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Naval capability as a factor for China rising: an assessment

Introduction

China's recent economic growth and growing diplomatic and military strength has called attention to the Power Transition Theory, which argues that the danger of a major war is the greatest when a rising dissatisfied challenger threatens to overtake a declining satisfied hegemonic power. This research paper critically examines the Chinese naval potential for becoming a challenger for US naval power. In this research paper, naval capability of China is taken as an independent variable (as a cause) and the dependent variable (as an effect) is China's potential for becoming a great power while threatening to overtake US hegemony in world affairs. Based on the Power Transition Theory, this research paper evaluates and compares the naval capabilities of China and United States of America to find out the reality behind this impression that China is a rising great power and in future it will compete with the USA in every field of life.

This research would be qualitative and descriptive while some numerical tables would be collated and presented according to the requirement. This research paper would be based on the different primary and secondary sources to collect authentic information for an un-biased research. I would try my best to come up with an informative and interesting research finding, although, there would be some limitations of time and budget and also problems related to the access to right sources may affect this research. I would try my best to make this research useful and valuable for my readers and also the students of strategic studies. This research paper will limit itself to the Chinese naval capabilities and main focus would be on China only. However, the relevant material related to the United States of America would also be provided.

The Power Transition Theory was introduced in 1958 by A.F.K. Organski. Organski divides the world system's state actors into essentially three levels of power: dominant, great and middle/small; and two attitudinal categories: satisfied and dissatisfied. This research paper addresses some of the key research questions on which the whole inquiry is based. Those questions are as follows: 1. What is Power Transition Theory

and how does it fit into my research? 2. Why naval power is so important? 3. How does China interpret Mahan? 3. Does China have a striking/outstanding/mighty naval power? 4. Does or can China challenge USA in naval capability? Is it a myth or reality? 5. Is China aspiring for naval hegemony/superiority over the USA? 6. What is the future scenario for China to get the status of super power? 7. Where will China stand in 2030 in its naval capability?

The research paper is divided into four chapters. The first chapter briefly discusses the premise of the study and explains the rationale behind this research. The brief introductory and historical overview of China and the USA has been presented in this chapter as well. Moreover, this chapter addresses two key research questions that what is in fact the Power Transition Theory and what is its relevance to this research. Furthermore, it has been also discussed that why naval power is that much important that this research has been based on it.

The second chapter states the facts and figures about Chinese naval capability in detail and also the characteristics of naval power of the United States of America have been discussed in the said chapter. The characteristics and force posture of the People's Liberation Army Navy and U.S. Navy have also been discussed. The Chinese and American naval strategies have also been discussed briefly in this chapter. Furthermore, the influence of Alfred Thayer Mahan, the twentieth century naval strategist of U.S. on Chinese maritime thinking has also been highlighted.

The third chapter presents the evaluation and comparison of Chinese and U.S. naval capabilities. This chapter inquires about Chinese ambitions for modernization of its naval forces and for getting hegemony over USA's naval power and for increasing its influence at the global level through maritime projection. Moreover, to seek clarification of the study, couple of interviews taken from experts of Chinese affairs has been incorporated at the end of the chapter. Furthermore, two research questions have been addressed in this chapter that does China have a mighty naval power and does China really challenge USA in terms of naval capability.

The final chapter sums up the whole study and presents a future scenario for Chinese naval capability. Moreover, few observations and recommendations have been presented in the conclusion.

Chapter 1 - Setting the scene

China's unprecedented industrial growth over the last two decades has raised the question of whether it now poses a threat to the security of the United States economically, militarily, or both. In this chapter, the foundation of the research has been articulated for better understanding of the study. After explaining the rationale behind this research, the theme of the study has been described in little detail. The introductory and historical account of China and USA has also been described in this chapter. Moreover, the two research questions have been addressed in this chapter.

1.1 - Rationale behind the Research

China's recent economic development and rising diplomatic and military strength has called the attention to the Power Transition Theory that was introduced by A.F.K. Organski in 1958. In his given theory, Organski argued that war would be likely as the challenger has approached power parity with the dominant nation. The tensions between the two major competitors would rise as the dissatisfied challenger, growing faster than the dominant nation, is threatening to catch up and overtake the dominant power. According to Organski's concept, as each actor perceives that the power gap between them was disappearing, the conflict would be triggered by the challenger who becomes impatient and mounts its attack before it becomes as strong as the dominant nation. This research paper critically analyzes the growing Chinese naval strength to examine the possibilities of confrontation of China with the United States of America while undermining its naval hegemony. Therefore, the rationale behind this research is basically the testifying of Power Transition Theory with special reference to Chinese naval capability vis-à-vis the American naval power.

1.2 - Power Transition Theory and its Relevance to the Research

This research paper has been based on the theme of the Power Transition Theory which was explained through a transition model by A.F.K. Organski in 1958. The central argument of Organski's transition model is linked to his conception of the world's hierarchical political structure. He divides the world system's state actors into fundamentally three levels of power, dominant, great and middle/small. Moreover, he has described two attitudinal categories as well, satisfied and dissatisfied. At the top of the power structure is the strongest state in the system, the dominant power. The dominant power is the primary recipient of the status quo and therefore is the only the most satisfied member of the system, as this state is either responsible for the

establishment of the existing international order or has inherited its control from a predecessor. The United States of America has been enjoying the sole super power status since the end of the Cold War, therefore, in this research, it has been taken as the dominant power. In the hierarchical power structure given by Organski then come the less influential than the dominant power but still relatively powerful, the great powers. Some members of this secondary grouping are considered satisfied with the international order as they cooperate or are allied with the dominant power, thereby earning a share of the responsibilities and benefits of systemic leadership. On the other hand, dissatisfied great powers tend to be relatively new to great power rank. They are newcomers to power so are confronted with a formerly established order and distribution of benefits that offer little in the way advantages and privileges to recent arrivals. Thus far the newly powerful seek and feel that they are entitled to a position in the hierarchy that is more in accordance with their capability attributes. Thus the dissatisfaction is seen as primarily a function of the frustration stemming from the reluctance of the status quo supporters to surrender voluntarily some portion of their own benefits in recognition of recent and ongoing changes in the systemic distribution of power. China's rapid economic growth raises concerns of world community, particularly of the US that China could pose a serious threat and challenge to prevailing international order underpinned by American power. Therefore, China has been taken as a rising challenger to confront a dominant power in this research paper. According to Organski's conception, in the hierarchical world system, the remainder and majority of the members are relatively weak in comparison to the great and dominant powers. The small and middle powers lack the capability to change the international order, whether they are satisfied or dissatisfied with their lot in the international system.

The conception and assumptions of the Power Transition Theory can be summarized as follows: 1. The international system is hierarchical. 2. Alliances are fixed. 3. The power of each state is constantly changing in relation to other states. 4. Domestic power changes are the source of the greatest disturbances in the international system. 5. The rising state initiates war. 6. Probability of war is higher with power parity. 7. Probability of war is lower with power preponderance.

This paper takes the foundation from the Power Transition Theory for conducting this research as it has very much relevance to the recent concerns about China's rapid economic and military growth while emerging as a rising great power. Therefore, this study would be interesting to inquire that whether China has the potential to challenge the United States of America in terms of naval capability or not.

1.3 - Why World Community and U.S. are concerned about China Rising?

It is claimed in a recent report issued by US Congressional Research Service that China's naval modernization has potential implications for the capabilities of US Navy in terms of preparing for a conflict in the Taiwan Strait area, maintaining US Navy presence and military influence in the Western Pacific, and countering Chinese ballistic missile submarines. The expansion of China's economy and its increasing participation in foreign commerce has raised China's international profile. The outstanding economic growth brought about by Deng Xiaoping's initiation of reforms in 1978, fueled conjecture that China will become the world's largest economic power early in the twenty-first century. China has emerged as a pivotal player in the "Pacific Century", while it is a nuclear power with the world's largest population, a thriving economy which is perceived as a rival of that of the United States of America, an ongoing military modernization program and a permanent seat on the U.N. Security Council. According to sources, the economy of the People's Republic of China is the second largest in the world after that of the United States with a GDP of US\$ 7.8 trillion (2008) when measured on the purchasing power parity (PPP) basis. It is the third largest in the world after the US and Japan with a nominal GDP of US\$ 4.4 trillion (2008) when measured in exchange-rate terms. China has been the fastest-growing major nation for the past quarter of a century with an average annual GDP growth rate above 10 per cent. China's remarkable industrial growth over the last two decades has raised the concerns of the United States of America economically, militarily, and especially as it relates to China's Navy.

Traditionally a continental power, China has recently become much more attentive to its maritime interests. The major factors which have attracted China to maritime interests include China's growing reliance on trade for its vital energy supplies, and the importance of Taiwan as a means of permitting or denying China's access to the Pacific Ocean. Having a flourishing economy, China's recent turn to naval modernization has in fact, mounted the concerns of the international community in general and of US in particular that China can eventually become a great power while posing a threat of waging a war against the United States of America.

1.4 Brief Introductory and Historical Overview of China and USA

Before analyzing their naval capabilities it will be insightful to get hold of brief introductory and historical account of China and USA. Therefore, in this particular section of the paper it has been discussed.

1.4.1 Brief Introduction and History of China

The People's Republic of China is situated in East Asia, bordering the East China Sea, Korea Bay, Yellow Sea, and South China Sea, between North Korea and Vietnam. The People's Republic of China is a socialist republic (specifically a people's democratic dictatorship according to its constitution) ruled by the Communist Party of China under a single-party system, and has jurisdiction over twenty-two provinces, five autonomous regions, four municipalities, and two largely self-governing Special Administrative Regions. China stood as a leading civilization for centuries, while outpacing the rest of the world in the arts and sciences, but in the 19th and early 20th centuries, the country was beset by civil unrest, major famines, military defeats, and foreign occupation. After World War II, the Communists under Mao Zedong established an autocratic socialist system that, while ensuring China's sovereignty, imposed strict controls over everyday life and cost the lives of tens of millions of people. After 1978, Mao Zedong's successor Deng Xiaoping and other leaders focused on market-oriented economic development and, by 2000, output had quadrupled.

1.4.2 Brief Introduction and History of USA

The United States of America is a federal constitutional republic comprising fifty states and a federal district. The country is situated mostly in central North America, where its forty-eight contiguous states and Washington, D.C., the capital district, lie between the Pacific and Atlantic Oceans, bordered by Canada to the north and Mexico to the south. The state of Alaska is in the northwest of the continent, with Canada to its east and Russia to the west across the Bering Strait. The state of Hawaii is an archipelago in the mid-Pacific. The country also possesses several territories, or insular areas, in the Caribbean and Pacific. Britain's American colonies broke with the mother country in 1776 and were recognized as the new nation of the United States of America following the Treaty of Paris in 1783. During the 19th and 20th centuries, 37 new states were added to the original 13 as the nation expanded across the North American continent and acquired a number of overseas possessions. The two most traumatic experiences in the nation's history were the Civil War (1861-65), in which a northern Union of states defeated a secessionist Confederacy of 11 southern slave states, and the Great Depression of the 1930s, an economic downturn during which about a quarter of the labour force lost its jobs. Buoyed by victories in World Wars I and II and the end of the Cold War in 1991, the US remains the world's most powerful nation state. The economy is marked by steady growth, low unemployment and inflation, and rapid advances in technology.

1.5 - Significance of Naval Power

The importance of naval power is best described with four facts about sea power. First and foremost, over 70 per cent of the world's surface is covered by ocean. Secondly, over 90 per cent of the international trade and commerce, when measured in weight and volume, travels by sea. This also includes the vast majority of the world's raw materials. Third, the vast majority of the world's major cities and urban population live within a few hundred miles of the oceans. Fourth, the international law provides for the "Freedom of the Seas". It means that any nation can use the open ocean for purposes of trade or defence without infringing on another country's sovereignty, subject to international agreements on pollution and exploitation of resources. By having a strong navy, one nation can get access to the whole world through water ways.

Chapter 2 - China and the USA: naval strategies and capabilities

This chapter elaborates the Chinese and American naval strategies to find out about their actual strength in naval capabilities. The characteristics and force posture of the People's Liberation Army Navy (PLAN) and US Navy have also been discussed. The influence of Alfred Thayer Mahan, the twentieth century naval strategist of US on Chinese maritime thinking has also been highlighted in this chapter. Moreover, a key research question on Chinese interpretation of Mahan's naval thinking has been discussed in this chapter.

2.1 - China's People's Liberation Army Navy (PLA Navy)

The People's Liberation Army Navy (PLAN) is the naval branch of the People's Liberation Army (PLA), the military of the People's Republic of China. Until the early 1990s, the navy performed a subordinate role to the PLA Land Forces. Since then, it has undergone rapid modernization. The People's Liberation Army Navy has become more prominent in recent years owing to a change in Chinese strategic priorities. The new strategic threats include possible conflict with the United States and/or a resurgent Japan in areas such as the Taiwan Strait or the South China Sea. The 225,000-man PLA Navy is organized into three fleets: North Sea, East Sea, and South Sea Fleets. Each fleet is composed of surface forces, submarine forces, naval aviation, and coastal defence forces. The South Sea Fleet also has two marine brigades, totalling some

10,000 men. In time of crisis, the PLA Navy can be supported by China's merchant and fishing ship fleets.

Force Size • Strength: 255,000 Surface Force • Destroyer: 26 • Frigate: 49 • Large landing Ship: 27 • Medium landing Ship: 31 • Fast attack craft: 200+ Submarine Force • SSBN: 3 • SSN: 5-7 • SSK: 56 Naval Aviation • Manpower: 26,000 • Aircraft: 400-500 Marine Corps • Manpower: 10,000 • Major Naval Bases • Lushun • Qingdao • Shanghai (Wusong) • Zhoushan • Fuzhou • Xiamen • Guangzhou • Zhanjiang • Yulin

2.2 - Chinese Naval Strategy In the early years

The central mission of the People's Liberation Army Navy (PLAN) was to defend twelve nautical miles of China's territorial waters extending seaward from the coastline, and 300 kilometers of its land territory that stretches inland from the coastline. The role of the People's Liberation Army Navy (PLAN) was marginalized from the 1950s to the 1970s. This is because land forces were given priority in the earlier strategy of countering incursions of the coastline by Taiwan-based Kuomintang forces, and in the later strategy of "luring enemy in deep" against a possible Soviet invasion of China. It was not until after Deng Xiaoping came to power in 1979 that naval strategy has been more fully articulated. The post-1979 "near-coast defence" strategy, for instance, requires the People's Liberation Army Navy (PLAN) to counter amphibious-landing operations in a possible Soviet invasion of China. The People's Liberation Army Navy (PLAN)'s role in this strategy is purely defensive and supportive. Because of such a strategy, the People's Liberation Army Navy (PLAN) fleets consisted mainly of smaller ships that are vulnerable to air and sea attacks, or those that are highly dependent on land-based intelligence, command and control, air cover and firepower support for operations. A new strategy of "near-seas active defense" was approved by 1987. This strategy requires the People's Liberation Army Navy (PLAN) to operate effectively and more independently in the near seas within and around the first island-chain, which stretches more than 200 nautical miles from China's coastline. This strategy also involves various missions ranging from reunification with Taiwan, restoring disputed maritime territories, securing major sea lanes to nuclear deterrence. The endorsement of this strategy can be attributed to the personal influence of the People's Liberation Army Navy (PLAN) Commander Liu Huaqing, the support of the civilian leadership and the decline of the Soviet threat. The implementation of the strategy, however, was hampered by the lack of funding and advanced technologies, and the uncertainty over land-based threats. Only modest progress was made in capabilities. It was not until after the 1996 Taiwan crisis that the People's Liberation Army Navy (PLAN) has

acquired a substantial number of surface and underwater operational platforms with improved anti-ship, air-defense and anti-submarine capabilities. These platforms are also heavier and more sustainable, more difficult to locate, and has better sensors and command and control. A new strategy of “far-seas operations” has been advanced since 2004. This strategy requires the People’s Liberation Army Navy (PLAN) to develop the capabilities to operate efficiently within and beyond the second island-chain, or project naval power up to and beyond 1,000 nautical miles from China’s territorial waters. More availability of funding and better technologies, and vulnerability stemming from China’s growing dependence on major sea lanes for shipping raw materials and traded goods have been utilized by naval researchers to rationalize the new strategy. The PLA Navy is likely to acquire aircraft carriers in the coming years to support “far-seas operations.”

2.3 - The United States Navy (U.S. Navy)

The United States Navy is the sea branch of the US Armed Forces. It is one of the seven uniformed services of the United States. As of 31 December 2008, the US Navy had about 331,682 personnel on active duty and 124,000 in the Navy Reserve. It operates 283 ships in active service and more than 3,700 aircraft. The US Navy is the largest in the world; its battle fleet tonnage is greater than that of the next 13 largest combined. The US Navy also has the world's largest carrier fleet, with 11 in service and one under construction. The Navy traces its origins to the Continental Navy, which was established during the American Revolutionary War (1775-1783) and was essentially disbanded as a separate entity shortly thereafter. The United States Constitution provided the legal basis for a seaborne military force by giving Congress the power “*to provide and maintain a navy*”.

2.4 - American Naval Strategy

We have been witnessing the US involvement and presence in every part of the world for a long time. Having situated at the corner of the globe, the USA has access to every part and corner of the world just because of its highly advanced naval capability. Therefore, we should keep this in mind that maritime strategy of USA is of swift and efficient nature. The United States of America is an island nation. As such, they use the seas to extend their political, economic, and diplomatic power. They say that they required maritime superiority to ensure safe seas for commerce. The Maritime Strategy, a component of the National Military Strategy, enables the United States of America to achieve its political, economic, and military goals through the global

employment of naval forces. Americans believe that sea power protects their way of life. They think that United States sea power is a force for good, protecting this nation's vital interests even as it joins with others to promote security and prosperity across the globe. In a latest report it is stated that guided by the objectives articulated in the National Security Strategy, National Defense Strategy, National Military Strategy and the National Strategy for Maritime Security, the United States Navy, Marine Corps, and Coast Guard will act across the full range of military operations to secure the United States from direct attack; secure strategic access and retain global freedom of action; strengthen existing and emerging alliances and partnerships and establish favourable security conditions. According to the latest report on US Maritime Strategy, never before have the maritime forces of the United States, the Navy, Marine Corps, and Coast Guard come together to create a unified maritime strategy. This strategy stresses an approach that integrates sea power with other elements of American national power, as well as those of their friends and allies. It describes how sea power will be applied around the world to protect American way of life, as they join with other like-minded nations to protect and sustain the global, inter-connected system through which they prosper. American naval strategists say that their commitment to protecting the homeland and winning their Nation's wars is matched by a corresponding commitment to preventing war. The security, prosperity, and vital interests of the United States are increasingly coupled to those of other nations. Their Nation's interests are best served by fostering a peaceful global system comprised of interdependent networks of trade, finance, information, law, people and governance. They believe that they prosper because of this system of exchange among nations, yet recognize it is vulnerable to a range of disruptions that can produce cascading and harmful effects far from their sources. Major power war, regional conflict, terrorism, lawlessness and natural disasters, all have the potential to threaten US national security and world prosperity. The oceans connect the nations of the world, even those countries that are landlocked. Because the maritime domain, the world's oceans, seas, bays, estuaries, islands, coastal areas, littorals, and the airspace above them, supports 90 per cent of the world's trade, it carries the lifeblood of a global system that links every country on earth. Covering three-quarters of the planet, the oceans make neighbours of people around the world. The US Maritime Strategy suggests that maritime forces must contribute to winning wars decisively while enhancing our ability to prevent war, win the long struggle against terrorist networks, positively influence events, and ease the impact of disasters.

2.5 - Mahan's Influence over U.S. and Chinese Maritime Thinking

Alfred Thayer Mahan has been called the America's nineteenth-century "evangelist of sea power" and the intellectual father of the modern US navy. He was one of the first to put the modern concept of sea power into writing. It is interesting to know that Mahan's writings and naval strategy have been considered and followed in China as well.

2.5.1 - Influence of Mahan over US

Alfred Thayer Mahan identified six characteristics as "*principal conditions affecting the sea power of nations*": geographic position, natural resources and climate, extent of territory, population, character of the people, and the character of the government. Modern naval historians have updated Mahan's list to include: economic strength, technological prowess, socio-political culture, geographic position, dependence on maritime trade and sea resources, and government policy. For Alfred Thayer Mahan sea power was at once a geographical imperative and a decisive force in international relations since classical ancient times. The sea power was not strictly equivalent to naval power. Mahan defined this vague concept variously in economic and military terms. There was a circular quality to his reasoning. The domestic prosperity and affluence was seemingly his overriding concern. He believed that the prosperity at home required robust, domestic industrial production, colonies and markets overseas, and merchant and military shipping. In his best-known work, *The Influence of Sea Power upon History (1661-1783)*, he pronounced these as the "pillars" of sea power. Mahan proclaimed that the sea would always be superior to the land as a medium for transporting goods to those markets. The advantages it conferred were "*of the nature of things, and permanent*".

2.5.2 - Influence of Mahan over China

Beginning in 1980s, as China opened itself to the world, it began to turn its attention to the seas, a domain long neglected by Mao Zedong. Since then Chinese naval thinkers have borrowed heavily from Mahan's writings to express their own recommendations on how China ought to cope with maritime matters. This process of foreign adaptation has become particularly visible in recent years, as proponents of Mahanian thought have multiplied and become more forceful.

2.5.2.1 - Liu Huaqing, "China's Mahan"

Admiral Liu Huaqing, widely regarded as the founding father of China's modern navy, is a central figure in China's dramatic turn to the seas. As a key draftsman of this strategic reorientation, he produced a coherent national vision and naval strategy that set the stage for his successors to advocate a new and ambitious role for the navy. In August 1982, paramount leader Deng Xiaoping appointed Liu Huaqing to serve as commander of the People's Liberation Army Navy (PLAN). Within a year of his promotion/appointment, Liu began to investigate aggressively for honest answers as to how China could break out of its self-imposed unresponsiveness to the high seas.

Notably, Liu premised his analytical framework for understanding naval warfare on Mahan's writings. In his memoir, he explicitly cites Mahan's *The Influence of Sea Power upon History*, hailing it as one of the most systematic appraisals ever written of concepts relating to command of the sea and naval strategy. Liu agrees with Mahan that a nation's prosperity and well-being are intimately bound up with command of the sea. Such command must be exercised both in peacetime, facilitating the international trade and commerce that triggers wealth creation, and in wartime, to control sea communications with the theatre of conflict.

According to Liu, Mahan's recommendations furnished the great powers of the past a "theoretical weapon" to justify foreign expansion and hegemony. In December 1985, Liu Huaqing formally introduced China's new maritime strategy. He asserted that nautical aims must be enfolded within China's national security strategy. Protecting territorial sovereignty, legal maritime rights, and the natural resources of the Yellow Sea, East China Sea and South China Sea were top objectives, and clearly only a capable navy could achieve them. As a strategic service, Liu reasoned, the PLA Navy must independently develop doctrine and capabilities consistent with its unique operational environment. Particularly, Liu's maritime strategy rested upon several central pillars:

- Offshore Defence - Liu vaguely defines offshore operations or "area defence" as taking place within the first island chain, which is located somewhere between China's coastline and the blue-water environment. He thus eschews both Mao's tightly restricted approach to the sea and the ocean-going capabilities boasted by the United States and the Soviet Union.

- Strategic Defence - Consistent with China's long-standing foreign policy of peaceful coexistence, Liu calls on Beijing to design a maritime posture that holds a strategically defensive line. Consonant with Mao's concept of active defence, which is predicated on "offensive defence", naval operations would nonetheless be offensive in character, meeting seaborne threats far from the Chinese coast.
- Operational Area - For the anticipated future, Liu envisions confining Chinese naval operations largely within the first island chain. However, as China's naval power grows, he considers extending the reach of the PLA Navy toward the second island chain.
- National Objectives - Liu declares that his strategy fulfills the nation's leading policy priorities such as, upholding national unity, protecting territorial integrity, ensuring access to natural resources, deterring imperial aggression from the sea, and maintaining peace in the Asia-Pacific region.
- Peacetime Missions - Liu maintains that his peacetime strategy will safeguard territorial integrity (including Taiwan as a top priority), support diplomatic aims, maintain credible deterrence, cope with regional contingencies, and assist other socialist nations confronting seaborne challenges.
- Wartime Missions - Liu calls on the PLA Navy to act either independently or jointly with the other services, defeating enemies at seas, assuring Chinese use of sea lines of communication, and taking part in nuclear retaliatory operations under unified command.

2.6 - Chinese Naval Capabilities

The PLA Navy is responsible for safeguarding China's maritime security and maintaining the sovereignty of its territorial seas along with its maritime rights and interests. The preparation for the maritime battlefield has been intensified and improved while the integrated combat capabilities are being enhanced to conduct offshore campaigns. The capability of nuclear counter-attacks has also been enhanced. In accordance with the principle of smaller but more efficient troops, the PLA Navy has compressed the chain of command and reorganized the combat forces in a more scientific way while giving importance to building maritime combat forces, especially amphibious combat forces. The PLA Navy has also sped up the process of updating its weaponry and equipment with priority given to the development of new combat ships as well as various kinds of special purpose aircraft and relevant

equipment. At the same time, the weaponry is increasingly informationalized and long-range precision strike capability is raised. The new strategy of far-seas operations shows that the People's Liberation Army Navy (PLAN) is clearly interested in having blue-water capabilities, or those that can operate and compete effectively in the far seas. The current naval buildup is evidently contributing to the development of such capabilities. Moreover, the PLA Navy may make several necessary preparations in the coming years.

First, it may build aircraft carriers. The new strategy implies that the People's Liberation Army Navy (PLAN) should acquire long-range, offensive capabilities to support far-seas operations and to "strike the enemy's rear" if China is attacked. Currently, the newly acquired People's Liberation Army Navy (PLAN) ships may provide area and fleet air-defense, but they do not have the offensive air capabilities to support far-seas operations and to "strike the enemy's rear." But carriers can provide such capabilities.

Moreover, the current straits garrison-oriented fleets may be reorganized into multifunctional battle groups for operation in spaces of different ranges such as the coastal waters, near seas and far seas. The People's Liberation Army Navy (PLAN) may also attempt to acquire overseas facilities for intelligence and logistics support of its far-seas operations.

Finally, it may augment its at-sea supply-replenishing capabilities to sustain naval operations in the far seas.

2.6.1 - China's Naval Surveillance Capabilities

According to sources, "anti-piracy operations" have given China's PLA Navy the best excuse to penetrate the Indian Ocean and station forces there permanently. As fighting piracy around the Gulf of Aden becomes a long-term mission, the PLA Navy South Sea Fleet is likely to set up a sub-fleet to handle that task, perhaps the "Indian Ocean Sub-fleet of the South Sea Fleet", and the PLA Navy will become the new owner of the Indian Ocean. In recent months, Chinese military publications have carried a number of articles stating that "the Indian Ocean does not belong to India." The intent of these articles is increasingly clear. While carrying out anti-piracy operations, the PLA Navy's battleships will gain experience in long-distance maritime combat operations in preparation for the establishment of an ocean-going aircraft carrier fleet. The navy may dispatch other battleships, such as its 054A FFG, on similar missions in the future.

China has a key military objective in dispatching battleships to the Gulf of Aden. The “Chinese Aegis” class DDG it has sent to the region has the most advanced radar detection and C4IRS capabilities, and therefore can conduct effective battlefield monitoring exercises in this region. The Gulf of Aden provides the best geographical environment for the PLA Navy to conduct surveillance on the activities of the US 5th Fleet.

The powerful detection capability of the Chinese Aegis DDG relies on the “Sea Lion” active phased array radar installed on the battleship. The basic measurements of the Chinese Sea Lion radar system give some clues as to its performance features. It is sea-to-air search radar capable of simultaneously searching for and tracking targets while constantly changing the beam indexes. It can search for more than 100 targets at once and track 50 of them. Its search range for combat aircraft appears to be around 500-550 kilometers (roughly 300-340 miles). China has built only two 052C DDGs outfitted with this advanced radar system; its purpose is to test the effectiveness of the Sea Lion for future installation on Chinese aircraft carriers. This radar system on the No. 171 DDG currently deployed in the Gulf of Aden makes it possible for the PLA Navy to monitor most of the airspace above Yemen, Oman and the Strait of Hormuz. Tankers carrying crude oil from Saudi Arabia would have to go through this strait.

In addition, the 5th Fleet of the United States Pacific Fleet based in Bahrain, the Command Headquarters of the United States Central Military Command located in Qatar, and the activities of the combat aircraft of the Saudi Arabian Air Force could all come under the surveillance of the Chinese Aegis radar system. Of course, while en route to the Indian Ocean – past the Philippines, Vietnam, Singapore, Brunei, Malaysia and through the Strait of Malacca – the Chinese Aegis can conduct surveillance, including the airspace above southern India. The activities of the air forces in the above countries and voice communication signals may also be monitored and intercepted. A number of these countries have territorial disputes with China on land or sea.

Moreover, the No. 171 and No. 169 DDGs are equipped with China’s best electronic intelligence acquisition and countermeasure systems, and their antenna arrays are very similar to the electronic intelligence acquisition and support systems developed by Israel. These systems can effectively detect and acquire the radar signals of the US 5th Fleet and record the data. Naturally, the equipment can also monitor the radar signals and frequencies of the naval battleships of the countries along this route. The No. 171 DDG is equipped with the NRJ6A ESM/ESM system; according to at least one military source, this microelectronic system is imported from Israel. Any navy ship formation

requires the support of a powerful underwater outpost force and reinforced anti-submarine capability to be able to engage in effective three-dimensional warfare. The best anti-submarine measure is of course using submarines to undertake anti-tracking operations. Consequently, the possibility cannot be excluded that new generation 093 SSN or other diesel-powered submarines may have played the role of underwater outpost during recent anti-piracy actions of the PLA Navy in the Gulf of Aden. Behind the curtain of the anti-piracy operations is in fact the rivalry of the naval forces of the major powers in establishing their new “national interest frontiers.”

China's PLA Navy held an impressive naval review in the historic port city of Qingdao on 23 April, 2009, marking the 60th anniversary of the founding of the PLA Navy. By any criteria, the event was a great success. At the display, Chinese President Hu Jintao sought to reassure the international community over China's rising military strength while highlighting Beijing's ambitions of becoming a major sea power. President Hu Jintao told that China's military, including the fast modernizing navy, “*will always be a force for the preservation of world peace and advancement of common development*”. The international fleet inspection featured the first known public display of its nuclear submarines. The two diesel-electric submarines also took part in the half-hour sail past, along with five missile destroyers, six frigates, and a large amphibious landing ship. Above them flew electronic reconnaissance and early warning planes, fighter jets and anti-submarine-warfare helicopters. The Chinese president, who also heads the Communist Party commission that commands the armed forces, viewed the display from aboard the Chinese destroyer Shijiazhuang, accompanied by the Chinese navy's commander, Adm. Wu Shengli, Defense Minister Liang Guanglie, and other top military brass. The navy has been a major beneficiary of the greater allocations, adding to its arsenal of sophisticated new submarines, aircraft, warships and weapons systems.

The 225,000-member service already operates more subs than any other Asian nation, with up to 10 nuclear-powered vessels and as many as 60 diesel-electric subs. April's gathering was portrayed by state media as a signal of China's intent to develop its navy into a force able to conduct operations far from home ports in defense of the country's maritime trade. Those plans are believed to include the addition of one or more aircraft carriers to the fleet over the coming years, possibly emboldening China in enforcing its territorial claims in the South China Sea and elsewhere. In December 2008, China also projected its naval power in pirate fight. There were two destroyers and a supply ship steamed out of a southern Chinese port on December 26, 2008, on China's first patrol

and potential combat mission beyond Chinese waters. According to the China Daily newspaper, the ships were due to reach the Gulf of Aden by January 6, 2009 and carry 870 crew members, including 70 elite Navy Special Forces trained in close combat and helicopter-borne raids.

The developments reflect China's determination to boost its sea power, in line with its rising economic and political clout. *"Now we have more overseas interests and activities, so that's why we need a stronger force on the oceans,"* says Peng Guangqian, a military expert in Beijing. The indisputable reality is that this military, the People's Liberation Army (or PLA), and particularly its naval component, the PLA Navy or (PLAN) is growing greatly in capability; further, it is a growing concern to defense and naval leaders in Washington, D.C., and other capitals, including Tokyo and Taipei.

The PLAN is most nearly mature with respect to platforms and weapons but, approximately in the order listed, progressively less so in human capital, organizational practices, and exercise regimen. It is working to become better in each. The superiority of the US nuclear submarine force will continue; however, the Chinese are apparently developing ballistic missiles with maneuvering warheads and terminal seekers to hit ships at sea. This capability to lob numerous accurate ballistic missile warheads high over the heads of all defenders could effectively circumvent the anticipated quiet and capable US nuclear attack submarines. China's entire fleet of approximately 55 general-purpose submarines conducted a total of six patrols during 2007, slightly better than the two patrols conducted in 2006 and zero in 2005. The 2007 performance matches China's all-time high of six patrols conducted in 2000, the only two years since 1981 that Chinese submarines conducted more than five patrols in a single year. The new information, obtained by Federation of American Scientists from the US Navy under the Freedom of Information Act, also shows that none of China's ballistic missile submarines have ever conducted a deterrent patrol. Chinese Submarine Patrols Rebound in 2007, but remain limited. The Chinese patrol rate compares better with that of the Russian Navy, which has largely ceased forward submarine operations compared with those of the Soviet Union during the Cold War. Russian general purpose submarines conducted seven patrols in 2007. The entire Chinese submarine fleet conducted six patrols during 2007, matching the previous all-time high from 2000.

The performance indicates that China operates its submarine fleet almost entirely as a coastal defense force.

2.7 - U.S Naval Capabilities

The mission of the US Navy is to maintain, train and equip combat-ready naval forces capable of winning wars, deterring aggression and maintaining freedom of the seas. The Maritime Strategy of the United States of America is about Security, Stability and Sea-power.

- Security: Maritime forces are first line of defense with ability to deploy quickly, reach difficult locations.
- Stability: 70 per cent of the world is water, 80 per cent of the world lives on or near the coastline and 90 per cent of our commerce sails across it. Any disruption in that chain caused by instability has a direct impact on American quality of life.
- Sea-power: The unifying force and common denominator that enables global security stability and prosperity. This strategy clearly articulates that our sea services operate across the full spectrum of operations; raising the prevention of war to a level equal to the conduct of war. We believe that preventing wars is as important as winning wars.

Maritime forces will be employed to build confidence and trust among nations through collective security efforts that focus on common threats and mutual interests in an open, multi-polar world. Although our forces can surge when necessary to respond to crises, trust and cooperation cannot be surged. They must be built over time so that the strategic interests of the participants are continuously considered while mutual understanding and respect are promoted. United States Navy, Marine Corps, and Coast Guard will act across the full range of military operations to secure the United States from direct attack; secure strategic access and retain global freedom of action; strengthen existing and emerging alliances and partnerships and establish favorable security conditions.

Expanded Core Capabilities of U.S. Maritime Power: • Forward Presence • Deterrence • Sea Control • Power Projection • Maritime Security • Humanitarian Assistance and Disaster Response

According to US Navy website, *“the strategy focuses on opportunities - not threats; on optimism - not fear; and on confidence - not doubt. It recognizes the challenges imposed by the uncertain conditions in a time of rapid change and makes the case for the necessity of US seapower in the 21st Century.”*

Chapter 3 - Comparative analysis of Chinese and US naval capabilities

In this chapter, the evaluation and comparison of Chinese and US naval capabilities has been presented. This chapter also inquires about Chinese ambitions for modernization of its naval forces and for getting hegemony over USA's naval power and for increasing its influence at the global level through maritime projection. Moreover, to seek clarification of the study, couple of interviews taken from experts of Chinese affairs has been incorporated at the end of the chapter. Furthermore, two research questions have been addressed in this chapter that does China have a mighty naval power and does China really challenge USA in terms of naval capability.

3.1 - Comparative Analysis

While reviewing the relevant material on Chinese naval capabilities, I came across an insightful article which was basically written in response of an Associated Press article. In AP article, it was declared that Chinese nuclear-propelled submarines "*are considered just a notch below cutting-edge US and Russian craft*". The response article rejected this claim by giving some astute explanation. The first reason for such rejection is given that the simplistic numerical comparisons are too often misleading. But quantity does provide a quality.

For instance: Nuclear Aircraft Carriers (CVN) U.S. = 11 China = 0 VSTOL/Helicopter Carriers (LHA/LHD) U.S. = 11 China = 0 Guided Missile Cruisers (CG) U.S. = 22 China = 0 Destroyers (DDG/DD) U.S. = 60 China = 27 Frigates (FF/FFG) U.S. = 30 China = 48 Ballistic Missile Submarines (Nuclear) (SSBN) U.S. = 14 China = 3 Attack/Cruiser Missile Submarines (Nuclear) (SSN/SSGN) U.S. = 57 China = 6 Attack Submarine (Non-Nuclear) (SS/SSK) U.S. = 0 China = 55

Secondly, numbers alone do not convey an adequate comparison. For example, each US CVN-type carrier can operate 60 or more high-performance aircraft. All US cruisers and destroyers have the Aegis advanced radar/fire control system; only a few Chinese ships have the equivalent. Similarly, all US cruisers and destroyers have vertical-launch systems for firing long-range Tomahawk strike (land-attack) missiles as well as surface-to-air missiles. The Chinese have no ship-launched strike weapons and their surface-to-air missiles are inferior. Further, there is no public evidence that the Chinese SSBNs have an operational missile, and none is known to have undertaken a long-range patrol. No long-range patrols have been reported of nuclear torpedo-attack submarines (SSN), and relatively few are made by diesel-electric undersea craft.

However, the one category in which the Chinese Navy does pose a potential threat to the US Navy, according to the write of that original AP article is in non-nuclear submarines. The Chinese Navy has modern, Russian-built Kilo (Project 877EKM) submarines as well indigenous-built diesel-electric submarines. The US Navy's ability to detect these craft, especially in littoral areas is limited. This was demonstrated for two years when the US Navy operated against a Swedish AIP submarine, the Gotland, "loaned" for anti-submarine exercises. According to the Swedish officers, the US carrier battle groups operating against the Gotland off the southern California coast invariably failed to locate the craft. The Chinese Navy, supported by a large, land-based air arm and land-based anti-ship missiles, could most likely deny US surface and air operations off of the lengthy Chinese coast, and in the Taiwan Strait. At this time US (nuclear) submarine operations in those areas appear to be feasible. Those submarines, armed with torpedoes, mobile mines, and Tomahawk missiles provide a considerable war-fighting capability. But the most likely scenarios for a US-Chinese conflict appear to be in Third World, resource-rich areas, such as Africa and South America. And today, and for the foreseeable future, the Chinese Navy cannot project meaningful political or military power to those distances. In my opinion, currently, the Chinese are far from any kind of naval parity with the United States.

3.2 - China's Naval Modernization

Traditionally, China was regarded as largely a land power with only very limited naval forces. During the Cold War-era, the People's Liberation Army Navy (PLAN) was mainly tasked with the defence of China's coast against amphibious assaults from the US or Soviet Union. Since the late 1980s, China has been seeking to develop a "blue water" navy force capable of operating in the regions beyond its offshore waters. The modernization of the PLA Navy over the past decade has been driven by two factors, the possibility of a military conflict with Taiwan over the island's declaration of independence, and more recently, the growing needs to protect China's sea lines of communications (SLOC) in order to secure the country's global network of energy resources and trading activities.

The PLA Navy has been following a three-step strategy in its modernization process. In the first step, it set its goal to develop a relatively modernized naval force that can operate within the first island chain, a series of islands that stretch from Japan to the north, to Taiwan, and Philippines to the south.

In the second step, the PLA Navy aims to build up a regional naval force that can function beyond the first island chain to reach the second island chain, which includes Guam, Indonesia, and Australia.

In the third-stage, the PLA Navy will develop a global naval force by the mid twenty-first century.

While manifestly lacking in the robust blue-water power-projection capabilities of the United States Navy, the People's Liberation Army Navy is reasonably well postured to perform the brown-water and green-water sea denial missions with which it is tasked as a matter of national policy. The PLA Navy has not failed in an attempt to match the US Navy. Rather, it has made substantial progress towards mounting an asymmetric sea-denial response to American power-projection capabilities, while at the same time deploying forces that are not inferior in overall combat potential to other regional maritime powers. Now some important latest developments with reference to the naval modernization of China are to be discussed in the following pages.

3.2.1 - Anti-Ship Ballistic Missiles (ASBMs)

It is stated that China is deploying large numbers of theater-range ballistic missiles (TBMs) capable of attacking targets in Taiwan or other regional locations. Although ballistic missiles in the past have traditionally been used to attack fixed targets on land, US Department of Defence and other observers believe that China is developing anti-ship ballistic missiles (ASBMs), which are TBMs and are equipped with maneuverable re-entry vehicles (MaRVs) capable of hitting moving ships at sea. US observers have expressed strong concern about this development, because such missiles, in combination with broad-area maritime surveillance and targeting systems, would permit China to attack moving US Navy ships in the Western Pacific. The US Navy has not previously faced a threat from highly accurate ballistic missiles capable of hitting moving ships at sea. Due to their capacity to change course, maneuverable re-entry vehicles (MaRVs) would be more difficult to intercept than non-maneuvering ballistic missile re-entry vehicles. US Department of Defence states that China is developing an anti-ship ballistic missile (ASBM) based on a variant of the CSS-5 medium-range ballistic missile (MRBM) as a component of its anti-access strategy. The missile has a range in excess of 1,500 km (810 nautical miles) and, when incorporated into a sophisticated command and control system, is a key component of China's anti-access strategy to provide the PLA the capability to attack ships at sea, including aircraft carriers, from great distances.

One observer states that: *“The PLA’s space networks and ground surveillance systems will help target the PLA’s new revolutionary long-range anti-ship ballistic missiles”*.

Today, the 2,500-kilometer-range DF-21C medium range ballistic missiles and the 700-kilometer-range DF-15A tactical missiles are being deployed along the Taiwan Straits. While those missiles were influenced by the old US Pershing 2 radar guided ballistic missile, China’s system is far more capable and effectively keeps US carrier battle groups out of their range until the US Navy can put enough truly effective anti-missile defenses to sea.

3.2.2 - Anti-Ship Cruise Missiles (ASCMs)

China is modernizing its extensive inventory of anti-ship cruise missiles (ASCMs), which can be launched from land-based strike fighters and bombers, surface combatants, submarines and possibly shore-based launchers. Among the most capable of the new ASCMs that have been or are being acquired by the PLA Navy are the Russian-made SS-N-22 Sunburn (carried by China’s four Russian-made Sovremenny-class destroyers) and the SS-N-27 Sizzler (carried by 8 of China’s 12 Russian-made Kilo-class submarines).

3.2.3 - Land-Attack Cruise Missiles (LACMs)

It is stated that China is developing land-attack cruise missiles (LACMs) that can be fired from land bases, land-based aircraft, or Navy platforms such as submarines to attack targets, including air and naval bases, in Taiwan or other regional locations, such as Japan or Guam.

3.2.4 - Surface-To-Air Missiles (SAMs)

According to sources, China is deploying modern surface-to-air missile (SAM) systems across from Taiwan, including long-range and high-altitude systems that have an advertised range sufficient to cover the entire Taiwan Strait, which is roughly 100 nautical miles (185 kilometers) wide. The advanced SAMs may have some effectiveness against stealthy aircraft. The longer-range and shorter-range SAM systems deployed along China’s coast opposite Taiwan would in combination provide China a multilayer defense against enemy aircraft seeking to operate over the Strait or approach that portion of China’s coast.

3.2.5 - Mines

China is believed to have an inventory of tens of thousands of naval mines of various types, including modern designs. Chinese naval publications demonstrate a strong interest in the use of naval mines in conflicts or blockade situations, and particularly for countering U.S. submarines.

3.2.6 - Nuclear Weapons

It is claimed that China, as a longstanding nuclear weapon state, could place nuclear warheads on weapons such as theater-range ballistic missiles (TBMs) including anti-ship ballistic missiles (ASBMs), land-attack cruise missiles (LACMs), anti-ship cruise missiles (ASCMs), torpedoes, and naval mines. It is also observed that China could use nuclear-armed versions of these weapons (except the LACMs) to attack U.S. Navy ships at sea.

3.2.7 - Land-Based Aircraft

It is observed that China is introducing increasing numbers of modern and capable (so-called fourth-generation) land-based fighters and strike fighters into the PLA Air Force and PLA Naval Air Force. These include Russian-made Su-27s and Su-30s and indigenously produced F-10s and F-11s. At least some of the strike fighters will be armed with modern anti-ship cruise missiles (ASCMs).

3.2.8 - Carrier-Capable Aircraft

China reportedly has been negotiating with Russia on the purchase 48 to 50 carrier-capable Su-33 Flanker D naval fighters. The Su-33, a derivative of the Su-27 design, can operate from aircraft carriers using a ski-jump ramp and is capable of in-flight refueling.

3.2.9 - Unmanned Aerial Vehicles (UAVs)

US Department of Defence report stated that "*acquisition of unmanned aerial vehicles (UAVs) and unmanned combat aerial vehicles (UCAVs), including the Israeli HARPY unmanned combat aerial vehicle (UCAV), expands China's options for long-range reconnaissance and strike.*" Another observer stated in 2007 that "*Chinese sources have also recently suggested that China is actively developing unmanned combat aircraft for carrier operations*".

3.2.10 - Submarines

China's submarine modernization effort, which is producing a significantly more modern and capable submarine force, has attracted substantial attention and concern. China by the end of 2006 completed taking delivery on eight Russian-made Kilo-class non-nuclear-powered attack submarines (SSs) that are in addition to four Kilos that China purchased from Russia in the 1990s.

China also has recently built or is building four other classes of submarines, including the following:

- A new nuclear-powered ballistic missile submarine (SSBN) design called the Jin class or Type 094;
- A new nuclear powered attack submarine (SSN) design called the Shang class or Type 093;
- A new SS design called the Yuan class or Type 041 (or Type 039A); and
- Another (and also fairly new) SS design called the Song class or Type 039/039G.

Along with the Kilo-class boats, these four classes of indigenously built submarines are expected to be much more modern and capable than China's aging older-generation submarines.

3.2.11 - Aircraft Carriers

The issue of whether and when China might set up one or more aircraft carriers, and what the design and qualifications of Chinese aircraft carriers might be, has been a topic of discussion among many observers for the last several years. The Chinese officials in recent years have begun to speak more openly about building one or more aircraft carriers. The developments since mid-2005 have suggested to some observers that China now intends to complete the unfinished ex-Russian carrier Varyag. China had purchased the Varyag from Russia several years ago, and would place it into service in the near future, possibly as an aviation training ship. Some observers also believe that China in the next few years will begin construction of one or more indigenously designed aircraft carriers. A press report in September 2008 stated that Fifty students have begun a training programme at the Chinese People's Liberation Army Dalian Naval Academy (DNA) designed to make them China's first naval pilots capable of operating fixed-wing aircraft from an aircraft carrier. The training programme, which is the first of its kind in the history of the People's Liberation Army Navy, was described by China's state media as "*an important decision made by the navy to realize its strategic transformation in the new era*". The majority of the training programme will be delivered at the Faculty of Automation Engineering at DNA, though

other naval institutions and flying academies will contribute to the programme. During four years of training, students will receive classroom instruction in automation and control engineering, seamanship and in addition, theories of flight and aircraft systems. This is likely to be followed by a flight training programme, beginning with primary flight training on land and eventually leading to advanced shipborne flight training.

To support its long-time ambition of acquiring an aircraft carrier capability and competence, the PLA Navy has been selecting and training future carrier operators for over two decades. [Italics, mine] The PLA Guangzhou Naval Academy launched a “Pilot Warship Captain” course in 1987 to train naval pilots to command warships which was basically inspired by the US Navy’s practice of appointing naval pilots to captain aircraft carriers. Nine naval pilots graduated from the course after three years of studies and all of them are now serving on PLA Navy destroyers as captains. These captains will reach their late forties by 2010, with 20 years of experience in warship operations, making them ideal candidates to captain an aircraft carrier. Although an operational carrier is unlikely to be commissioned soon, a source within the Chinese shipbuilding industry has confirmed that the PLA Navy is planning to convert the ex-Soviet navy carrier Varyag into a training carrier. The 67,500 ton vessel that was bought from Ukraine for US\$ 20 million in 1997 has been harboured at the Dalian Shipyard for renovation since 2002. If the PLA Navy manages to prevail over the technical difficulties involved in fitting the vessel with a new propulsion system and the necessary take-off and landing systems, Varyag will serve as a competent platform for the PLA Navy’s future shipborne flight training programme, pending the introduction of the first operational Chinese aircraft carriers perhaps by 2020.

3.2.12 - Surface Combatants

China since the early 1990s has purchased four Sovremenny-class destroyers from Russia and deployed nine new classes of indigenously built destroyers and frigates (some of which are variations of one another) that demonstrate a considerable modernization of PLA Navy surface combatant technology. US Department of Defence states that China’s newest indigenously built destroyers and frigates “*reflect leadership’s priority on advanced anti-air warfare capabilities for China’s naval forces, which has historically been a weakness of the fleet*”.

3.2.13 - Sovremenny-Class Destroyers

China in 1996 ordered two Sovremennyclass destroyers from Russia; the ships entered service in 1999 and 2001. China in 2002 ordered two additional Sovremenny-class destroyers from Russia; the ships entered service in 2005 and 2006.

Sovremenny-class destroyers are equipped with the SS-N-22 Sunburn ASCM, a highly capable anti-ship cruise missile (ASCM).

3.2.14 - Five New Indigenously Built Destroyer Classes

China since the early 1990s has built five new classes of destroyers, one of which is a variant of another. Compared to China's 14 remaining older Luda (Type 051) class destroyers, which entered service between 1971 and 1991, these five new destroyer classes are considerably more modern in terms of their hull designs, propulsion systems, sensors, weapons, and electronics. A key area of improvement in the new destroyer designs is their anti-air warfare (AAW) technology, which has been a significant PLA Navy inadequacy. Like the older Luda-class destroyers, these new destroyer classes are armed with anti-ship cruise missiles (ASCMs).

3.2.15 - Four New Indigenously Built Frigate Classes

China since the early 1990s has built four new classes of frigates, two of which are alternatives of two others, which are more modern than China's 29 remaining older Jianghu (Type 053) class frigates, which entered service between the mid-1970s and 1989. The four new frigate classes, like the new destroyer classes, feature improved anti-air warfare (AAW) capabilities. Unlike the new destroyer designs, some of the new frigate designs have been put into larger-scale series production.

3.2.16 - Fast Attack Craft

As an evident replacement for its 190 older fast attack craft, or FACs (including 37 armed with ASCMs), China in 2004 introduced a new type of ASCM-armed fast attack craft, called the Houbai (Type 022) class, which uses a stealthy, wave-piercing, catamaran hull. The Houbai class is being built in at least six shipyards. Forty were in service as of 2008, and a total of as many as 100 might be built.

3.2.17 Amphibious Ships

- **Yuzhao (Type 071) - Amphibious Ship** It is stated that China is building a new class of amphibious ship called the Yuzhao or Type 071 class. The design has an estimated displacement of 17,600 tons, compared with about 15,900 tons to 16,700 tons for the US Navy's Whidbey Island/Harpers Ferry (LSD-41/49) class amphibious ships, which were commissioned into service between 1985 and 1998, and about 25,900 tons for the US Navy's new San Antonio (LPD-17) class amphibious ships, the first of which was commissioned into service in 2006. The first Type 071 ship reportedly was commissioned into service on July 6, 2008.

- **Reported Potential Type 081 Amphibious Ship** - In August 2007, it was reported that China might begin building a larger amphibious ship, called the Type 081 LHD, which might displace 20,000 tons.
- **Other New Amphibious Ships and Landing Craft** Aside from the Type 071 and Type 081 projects, China between 2003 and 2005 commissioned into service three new classes of smaller amphibious ships and landing craft. Each type was built at three or four shipyards. Between these three other classes, China commissioned into service a total of 20 amphibious ships and 10 amphibious landing craft in 2003- 2005. Additional units in some of these classes are possible. China also has numerous older amphibious ships and landing craft of various designs.

3.3 China's Naval Limitations and Weaknesses

Although China's naval modernization and transformation effort has improved China's naval capabilities and competency in various ways in recent years, however, observers believe PLA military (including naval) forces continue to have limitations or weaknesses in the following areas, among others:

- Sustained operations in waters and air space which are more distant from China;
- Joint operations;
- C4ISR systems, including long-range surveillance and targeting systems for detecting and tracking ships at sea, a capability needed to take full advantage of longer-ranged anti-ship weapons;
- Anti-air warfare (AAW) capability for defending surface ships against air attack;
- Antisubmarine warfare (ASW) capability for defending surface ships against submarine attack;
- Mine countermeasures (MCM) capability; and
- Shipbuilding dependence on foreign suppliers.

The paragraphs below elaborate on these issues in detail.

3.3.1 - Sustained Operations in Distant Waters

Regarding sustained operations in more distant and far-away waters, US Department of Defence report states that, “*China’s ability to sustain military power at a distance remains limited....*” That US Department of Defence report also states that China will not be able and capable to project and sustain small military units far beyond China around its coastline to the far-reaching oceanic waters before 2015, and will not be able to project and sustain large forces in combat operations far from China into the ocean until well into the following decade. [Italics, mine] [Emphasis added]

3.3.2 - Joint Operations

Regarding joint operations, US Department of Defence report states that the PLA hopes eventually to fuse and blend service-level capabilities with an integrated network for C4ISR, a new command structure, and a joint logistics system. However, it continues to face deficiencies and inadequacies in inter-service cooperation and actual experience in joint exercises and combat operations. [Italics, mine]

3.3.3 - C4ISR Systems

Regarding C4ISR systems, one observer states that enhancing China’s naval capabilities is a key component of China’s military transformation, as reflected by recent leadership statements and the development of several new classes of surface ships and submarines. Moreover, informatization is clearly a central aspect of PLA Navy transformation and naval C4ISR modernization will have important implications in areas such as joint operations and command and control. Chinese C4ISR modernization has become a top priority and PLAN informatization appears to have made some impressive progress in recent years. It remains unclear, however, how close the Chinese actually are to achieving the so-called “informatized force.” The PRC’s 2006 Defense White Paper established a goal of being able to fight and win informatized wars by the mid-21st century. This reflects a perceived gap between the Chinese armed forces and the world’s most advanced militaries, which Chinese writers often suggest will take decades to overcome. At the same time, however, it also raises the issue of distinguishing between the “ideal” capability the Chinese navy seeks to establish in the long term and that which might simply prove “good enough” in the short term. Indeed, even a relatively simple system of deconfliction¹⁰⁰ by time or geographic area might be sufficient in a Taiwan scenario. This suggests that the PLAN might achieve an employable capability with surprising rapidity, especially if it pursues one

that falls short of the standards set by US proponents of “network centric warfare,” but that is nonetheless capable of contributing to the achievement of China’s operational and strategic objectives. [Italics, mine]

3.3.4 - Anti-Air Warfare (AAW)

Regarding AAW, one observer stated in 2004 that China’s decision to “*shed its strictly coastal defence force structure in favor of acquiring larger and more modern fighting vessels capable of blue-water operations*” has exposed a significant vulnerability, the PLA Navy’s inability to provide a sophisticated, layered air defence for these new forces.

3.3.5 - Antisubmarine Warfare (ASW)

Regarding ASW, one set of observers, based on a review of Chinese military literature, states that when considering Chinese views of the American submarine force, it is certainly relevant to consider how China appraises its own antisubmarine warfare forces. Generally, China considers its ASW forces to be weak and inadequate. One Chinese naval analyst observes: “*[Chinese] people are focused on China’s submarine force (both conventional and nuclear) development, but often neglect the threat we face from [US Navy] submarines.*” It is, moreover, suggested that “*there is still a relatively large gap between [China’s] ASW technology level and that of the world’s advanced level.*” In appraising the ASW capabilities of its own surface forces, another naval analyst notes, “*Across the world, most naval ships are now equipped with towed array sonars, which has increased their ASW capabilities, but most of our ships only have hull mounted sonars.*” Finally, there is a concern that these antisubmarine assets are themselves highly vulnerable: submarines can carry out ferocious missile attacks from tens or even 100-200km ranges, causing the submarine hunting vessels to become the hunted targets. Chinese aerial ASW is also highlighted as a particular weakness. {Italics, mine]

3.3.6 - Mine Countermeasures (MCM)

Regarding MCM, one observer stated in 2004 that a serious [PLA Navy] operational insufficiency involves the mine countermeasures vessels (MCMV). Though China has an intense shipping [activity] along its coasts, the PLAN has virtually no mine-sweeping or mine-hunting capabilities. This was due, perhaps, to the consideration that the US Navy is usually more concerned to keep the sea lanes open, instead of laying mines,

but nevertheless the lack of MCM is simply stunning. Any hostile organization (including, but not limited to, state-sponsored terrorists and insurgents) could play havoc with the Chinese shipping simply by laying a few mines here and there. [Italics, mine]

3.3.7 - Shipbuilding Dependence on Foreign Suppliers

The rapid growth and transformation of China's commercial shipbuilding sector is viewed by observers as benefiting China's warship design and construction programs in certain respects, particularly since China's warships are built in shipyards that also build commercial ships. Improvements in Chinese commercial shipbuilding notwithstanding, observers believe that China's ability to design, build, and maintain complex warships is limited in certain respects by a dependence on foreign suppliers for certain key warship components, particularly propulsion systems and combat system equipment.

3.4 - Potential Implications for Required U.S. Navy Capabilities

According to a recent report related to Chinese naval modernization and its implications for United States of America, there are some potential implications of China's naval modernization for required US Navy capabilities that can be organized into three groups: • Capabilities for a crisis or conflict in the Taiwan Strait area; • Capabilities for maintaining US Navy presence and military influence in the Western Pacific; and • Capabilities for detecting, tracking, and if necessary countering PLA Navy SSBNs equipped with long-range SLBMs. Each of these is discussed below.

3.4.1 - Capabilities for Taiwan Strait Crisis or Conflict

US military operations in a potential crisis or conflict in the Taiwan Strait area would likely feature a strong reliance on US Navy forces and land-based US Air Force aircraft. If air bases in Japan and South Korea are, for political reasons, not available to the United States for use in the operation, or if air bases in Japan, South Korea, or Guam are rendered less useful by PLA attacks using TBMs, LACMs, or special operations forces, then the reliance on US Navy forces could become greater. For the US Navy, a crisis or conflict in the Taiwan Strait could place a premium on the following: • On-station or early-arriving forces; • Forces with a capability to defeat PLA anti-access weapons and platforms; and • Forces with an ability to operate in an

environment that could be characterized by IW/IO and possibly EMP or the use of nuclear weapons directly against Navy ships.

3.4.2 -Capabilities for Maintaining Regional Presence and Influence

For the US Navy, maintaining regional presence and military influence in the Western Pacific could place a premium on the following, among other things: • Maintaining a substantial US Navy ship presence throughout the region; • Making frequent port calls in the region; • Conducting frequent exercises with other navies in the region; • Taking actions to ensure system compatibility between US Navy ships and ships of allied and friendly nations in the region; and • Conducting frequent exchanges between US Navy personnel and military and political leaders of other countries in the region.

3.4.3 - Capabilities for Tracking and Countering PLA SSBNs

Detecting, tracking, and if necessary countering PLA Navy SSBNs equipped with long-range SLBMs could require some or all of the following: • A seabed-based sensor network analogous to the Sound Surveillance System (SOSUS) that the US Navy used during the Cold War to detect and track Soviet nuclear-powered submarines; • Ocean surveillance ships with additional sonars, which would be similar to the TAGOS-type ocean-surveillance ships that the Navy also used during the Cold War to help detect and track Soviet nuclear-powered submarines; and • Enough SSNs so that some can be assigned to tracking and if necessary attacking PLA SSBNs.

3.5 - Comparison of Naval Inventories of U.S. and China

US Naval Inventory/Chinese Naval Inventory: a) Active Navy 341,588 / 255,000; b) Submarines 71 (Strategic 14) (Tactical 57) / 62 (Strategic 3) (Tactical 59); c) Principal Surface Combatants 106 / 75; d) Aircraft Carriers 11;e) Cruisers 22; f) Destroyers 52 / 29; g) Frigates 21 / 46; h) Patrol & Coastal Combatants 16 / 233.

3.6 - Key Findings

The discussion so far has highlighted a lot of weaknesses and vulnerabilities at the Chinese naval side whereas we have witnessed that US has far more advanced and sophisticated naval force. Though, China has been aspiring and working for its naval modernization and transformation which is increasing its capabilities but it will take a long time to get an equivalent level with US naval capabilities. But we cannot overlook its growing capabilities in overall military and in naval forces particularly which will

definitely enhance its capacity to reach far-off oceanic waters while threatening US dominance around the world. Though, it will take time but China does pose a potential threat to US, I conducted couple of interviews from some strategists who have also concluded that right now China does not pose any major threat to US naval hegemony; however it has been pursuing its agenda to become a global navy that could be anticipated as a future threatening rising power. But it cannot be witnessed that much soon.

Chapter 4 - Future prospects for Chinese naval power

In this chapter, the whole discussion has been summarized and a future scenario for Chinese naval capability has been projected. Moreover, few observations and recommendations have been presented in the conclusion.

4.1 - Futuristic Overview: China in 2030

The new strategy of far-seas operations shows that the China's PLA Navy is clearly interested in having blue-water capabilities, or those that can operate and compete efficiently in the far seas. The current naval buildup is clearly contributing to the development of such capabilities. Moreover, the PLA Navy may make several necessary preparations in the coming years. The new strategy implies that the PLA Navy should obtain long-range, offensive capabilities to support and maintain far-seas operations and to "strike the enemy's rear" if China is attacked. Currently, the newly acquired PLA Navy ships may provide area and fleet air-defense, but they do not have the offensive air capabilities to support far-seas operations and to "strike the enemy's rear". But carriers can provide such capabilities. The PLA Navy may also attempt to acquire overseas facilities for intelligence and logistics support of its far-seas operations. It may enhance its at-sea supply-replenishing capabilities to sustain naval operations in the far seas. As per evidence suggests, China maintains one of the largest militaries in the world. Now it is moving ahead in transforming and modernizing its navy; so no doubt China will be able to build its largest navy and will get access to international waters as a blue water navy in near future. Therefore we can anticipate that China could be a major threat for US interests in international waters in future. At the occasion of the 60th anniversary of the PLA Navy, 52 vessels were shown in manoeuvres off Qingdao in April 2009, including previously unseen nuclear submarines. The demonstration was seen as a sign of the growing superpower status of China, while the president, Hu Jintao, indicated that China is neither seeking regional hegemony nor entering an arms race. China's naval modernization drive is

likely to continue because China's rapid economic growth can provide the needed resources. The future of Chinese navy is bright in a sense that it will be able to reach to blue waters and will become a blue-water navy thus challenging US hegemony in international waters. Chinese reports reveal that the Chinese navy is determined to fulfill its blue-water ambitions, even if it takes a generation or more. The memory of the "Century of Humiliation" (1842–1949), when European countries, Russia, and Japan forced a weakened China to grant territorial concessions and then divided the country into competing spheres of influence, still has a deep resonance among the Chinese people. The Chinese see a powerful navy, capable of projecting power into the world's oceans, as an important tool to prevent China from being "bullied" again by outside powers.

4.2 - Chinese Naval Ambitions

The PLA Navy's ambitions include operating out to the first and second island chains, as far as the South Pacific near Australia, and spanning to the Aleutian Islands, and operations extending to the Straits of Malacca near the Indian Ocean. Modernizing the fleet into a blue water navy will also provide better power projection in not only the region but globally in the 21st century. Chinese naval analysts also feel the need to develop a navy capable of challenging the United States Navy or capable of handling a potential conflict with Taiwan. The future PLA Navy fleet will be composed of a balance of assets aimed at maximizing the PLA Navy's fighting effectiveness.

4.2.1 Blue Water Navy

The term blue-water navy is a colloquialism used to describe a maritime force capable of operating across the deep waters of open oceans. "Blue-water" (high seas) naval capability means that a fleet is able to operate on the "high seas." While traditionally a distinction was made between the coastal brown-water navy (operating in the littoral zone to 200 nautical miles (370 km)) and a seagoing blue-water navy, a new term "green-water navy" has been created by the US Navy. Green-water navy appears to be equivalent to a brown-water navy in older sources. The term brown-water navy appears to have been reduced in US Navy parlance to a riverine force. In modern warfare blue-water navy implies self-contained force protection from sub-surface, surface and airborne threats and a sustainable logistic reach, allowing a persistent presence at range. In some maritime environments such a defence is given by natural obstacles, such as the Arctic ice shelf. China's naval modernization and transformation suggests that Chinese navy aspires greatly to become a "blue-water" navy and has been

pursuing such strategy which will enable it to eventually turn into this capability-having navy. All the more reason for China to move from a “brown-water” to “blue-water” navy which is to say, from a limited naval force patrolling China’s own territorial waters, to one that can project power thousands of miles away. Enter the modern aircraft carrier battle group. *“China’s navy is not good enough to meet the needs of China’s maritime security, so I think it’s necessary to build an aircraft carrier,”* says Mr. Peng, a military expert.

4.2.2 - Chinese Navy Requires Super cruising Fighter

A super cruising combat aircraft is a high priority of the Chinese navy, the country’s top admiral says in a revealing official interview that gives strong clues of perceived shortcomings and future directions for the maritime force. Admiral Wu Shengli also says China must step up work on precision missiles that can overcome enemy defenses, and the nation should move faster in developing large combat surface ships -- probably meaning the aircraft carrier program that looks increasingly imminent.

4.2.3 - Aircraft Carriers

The US Defense Department reported in early 2009 that, *“Analysts in and out of government project that China will not have an operational, domestically-produced carrier and associated ships before 2015. However, changes in China’s shipbuilding capability and degree of foreign assistance to the program could alter those projections. The PLA Navy is considering building multiple carriers by 2020”*. China has an aircraft carrier research and design program, which includes continued transformations to the former Soviet Kuznetsov-class aircraft carrier Varyag. Beginning in early 2006 with the release of China’s Eleventh Five Year Plan, PRC-owned media reported high-level government and military official statements on China’s intent to construct aircraft carriers. In December 2008, China’s Ministry of National Defense spokesman Senior Colonel Huang Xueping said that, *“China has vast oceans and it is the sovereign responsibility of China’s armed forces to ensure the country’s maritime security and uphold the sovereignty of its coastal waters as well as its maritime rights and interests,”* and added that China is *“seriously considering”* adding an aircraft carrier to its fleet, because *“the aircraft carrier is a symbol of a country’s overall national strength, as well as the competitiveness of the country’s naval force.”* This was preceded by a November 2008 statement by the Director of the Ministry of National Defense, Foreign Affairs Office, Major General Qian Lihua, that *“having an aircraft carrier is the dream of any great military power,”* and *“the question is not whether you*

have an aircraft carrier, but what you do with your aircraft carrier". China continues to show interest in procuring Su-33 carrier-borne fighters from Russia even though the ex-VARYAG aircraft carrier has yet to complete refurbishment at Dalian shipyard. Chinese Defence Minister Liang Guanglie was quoted in state media in March 2009 saying China no longer wanted to be the only major global power without an aircraft carrier. *"China will not remain the world's only major nation without an aircraft carrier indefinitely*, state press in 23 March 2009 cited the nation's defense minister as telling his Japanese counterpart. Liang Guanglie made the remarks to visiting Japanese Defense Minister Yasukazu Hamada on Friday, the Oriental Morning Post said, in discussions that took place after a recent spike in tension in the South China Sea. *"Among the big nations only China does not have an aircraft carrier. China cannot be without an aircraft carrier forever,"* the paper quoted Liang as saying, citing Japanese official sources. *"China's navy is currently rather weak, we need to develop an aircraft carrier"*. Liang's comment is the highest-level recent confirmation that China aims to acquire an aircraft carrier, a sophisticated piece of military hardware that can be used to project power far beyond a nation's shores.

4.3 - Conclusion

Chinese foreign policy is based on the five peaceful coexistence principles. In handling international relations, China has consistently taken the Five Principles of Peaceful Coexistence as the guide instead of using social system, ideology or the concept of values as the criterion. These principles were first put forward by the late Chinese Premier Zhou Enlai when he met with an Indian delegation in December 1953. The Five Principles are: mutual respect for sovereignty and territorial integrity, mutual non-aggression, non-interference in each other's internal affairs, equality and mutual benefit, and peaceful coexistence. These five principles clearly depict that China does not have any ambitions or clandestine plans to confront US naval hegemony. China has not fought any war for at least 2 decades. China has no military staying outside China's territory. If any one is having its bases and staying force all over the world, occupying other countries, fighting wars in the current world, we know who it is.

Building a blue-ocean navy, would involve not only the construction and deployment of aircraft carriers, but escorts and supply ships for them, and other ships for other purposes. This new navy would have to be very large, as active in the Indian Ocean as in the Pacific in order to keep sea lanes secure for oil deliveries necessary for the economy. It would necessitate increasing significantly the number of airplanes built and deployed, fighters and bombers alike. And it would require large expenditures for

standard operations at sea, and of course maintenance, plus the salaries and benefits of the much larger complement of personnel that such a build-up would require.

Therefore, building such a navy would require a lot of financial assistance, professional training and advanced equipment and it will take some time to materialize. China will need aircraft carriers to become a great power in the distant waters of the South China Sea, capable of challenging America's influence in the maritime countries of Southeast Asia and its access to the region's strategic shipping lanes. It is not clear that China could meet such an enormous challenge since construction and deployment of an aircraft carrier requires the most modern technology, advanced pilot skills and astronomical funding. China's success is one of the most important developments of modern history, but projecting from current growth to Chinese global dominance or threats to our way of life is just wrong. Signs that China is making rapid progress in that direction should be welcomed, not feared.

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