensive operations to blunt the force of the attack. Positional warfare was key at this stage. The second stage was strategic counterattack, where offensive operations were to be used to counterattack when the enemy's offensive had been stalled. The third and final stage was a strategic offensive once the enemy had been weakened and conditions created for a decisive battle to end the war. It included the elements of forward defence, positional warfare, and combined arms operations and the entire operational tactics were countering an invasion.

However, when the economic reform started in the late 1970s, Deng realised that early strategic retreat to the inland would severely jeopardise protection of the newly emerged economic growth centres in the coastal areas. Under Mao's "people's war", the coastal areas would be exposed to the enemy, and once they were lost it would affect China's war preparations and would lead to a defeat. Therefore, defeating the adversary close to the border before he could capture any territory became the priority in China's security calculations. In

this regard, under Deng's initiative a new slogan of "people's war under modern conditions" was developed after Mao's death. It put old Maoist doctrine into new strategic and technological environments. It brought in the need for modernising the military doctrine in order to direct its military preparedness and achieve the fighting capabilities necessary for future wars. The new doctrinal concept aimed: to upgrade the quality of PLA's personnel and equipment, increase the efficiency of organisational and command structures, and improve force projection and combat capabilities.¹⁶ To achieve all these goals, the new military doctrine focused on improvement of the PLA's command, control, communications, and intelligence (C3I) and logistic systems, combined arms training, and rapid response task force.¹⁷

Accordingly, by the 1980s China's doctrinal concepts and military strategy had been revamped to suit the changing security environment. China adopted new strategic guidelines based on global security perceptions, China's military capability and preparedness, and the nature of war that had taken place in different parts of the world. After a series of meetings and reviews at the top political leadership and China's Central Military Commission, it was concluded that a large-scale invasion of China by an external power is highly unlikely. It was observed that PLA lacked any credible means of launching offensive strikes beyond its border and also pre-empting a Soviet attack was difficult.¹⁸ At the same time, the guidelines argued that a general war was highly unlikely because of the financial cost of the war and that China's most likely threats came from

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16. Huang, "The Chinese Navy's Offshore Active Defense Strategy".

17. Ibid.

18. M. Taylor Fravel, *China's Military Strategy Since 1949: Active Defense* (Princeton: Princeton University Press, 2019), p. 142.

small and medium-sized local conflicts, not general or total wars.¹⁹ Following the strategic guidelines, the military planners and strategic thinkers came up with a new “local war” concept, which, in the subsequent periods, has become the central tenet of the military doctrine of the PLA.

Since then China focused on the technological advancement of its defence forces to gain superiority in a local war theatre. Chinese analysts argued that the local war would be geographically limited and shorter in duration, although some wars like the Iran-Iraq war dragged on for several years.²⁰ During the major wars, combatants employed massive firepower—particularly airpower—and short-range missiles. While, in the local war, the role of an army could not be discarded entirely, it was no longer key to victory as it was during the world wars. All weapons in the disputants’ inventory were fair game for use, including chemical and tactical nuclear weapons, and successful armies practised combined arms and had good command, control, communications, and intelligence systems (C3I). The objective was that without attaining supremacy both in terms of capability as well as being a flexible force, China cannot defeat the enemy in a limited local war. With the changes in the nature of war and more sophisticated weaponry emerging with major powers worldwide, China modified the local war doctrine to “local war under modern high-tech conditions” in the 1990s; it later became “under conditions of informatisation”, which is now the guiding principle of Chinese military strategy. The 1991 Gulf War and the 1996 Taiwan Strait crisis apparently convinced the PLA planners that a medium-sized local war could take place involving a large-scale sea crossing and amphibious landing operations, counteroffensive operations in the border regions, repelling local foreign invasion, and above all preventing the US forces deployed in the Western Pacific from interfering in China’s efforts for unification of Taiwan.²¹

19. M. Taylor Fravel, “The evolution of China’s Military Strategy: Comparing the 1987 and 1999 Edition of Zhanlue” in James Mulvenon and David M. Finkelstein (eds.), *China’s Revolution in Doctrinal Affairs: Emerging Trends in the Operational Art of the Chinese People’s Liberation Army* (Beijing: Chinese People Liberation Army, 2002), pp. 79-99.

20. Ibid.

21. Toshi Yoshihara and James R. Holmes, *Red Star over the Pacific: China’s Rise and the Challenge to US Maritime Strategy* (Annapolis: Naval Institute Press, 2010).

The local war theory has brought in a new concept into the lexicon of China's military strategy which includes "active defence", "strategic frontier", "strategic deterrence", "victory through elite groups", "gaining initiative by striking first", "victory over inferiority through superiority", and "fighting a quick battle to force a quick resolution".²² The concepts are important in real-time situations with specific objectives to support particular types of systems and missions. For instance, "active defence" is a strategy of offensively defending the "core area" which includes China's shorelines and territorial waters, while "strategic frontier" is a geographical perimeter line preventing the enemy from approaching the "core area". Similarly, technological advancement is the key component in all aspects of the new strategy. According to Chinese calculations, local war will likely take place in the maritime domain, and, as a result, the navy and air force received increased attention in the modernisation drive. Indeed, concepts like "active defence" and "strategic frontiers" are exclusively connected with the maritime domain which is relevant in the 21st century security strategy of China. For instance, the 2015 defence white paper states that "active defence is the guiding principle of China's defence strategy in a new era".²³ From the 1990s onwards, China has focused on a concerted naval modernisation drive to make the "active defence" and "strategic frontiers" strategy successful, and lately with a blue-water navy ambition.

CHANGES IN TECHNOLOGY OF WAR

Technology has changed modern warfare; it has increased the lethality of war but reduced duration and casualties. Technological modernisation of defence forces is a continuing process that countries have undertaken to achieve victory in a war. Technological modernisation is also a preparation for war that generally happens during peacetime. How technology can change the theory of war can be seen in the change in China's war theory

22. Nan Li, "The PLA's Evolving Warfighting Doctrine, Strategy, and Tactics, 1985-95".

23. Ministry of National Defence, "Chapter III: Strategic Guideline of Active Defence", in *China's Military Strategy 2015* (Beijing: People's Republic of China, May 2015), http://eng.mod.gov.cn/Database/WhitePapers/2015-05/26/content_4586711.htm

from “victory through inferiority over superiority” to “victory through superiority over inferiority”. In the Maoist “luring the enemy in deep” concept China would be able to overcome the adversary’s technological superiority by utilising Chinese comparative advantages of landmass, manpower, and time. However, in the local war scenario, Chinese victory could only be guaranteed through technological superiority over the enemy. Chinese leadership realised that without technological advancement getting superiority in the local theatre was difficult to achieve. Since the local war theatre could be the shorelines of China, naval modernisation got a higher priority in China’s military modernisation drive. As a result, the subsequent decades have witnessed billions of dollars being spent for research and development in the defence sector to convert China into a modern maritime power in the 21st century.

The quest for technological modernisation of defence forces emanated from the Chinese assessment of small wars such as Israel’s invasion of Lebanon in 1982, and the Falklands war between Argentina and Britain that demonstrated the ability of the technologically superior power to finish the war quickly before international responses mounted against it. The military leadership realised that modern limited wars emphasising speed, mobility, lethality, and C3I technologies can change the course of the war in one’s favour. Given the nature of war and victory for the technologically advanced states, PLA demanded increased budgetary allocation for modernisation, especially to create “fists” and rapid response units or “special forces” in every military region, who must be well trained and equipped to fit the local situations and the capability of a potential adversary.²⁴ It was also recognised that, except the USSR, and possibly India, the most likely source of conflict around China’s periphery would not involve countries whose military forces had the capability to conduct high-technology warfare in the same capacity as the Western powers.²⁵ The 1989 Tiananmen tragedy put a

24. Godwin, “Changing Concepts of Doctrine, Strategy, and Operations”.

25. Jian Wenxian, et al., “Tentative discussion of the special principles of a future Chinese limited war,” *Guofang Keji Daxue Xuebao*, No. 11 (November 1, 1987), in *JPRS-CHI*, 12. Quoted in Godwin, *Changing Concepts of Doctrine, Strategy, and Operations*, p. 470.

roadblock to China's effort in acquiring Western equipment and technology and emphasised the need to promote indigenous research and development.

It was understood that weapons and technology are the decisive elements of modern warfare.²⁶ More precisely, the 1991 Gulf War became the reference point for the PLA's modernisation programme. The Gulf War was a high-tech war, used the latest weaponry against an inferior state by a Superpower, and which highlighted the need for a defence industrial complex in China. The Gulf War proved decisive in China's technological preparedness to ensure victory in short and limited wars. The Gulf War demonstrated the awesomeness of American military prowess that inspired the PLA to model its modernisation on that of the Pentagon.²⁷ Since then China focused its attention on Russia for technological cooperation and started giving attention to strengthening the indigenous capability to equip the Chinese defence forces as a modern and flexible force in the 21st century.

General Liu Huaqing, China's most senior officer and the military official responsible for overseeing the technological improvements of China's armed forces, highlighted the need for the technological modernisation. He stated (in 1993) that the PLA "fails to meet the needs of modern warfare and this is the principal problem with army-building."²⁸ This problem would be met, he stated, by the "vigorous" importation of foreign technology and accelerating the modernisation of weapons and equipment through improvements in China's own defence industries and R&D.²⁹ As a result, higher budgetary allocation for defence was earmarked and high priority was placed on mastering electronic warfare (particularly air and naval); improving missile and aircraft guidance systems; developing precision-guided munitions (PGMs); building satellites, early warning and command systems, and advanced communication relay stations; laser technology; artificial intelligence; mastering in-flight refuelling;

26. Shambaugh, "The Insecurity of Security", n. 10.

27. Allen S. Whiting, "The PLA and China's Threat Perceptions", *The China Quarterly*, No. 146 (Special Issue: China's Military in Transition) 1996, pp. 596-615.

28. Liu Huaqing, "Unswervingly march along the road of building a modern army with Chinese characteristics," *Jiefangjun Bao*, August 6, 1993, in FBIS-CHI, August 18. Quoted in Godwin, *Changing Concepts of Doctrine, Strategy, and Operations*, p. 472.

29. *Ibid.*

The regional security environment that emerged after the end of the Cold War was another reason for China's defence modernisation, especially naval modernisation. With rapprochement with the Soviet Union and a relatively stabilised land border in the south and west, China felt no major security threat from external sources.

and developing an anti-ballistic missile system.³⁰ Of course, China's persistent search abroad for military technology and hardware has been a bone of contention in that China was accused of stealing Western technology. Despite its opaque intellectual property rights protection system, China's vigorous efforts at force modernisation and steady higher budgetary allocations for defence were visible in every budget for the next three decades.

REGIONAL SECURITY ENVIRONMENT

The regional security environment that emerged after the end of the Cold War was another reason for China's defence modernisation, especially naval modernisation. With rapprochement with the Soviet Union and a relatively stabilised land border in the south and west, China felt no major security threat from external sources. No regional country that was capable of challenging China, whether in terms of technological capability or the sheer size of the military, emerged in the vicinity. For Chinese analysts, Russia was no longer a primary threat for China, Japan was unlikely to become a threat in the foreseeable future, while the US was continuously depicted as the number one source of threat to the People's Republic of China.³¹ This threat perception emerged due to American policies and actions toward Tibet, Taiwan, Hong Kong, and human rights which were all seen as aimed at the eventual demise of Communism in China. Besides, Chinese defence planners and security analysts questioned the rationale of the existence of the forward deployment of US forces in the region even after the demise of the Soviet Union, and they suspected that the continuation of US forces in

30. Shambaugh, "The Insecurity of Security", n. 10, p. 18.

31. Whiting, *The PLA and China's Threat Perceptions*, n. 27.

the region was against a resurgent China.³² In their view, the Pentagon was trying to manufacture China as a principal threat to replace the Soviet Union to justify continued high levels of defence expenditure. For them, the US still maintained its Cold War era military alliances in East Asia, and its defence cooperation with Taiwan had been a stumbling block in the unification dream. Since the US was superior, both in terms of technology and manpower, China was in no way able to cope with the US threat.

Since the US is a global Superpower, and while China has not harboured any ambitions to become a rival to the US at the global level, a Cold War with the US would not lead to the same fate as that of the former Soviet Union. At the same time, China had to mitigate the challenges posed by the US' increasing preponderance in Asia. In this situation, Beijing felt that the only way it could counter the threat from the US was to gain local superiority. In this regard, China's technological modernisation was targeted at achieving local superiority in the "war zone campaign",³³ a major type of local war that may enhance local and temporary PLA superiority over the powerful enemy. Incidentally, China's "active defence" strategy itself is to prevent US amphibious operations from the sea, as the theatre of future conflict would in all likelihood be the maritime domain in the east and the south of China. The PLA Navy, therefore, received high priority in China's defence modernisation.

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POWER PROJECTION AMBITION

Ever since the establishment of PRC, Communist leaders have harboured the notion that the new China should emerge as a great power one day.

32. David Shambaugh, *Modernizing China's Military: Progress, Problems, and Prospects* (Berkeley: University of California Press, 2002).

33. Nan Li, "The PLA's Evolving Campaign Doctrine and Strategies", n. 22.

However, the economic capacity and technical capability were not conducive to preparing China for such a project. When the Soviet threat dissipated and the economic reforms allowed China to earmark money for modernisation of its defence forces, China had gradually started focusing on projecting its power at least in the Asia-Pacific region. China has been surrounded by strong land powers such as India and Russia, so a continental expansion was impossible, while the ocean has been dominated by US naval power. However, the US is a distant naval power while China could emerge as a regional power by marginalising the US power at sea by means of strengthening its naval capability. This was evident when Admiral Liu Huaqing propounded his island chain strategy in the 1980s that China would be able to expand its influence gradually into “far sea” areas in three stages. In the first stage, from 2000 to 2010, China was to establish control of waters within the first island chain that links Okinawa Prefecture, Taiwan, and the Philippines. In the second stage, from 2010 to 2020, China would seek to establish control of waters within the second island chain that links the Ogasawara island chain, Guam, and Indonesia. In the final stage, from 2020 until 2050, China would have to be able to exercise its naval power in the South Pacific and Indian Oceans, using aircraft carriers as a key component of its military force.³⁴

Sea power strategy has a unique role in China’s development strategy in matters of countering the pressures and challenges that China faces. A powerful navy is required for securing its maritime trade as well as protecting its extra-territorial interests. Protecting the sea lines of communication (SLOCs) has been necessary for a smooth ride of economic reforms. The booming economic belt in the south and east coastal area—which became the engine of China’s economic growth—was heavily dependent on seaborne trade. The protection of trade and overseas assets is integral to projecting the maritime power of a nation. A Chinese naval officer spelled out as early as in the 1990s that “the international law of the sea today stipulates thus:

34. Hailong Ju, *China’s Maritime Power and Strategy: History, National Security and Geopolitics* (Singapore: World Scientific, 2015).

the black land is yours, the blue water is everyone's, and the brown water is yours and everyone's. The enlightenment from historical experience today is: if you cannot occupy yours, it is someone else's."³⁵ In this respect, it was necessary for China to build a strong and modern navy that is commensurate with China's international status which can also safeguard its maritime sovereignty, rights, and interests. Importantly, the domestic stability and the continuity of the Communist Party's hold on power rests on whether it can protect its maritime rights and its status as a powerful and prosperous nation.

At the same time, Deng was well aware of the repercussions of China's defence modernisation programme that would have unleashed across the region an arms race in Asia. It was feared that other countries would see China as harbouring hegemonic intentions. To mitigate such suspicion and concern, Deng proclaimed his '24-character strategy' in the early 1990s that China needs to: "observe calmly; secure our position; cope with affairs calmly; hide our capacities and bide our time; be good at maintaining a low profile; and never claim leadership."³⁶ China needed a peaceful regional and global environment at least for the initial 20 years of the 21st century, conducive to China's rise to regional pre-eminence and global influence.³⁷

CHINA'S NAVAL MODERNISATION

China's naval modernisation has been targeted to achieve specific missions as part of the national grand strategy. In general, China's naval modernisation effort encompasses a wide array of platforms and weapon acquisition programmes, including anti-ship ballistic missiles (ASBMs), anti-ship cruise missiles (ASCMs), submarines, surface ships, aircraft, unmanned vehicles (UVs), and supporting C4ISR (command, control, communications, computers, intelligence, surveillance and reconnaissance) systems. The

35. Quoted from Whiting, *The PLA and China's Threat Perceptions*, n. 27, p. 600.

36. See, for example, "Deng Xiaoping's '24-Character Strategy'", <https://www.globalsecurity.org/military/world/china/24-character.htm>

37. Office of the Secretary of Defence, "Annual Report to Congress: Military Power of the People's Republic of China 2008", Washington, D.C., <https://fas.org/nuke/guide/china/dod-2008.pdf>

modernisation efforts also include improvements in maintenance and logistics, doctrine, personnel quality, education and training, and exercises.

The Chinese navy is tasked with national defence 'goals and tasks' of 'safeguarding national sovereignty', which include national economic development; defence of the homeland, to include "the security of China's lands, inland waters, territorial waters, and airspace, safeguard its maritime rights and interests; to oppose and contain the separatist forces for 'Taiwan independence', and defend national sovereignty and territorial integrity."³⁸ Besides, the mission and objectives of China's naval modernisation aimed to achieve a greater degree of control or domination over China's near-seas region, particularly the South China Sea; for enforcing China's view that it has the right to regulate foreign military activities in its 200-mile maritime exclusive economic zone (EEZ); for defending China's commercial sea lines of communication (SLOCs), particularly those linking China to the Persian Gulf; for displacing US influence in the Western Pacific; and for asserting China's status as the leading regional power and major world power.³⁹

Specific operational missions and strategies have been carved out for the PLA Navy according to the doctrinal changes. In the initial period Navy's mission was 'coastal defence', then defined as 'offshore defence', and from the second decades of the 21st century onwards it is 'open sea protection'. The need for a strong navy was outlined by Mao when he emphasised that expertise in amphibious warfare, seaborne logistics and maritime airpower were required to conquer Taiwan. However, his plan to organise a strong navy was aborted because of the Korean War and thereafter limited by domestic political events, especially the disastrous Great Leap Forward. Later, naval development was severely impacted during the 1960s by the Sino-Soviet split and the continental mindset. Only at the end of the 1970s, after the end of the

38. "China's National Defense in 2010", Information Office of the State Council of the People's Republic of China, March 31, 2011, http://www.china.org.cn/government/whitepaper/node_7114675.htm

39. "China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress", CRS Report (Washington, D.C.: Congressional Research Service, 2019), <https://fas.org/sgp/crs/row/RL33153.pdf>

Cultural Revolution and the post-Mao power struggle, was the PLA Navy in a position to 'take off'. Up until the mid-1980s PLAN's primary strategic concept was one of 'coastal defence' or to play a supportive role to the army in China's 'luring the enemy into deep' strategy. This strategy focused the PLAN on defending China's coast from the Soviet Pacific Fleet. By the late 1980s, then PLAN Commander Admiral Liu Huaqing laid out a new strategy known as 'offshore defence' in pursuance of new missions of the Chinese Navy.⁴⁰

The main objective of the 'offshore defence' strategy was to build China a powerful regional navy. It called for naval capabilities suited to China's specific regional maritime interests. In essence, the strategy emphasised a defence perimeter for the navy to be extended from coastal waters out to between 200 and 400 nautical miles, and even further in defence of territorial claims in the South China Sea. Eventually, the mission areas of offshore defence were defined as the Yellow Sea, East China Sea, South China Sea, the areas around the Spratly Islands and Taiwan, and the areas inside and outside the Okinawa island chain as well as the northern part of the Pacific Ocean.⁴¹ This includes the areas outside the 'first island chain' as well as the more traditional coastal waters.

PRC's industrial base upon which to build a modern naval force was inadequate in the early decades. As a result, China had heavily relied on the former Soviet Union for its naval requirements. During this period, the Chinese navy focused on frigates, submarine chasers, minesweepers, guided-missile fast attack craft, torpedo boats, patrol boats, diesel-electric submarines and shore-based tactical bombers.⁴² Initially, torpedo boats were imported from the Soviet Union or constructed in Chinese shipyards with Soviet designs and parts. In the 1960s, the local industry began to deliver more types of ships, also of Soviet origin. The PLAN fielded a large number of small craft

40. Alexander Chieh-cheng Huang, "The Chinese Navy's Offshore Active Defense Strategy", *Naval War College Review*, vol. 47, no. 3, 1994.

41. Office of Naval Intelligence of the US Navy, "The People's Liberation Army Navy: A Modern Navy with Chinese Characteristics", August 2009, <https://fas.org/irp/agency/oni/pla-navy.pdf>

42. Kamlesh Agnihotri, *Strategic Direction of the Chinese Navy: Capability and Intent Assessment* (Bloomsbury: New Delhi, 2015).

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and submarines, particularly the Type 021 Huangfeng guided-missile boats and the Type 033 Romeo-class submarines. China's first generation diesel-electric submarines were Russian built Romeo-class and indigenously built Ming-class (Type 35) submarines, based on the Soviet Romeo design. The first nuclear powered Han-class (Type 091) attack submarine (SSN) was commissioned in 1974, and its first ballistic missile nuclear submarine (SSBN), Xia-class (Type 092), was commissioned in 1983 and entered into service in 1987. Subsequently, China built more advanced Jin class SSBNs which are now operationally in service.

When Chinese Premier Li Peng and Deputy Chief of Staff General Xu Xin visited Moscow in April 1990, despite the disintegration of the Soviet Union, they got assurance from the new Russian leaders about the possibility of arms sales and technology transfers.⁴³ China then purchased US\$ 5-6 billion worth of Russian weaponry in 1993, which included 26 SU-27 interceptors, 4 *Ilyushin* transport aircraft, 18 SA-300 anti-aircraft systems and 100 missiles.⁴⁴ In 1994, China bought four Russian Kilo-class diesel submarines, along with additional SU-27 fighters, T-72 battle tanks, and AWACS early warning aircraft and in-flight refuelling tankers from Russia.⁴⁵ To strengthen its naval fleet, the PLA Navy (PLAN) ordered four *Sovremenny*-class destroyers from Russia. Of particular note, these ships are outfitted with the 3M-80E Moskit (NATO designation: SS-N-22 Sunburn) ramjet-powered, supersonic ASCM, which has a range of 120 km; later-model

43. Tai Ming Cheung, "Ties of convenience: Sino-Russian military relations in the 1990s," in Richard H. Yang (ed.), *China's Military: The PLA in 1992/93* (Boulder: Westview Press, 1993), pp. 61-77.

44. Shambaugh, "The Insecurity of Security", n. 10.

45. See, "Kilo Class". <https://www.globalsecurity.org/military/world/china/kilo.htm>

Sunburns have a 200-km range. Some of the systems that China bought were to gain the technology and production capability needed to become more independent of foreign sources of supply.⁴⁶

Richard Bitzinger argues that China actually started its naval modernisation programme in the year 1997, and he gives multiple reasons for that. For him, it was the year that Chinese defence spending began its remarkable run of double-digit real annual growth.⁴⁷ Besides, the central government forced the PLA to divest itself of the bulk of its commercial activities so as to concentrate on its primary functions—defence, compellence, and if necessary, war-fighting. It was also around the time PLA officially adopted the strategic concept of fighting “limited local wars under high-technology conditions/conditions of informatisation” or the addition of computers and information sharing networks to military platforms,⁴⁸ which still drives current operational and hardware requirements for military modernisation. From the beginning of the new century, PRC has increasingly turned to its own indigenous defence industry to provide the PLA with modern weaponry—in some cases through reverse engineering or stolen outright from foreign suppliers. China’s 2006 defence white paper outlined a three-step development strategy with a short-term and medium-to-long term plan for the modernisation of national defence and armed forces; the first step was to lay a solid foundation by 2010, the second was to make major progress around 2020, and the third is to basically reach the strategic goal of building informationised armed forces and being capable of winning informationised wars by the mid-

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46. Shambaugh, “The Insecurity of Security”, n. 10.

47. Richard Bitzinger, “Modernising China’s Military, 1997-2012”, *China Perspective*, no. 4 (88), 2011, pp. 7-15.

48. Ibid.

21st century.⁴⁹

Naval modernisation had given considerable attention to surface platform ships and submarines. Since the 1990s, China has commissioned 6 new classes of destroyers. The Type 052D represents the latest effort to upgrade the PLAN's destroyer programme. Type 052D entered service in 2014 outfitted with an Aegis-type air-defence radar and fire-control system and forms a critical part of the PLAN's goal of expanding operations into distant seas. As of May 2020, there were 11 Type 052D destroyers in active service, while an additional nine were undergoing sea trials or are being fitted out. China has also built another class of Type 055 (*Renhai*-class) guided missile destroyer, and the first ship was commissioned in January 2020, and five destroyers have been launched over the last 18 months.⁵⁰ These vessels are equipped with the indigenous YJ-83 or YJ-62 anti-ship cruise missile (ASCM) and the HN-2 land-attack cruise missile (a variant of the Russian Kh-55 missile). The Type-052C also carries several Chinese built HHQ-9 surface-to-air missiles (SAM), housed in vertical launch systems (VLS). A new Type 052D (*Luyang*-class) destroyer is under construction with an estimated displacement of more than 7,000 tonnes, which is expected to perform major command and control functions and will likely serve as the primary escort of China's aircraft carrier strike groups in blue-water operations.⁵¹

China's naval modernisation has also taken place in the case of submarines, and most of its submarines are now being built under Russian and Chinese designs. Qualitatively, China's newest submarines might not be as capable as Russia's newest submarines, but compared to China's earlier submarines, which were built to antiquated designs, its newer submarines are much more capable.⁵² Most of China's submarines are non-nuclear-powered

49. Information Office of the State Council, People's Republic of China, "China's National Defense in 2006", December 29, 2006, <https://fas.org/nuke/guide/china/doctrine/wp2006.html>

50. Franz-Stefan Gady, "China's Navy Commissions First-of-Class Type 055 Guided Missile Destroyer", *The Diplomat*, January 13, 2020, <https://thediplomat.com/2020/01/chinas-navy-commissions-first-of-class-type-055-guided-missile-destroyer/>

51. "How is China modernizing its navy?", *CSIS China Power*, <https://chinapower.csis.org/china-naval-modernization/>

52. "China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress", Congressional Research Service, January 22, 2020, <https://fas.org/sgp/crs/row/RL33153.pdf>

attack submarines (SSKs). China also operates a small number of nuclear-powered attack submarines (SSNs) and a small number of nuclear-powered ballistic missile submarines (SSBNs). The number of SSNs and SSBNs may grow in the coming years, but the force will likely continue to consist mostly of SSKs. Since the late 1990s, the PLAN has acquired three types of indigenously built conventional submarines; Yuan-Class (Type 039A or Type 041), Song-Class (Type 039), and Ming-Class (Type 035), and bought 12 Kilo-class submarines from Russia. Its inventory of nuclear powered submarines are ballistic missile (SSBNs) Jin-Class (Type 094), *Han*-class (Type 091) and Shang-Class (Type 093) attack submarines (SSNs). China's submarines are armed with one or more of the following: ASCMs, wire-guided and wake-homing torpedoes, and mines. Wake-homing torpedoes can be very difficult for surface ships to elude. Each Jin-class SSBN is expected to be armed with 12 JL-2 nuclear-armed submarine-launched ballistic missiles (SLBMs). China reportedly is developing a new SLBM, called the JL-3, as a successor to the JL-2. The weapons systems of SSNs include torpedoes and cruise missiles. According to the US Naval Intelligence report, China's submarine force will grow from a total of 66 boats (4 SSBNs, 7 SSNs, and 55 SSKs) in 2020 to 76 boats (8 SSBNs, 13 SSNs, and 55 SSKs) in 2030.⁵³ Since 2006, 8 nuclear submarines have reached initial operational capability, for an average of one every 15 months. Diesel-electric submarines are produced at two shipyards and typically undergo approximately one year of outfitting and sea-trials before becoming operational.⁵⁴

China's newest series-built SSK design is the Yuan-class (Type 039A) SSK, its newest SSN class is the Shang-class (Type 093) SSN, and its newest SSBN class is the Jin (Type 094) class SSBN. In May 2020, it was reported that two additional Type 094 SSBNs had entered service, increasing the total number in service to six.⁵⁵

53. "China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress", Congressional Research Service, May 21, 2020, <https://assets.documentcloud.org/documents/6927913/China-Naval-Modernization-Implications-for-U-S.pdf>

54. Ibid.

55. Ibid.

Table 1: Numbers of Certain Types of Ships Since 2005

Year of DOD report	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2019 change from 2005
Ballistic missile submarines	1	1	1	1	2	2	2	2	3	3	4	4	4	4	4	+3
Nuclear-powered attack submarines	6	5	5	5	6	6	5	5	5	5	5	5	5	5	6	0
Diesel attack submarines	51	50	53	54	54	54	49	48	49	51	53	57	54	47	50	-1
Aircraft carriers	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	+1
Destroyers	21	25	25	29	27	25	26	26	23	24	21	23	31	28	33	+12
Frigates	43	45	47	45	48	49	53	53	52	49	52	52	56	51	54	+11
Corvettes	0	0	0	0	0	0	0	0	0	8	15	23	23	28	42	+42
Missile-armed coastal patrol craft	51	45	41	45	70	85	86	86	85	85	86	86	88	86	86	+35
Amphibious ships: LSTs and LPDs	20	25	25	26	27	27	27	28	29	29	29	30	34	33	37	+17
Amphibious ships: LSMs	23	25	25	28	28	28	28	23	26	28	28	22	21	23	22	-1
Total of types above (does not include other types, such as auxiliary and support ships)	216	221	222	233	262	276	276	271	273	283	294	303	317	306	335	+119
China Coast Guard ships	<i>n/a</i>	185	240	248	<i>n/a</i>											
Total U.S. Navy battle force ships (which includes auxiliary and support ships but excludes patrol craft)	291	282	281	279	282	285	288	284	287	285	289	271	275	279	286	-5
U.S. Navy figure compared to above total for certain Chinese ship types	+75	+61	+59	+46	+20	+9	+12	+13	+14	+2	-5	-32	-42	-27	-49	-124

Source: "China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress", CRS Report (Washington, D.C.: Congressional Research Service 2019). <https://fas.org/sgp/crs/row/RL33153.pdf>

China's first aircraft carrier, *Liaoning* (Type 001), was purchased from Ukraine in 1998 and reverse-engineered for Chinese conditions; it entered service in 2012. China's second aircraft carrier (and its first fully indigenously built carrier), *Shandong* (Type 001A), entered service on December 17, 2019. China's third carrier, the Type 002, is under construction and is expected to enter service by 2024. China's fourth carrier, reportedly also to be built to the Type 002 design, may begin construction as early as 2021.⁵⁶ The

Type 002 carriers are to be conventionally powered just like the *Liaoning* and *Shandong*. In late November 2019, it was reported that the Chinese government, while deciding to proceed with the construction of the fourth carrier, had put on hold plans to build a fifth carrier, known as the Type 003, which was to be nuclear-powered, due to budgetary and technical considerations.⁵⁷ Observers expect that it will be some time before China masters carrier-based aircraft operations on a substantial scale.

China's naval modernisation effort, which forms part of a broader Chinese defence modernisation programme, has been underway for more than 25 years, which has transformed China's navy into a much more modern and capable force.

CONCLUSION

China's naval modernisation effort, which forms part of a broader Chinese defence modernisation programme, has been underway for more than 25 years, which has transformed China's navy into a much more modern and capable force. China's navy is a formidable military force within China's near-seas region, and it is conducting a growing number of operations in more-distant waters, including the broader waters of the Western Pacific,

56. "Power Projection: China's Fourth Aircraft Carrier", *Forbes*, December 3, 2019, <https://www.forbes.com/sites/hisutton/2019/12/03/super-power-projection-work-to-start-on-chinas-4th-aircraft-carrier/#4d49f75c5d38>

57. Minnie Chan, "Chinese Navy Set to Build Fourth Aircraft Carrier, but Plans for a More Advanced Ship Are Put on Hold," *South China Morning Post*, November 28, 2019, <https://www.scmp.com/news/china/military/article/3039653/chinese-navy-set-build-fourth-aircraft-carrier-plans-more>

the Indian Ocean, and waters around Europe. China's navy is, by far, the largest of any country in East Asia, and within the past few years, it has surpassed the US Navy in numbers of battle force ships, meaning the types of ships that count toward the quoted size of the US Navy. It was reported that at the end of 2020, China will have 360 battle force ships, compared with a projected total of 297 for the US Navy at the end of FY2020. US Department of Defence projects that China will have 400 battle force ships by 2025, and 425 by 2030.⁹

Until recently, China's naval modernisation effort appeared to be focused less on increasing total platform numbers (i.e., ships and aircraft) than on increasing the modernity and capability of Chinese platforms. Some categories of ships, however, are now increasing in number. The planned ultimate size and composition of China's navy is not publicly known. Compared with other countries, China does not release a navy force-level goal or detailed information about planned ship procurement rates, planned total ship procurement quantities, planned ship retirements, and resulting projected force levels. The 2006-20 Medium and Long-Term Defence and Science Technology Plan which sought to address the reform and development of defence innovation ecosystem comes to an end, and China has almost fulfilled its objectives in modernising its naval force which is now capable of establishing Chinese order at least in the near seas. Chinese military authorities have been pushing to achieve the target of defence and related programmes in every Five-Year Plan (FYP) without any delay, and the 13th Five-Year Plan (2016-2020) has provided added momentum in the modernisation programme. At the annual meeting of the Chinese National Peoples' Congress in March 2019, President Xi noted this was "a crucial year for implementing the development and construction of our military's 13th FYP to achieve the 2020 targets for national defence and army building."⁵⁸ Importantly, the year 2020 is also crucial in Chinese strategic thinking as it is the period where China was to complete sea control within the second island chain propounded by

58. *Military Balance 2020*, International Institute of Strategic Studies, London, 2020, p. 238.

Liu Huaqing in the 1980s, and as China is celebrating its 100th year of the launch of Chinese Communist Party in 2021. So Xi seeks to ensure that by the 100th anniversary of the inception of the People's Republic of China, its path towards becoming a great power by 2049 is smooth and China is headed in the right direction. China's emphasis on modernisation of its navy has contributed to make the PLA Navy a very formidable and also a challenging navy in the Indo-Pacific region in the 21st century.