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Sea Power and the Rights to Unimpeded Entrée
The Coming Uncertain Clash

By

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The Point of a Paradigm

If we are to form an opinion on the current state of reality and to act upon it with any impact, some sort of a simplified chart or theory is necessary. The end of the Cold War and the paradigm that it represented brought in its wake scholarly works that sought to prognosticate what future international relations and order held. Wide ranging theories were advanced from the emergence of one world in which harmony, democracy and an end to conflict were prophesized, and with it an end to a turbulent history of man's ideological evolution with the grand terminal formulation that western liberal democracy had prevailed.[1] Some saw the emergence of a multi polar order and the arrival of China not withstanding the warts of Tiananmen. Yet others saw in the First Iraq War, the continuing war in the Levant, the admission of former Soviet satellite nations into NATO and the splintering of Yugoslavia an emerging clash of civilisations marked by violent discord shaped by cultural and civilisational similitude.[2] However, these illusions were, within a decade, dispelled and found little use in understanding and coming to grips with the realities of the post Cold War world as each of them represented a candour of its own. The paradigm of the day (if there is one) is the tensions of the multi polar; the tyranny of economics; the anarchy of expectations; and a polarisation along religio-cultural lines all compacted in the cauldron of globalisation in a State of continuous technology agitation.

So too when thinking of maritime affairs a paradigm only places in perspective the events that we are confronted with, provides a pattern and a context within which a strategy may be devised and force structures put in place to come to terms with an uncertain future. China's quest to secure efficiently rights of passage on

the sea to fuel her thirst for energy, primary produce and commodities has led her to the 'Northern Passage'[3]. Today that paradigm is a reality and in 2011 alone more than 18 commercial ships had made the now ice-free crossing and it is no surprise that Chinese merchantmen are leading the charge. To put matters in perspective, as a trade corridor the distance from China to markets in Europe has been cut down to less than 8000 miles from 14,700 miles. Significantly the route avoids two sensitive 'choke points' the Malacca Strait and the Suez Canal. China also theorises that the road to securing these sea lines of communication is through a strategy of 'Access Denial.'[4] The access denial paradigm was founded on China's significant security concern in relation to Taiwan. The U.S. deployment of two carrier groups to the region during the 1995–1996 Taiwan Strait crisis remains in Chinese memory as an embarrassing infringement of sovereignty. The value and logic of an access denial strategy is obvious in reference to Taiwan. But enabling such a strategy when scope and space are enlarged must clearly tax strategists world wide and suggest an uncertainty of an impending clash.

The Fear of Nations

As the curtains fell on the Cold War some of the symptoms that emerged were an increased and vicious securing of spheres of power and economic influence as exemplified by China in Africa; the competition between autocracy and liberalism' an older religious struggle between radical Islam and secular cultures; and the inability to regulate the anarchic flow of technologies and information. As these struggles are played out the first casualty in the post Cold War era is the still born hope of a benign and enlightened world order. The endemic instability world wide is characterized by the number of armed conflicts that erupted between the periods 1989 to 2010 which total 49.[5] The nature of these wars, more than anything else, reflected what I tern the 'Uncertainty Paradigm' for they ranged from wars of liberation and freedom to insurgencies, civil wars, racial-ethnic-religious wars, proxy wars, interventions and wars motivated by the urge to corner economic resources. In all cases it was either the perpetuation of a dispensation, political ambitions, or the fear of economic deprivation that was at work below the surface. If that were not enough to underscore the fragility, gravity and self-centeredness of the international system, in the same period the United States of America alone has militarily intervened in foreign countries on 11 occasions; more often than at any time in history.[6]

China, in the 18th century under the Qing dynasty enjoyed a golden age. It was a period of *shengshi,* an age of prosperity. Currently some Chinese nationalists say that, thanks to the Communist Party and its economic prowess, another *shengshi* has arrived.[7] In 2010 China became the world's biggest manufacturer, a position that the US had held for most of the 20th century. By 2020, it has been forecast, that China could become the world's largest economy. Significant to political influence is its matching economic and military growth. Power, changes the very character of nations and its people and of their standing in the comity of nations. It transforms their outlook towards the world and places primacy to their beliefs and interests in the international milieu giving it new drive to shape global affairs in a manner that promotes their well being. This search for geopolitical space that the emergence of a new cognizable revisionist power precipitates, historically, has been the cause for global instability and tensions. Add to this that the principle of nationalism is inextricably linked, both in theory and practice, with the concept of war,[8] then, we are faced with a situation when the military dimension of power will potentially throw up conflictual circumstances that will have to be contended with. In this context the slogan of the 18th century Qing dynasty "the dream of a prosperous country and a strong army" today has new connotations.[9]

In this era the fears and anxieties of nations are driven by four vital traumas. At the head of these four is the perpetuation of the State and its dispensation, a factor that every nation lists as primary to their national interests. In second place is the fear and understanding that impedance to the nation's ambitions of growth and development may come about due to internal or external stresses or a combination of the two; in all cases it is the duty of the State to ensure through polity, diplomacy or military power that these stresses are effectively countered or put down, if it is a matter of access to external resources then its denial becomes a matter that calls for the use of all dimensions of power in the quiver of the State. The third trauma is that the remaining interests that the State considers critical must be recognized and accepted by the International system; this distress places the system on the horns of a dilemma, particularly so when interests overlap at which time there is a real potential for friction and conflict. Lastly, is a conundrum faced by all major powers or those that aspire for such status, and that is, given a circumstance when the State deems it necessary for military power to be applied, it must do so with the confidence (at times misplaced) that they will prevail.

It will not fail anybody's notice that both India and China fall into this very same cast ensnared by the 'four traumas', with one very critical difference, and that is the cooperative stimulus along with an egalitarian tradition is strong in India's case, while China has no belief in respecting either. Against this backdrop, when the politics of competitive resource access is put into the same pot as survival and development of State, to which is added the blunt character of military power, we have before us the recipe for friction and conflict. It is against this canvas of competitive resource access that the development and structuring of Indian maritime power must be gauged.

Evolution of China's 'Access Denial Strategy'

China published its sixth Defense White Paper in January 2008. Its contours were that of a self-confident China recognizing its own growing economic and military prowess. Unwritten was Beijing's intention to improve her image the first step of which was to provide some clarity by the issuance of the White Paper. At the same time, the paramountcy of containment of the various social fissures that their development has precipitated was top of their agenda. Their appreciation of the security situation underscored the belief that the risk of world wide all-out war was relatively low in the foreseeable future, yet, the absence of such risk did not automatically imply a conviction that stability and peace pervades international relations. The paper critically points out that struggles for cornering strategic resources, dominating geographically vital areas and tenanting strategic locations have, in fact, intensified. Power as a natural currency for politics remains the preferred instrument. Under these circumstances the portents for friction are ever present and would therefore demand preparedness, modernization and orientation of a nature that would serve to neutralize the fall out of such friction.[10]

One of the clauses that is central to the White Paper is that "the influence of military-security factors on international relations is mounting." Examining the nature of the geopolitical scenario, the paper reiterates the defensive posture of China's national defense policy. But typical of their nuanced approach to such issues, they in the same breath, highlight the fact that they are in the process of implementing a military strategy of 'active defense', in which, material as well as doctrinal tenets would combine offensive operations with defensive manoeuvres. This would demand that the Peoples Liberation Army Navy (PLAN) develop advanced assault capabilities.

Of significance is the enhancement of mobility and strike capabilities in all three dimensions. Doctrines to back such capabilities involving sea-air-land integrated operations would be central to military strategy. Long range assault, regional reach and the development of 'Access Denial' and control strategies are central to military operations.[11]

To China, two events of the 1990s have had a seminal impact on the shaping of their military strategy. The first of these is the Gulf War of 1991. China took home not lessons or answers but, a reason for strategic preemption. In the words of General Liu Jingsong "allowing a modern military opponent unfettered access to land, sea and air territories in which to build up and employ forces, as well as regional bases and logistic hubs to sustain them, was a recipe for defeat. He pointed out that the very assembly and positioning of coalition forces constitute "first firing" and justified action to postpone or even deter actual war.[12]

The second event was during the Taiwan Strait crisis of 1995-1996, which to the Chinese was a humiliating experience of their sovereignty being violated when the US deployed two carrier groups in the Straits with impunity. These two events were the primary causes for them to formulate and enable their 'Access Denial' strategy. China has never publicly acknowledged this stratagem; however force planning and structuring that we are currently witness to, whether it is the ASAT programme, the missile modernization, the nuclear submarine build and replacement agenda or the thrust on 'informatisation' and cyber warfare, should leave none in doubt of the course which their force planners have charted.

The development of 'Access Denial' capabilities has shown impressive growth over the last decade and a half, not just in terms of material progress but also in terms of doctrinal foundations and operational precepts. China's three modernizations, as mentioned earlier, along with their investments in cyber warfare, anti-air, anti-ship weaponry and anti-carrier hardware in addition to the thrust on nuclear submarine, both strategic and nuclear powered attack submarines, a carrier group centered on the Liaoning (ex Varyag) aircraft carrier with its suite of SU30s all make for a force that is increasingly lethal in effectiveness and enhanced in reach. Operating from infrastucture that they have cultivated from Sittwe and Aan in Myanmar to Hambantotta in Sri Lanka, Maroa in the Maldives and Gwadar in Pakistan (collectively the so called 'string of pearls') would gives teeth to the long range access denial within the coming Third Island Chain.

Specific operational deployments may include one carrier group operating in the Eastern Ocean; a Jin class Ballistic Missile Nuclear Submarine (SSBN) on deterrent patrol; two Nuclear powered Submarines (SSN) on SLOC patrol with cooperating surface group and maritime patrol aircrafts; long range maritime strike air crafts operating from Aan or Gwadar; one amphibious brigade standby with transports on hand at one of the 'string of pearls.' Also one regiment of ASAT missiles along with cyber warfare teams to manipulate, black out, control and wage information warfare that will seek to paralyze operations in the Indian Ocean or Eastern Ocean. In the absence of a security oriented cooperative impulse, the problem with such sweeping strategies (specifically the coming 'Third Island Chain' superimposed on a long range Access Denial Strategy), is its blindness to recognize that, as historically never before, we are in fact dealing with a sea space that, in Mahan's words, is the busiest of all the "vast commons." The reluctance for collaboration makes the potential for friction high.

During President Hu Jintao's review of the South China Fleet in Shanya in April 2008, he declared that the central problem arising from China's security goals was how to maintain the robust level of resource access and to put in place control features needed to sustain and nurture national development. To this end, the importance of protecting and securing maritime interests present a major challenge. He specifically focused on the PLAN's rapid reaction capability in its territorial seas, sea control capabilities in blue waters and power projection in waters of interest. In relation to extra regional naval forces, the PLAN's strategy would center on an effective denial capability. To achieve these objectives, the development and implementation of Access Denial strategy and the 'Assassin's Mace'[13] were key. The rapid expansion of the nuclear submarine fleet is all a part of this venture. The new dispensation which is due to take over the reigns of office in March 2013 under chairman Xi Jinping has promised continuity with power being central to their policies.[14]

Oceans and Economic Power

Among the multifarious factors that characterize and influence the development of nations an ever increasing role is being played by its maritime power. The realization of such power is at the heart of making effective use of the world's oceans. Higher the level of development of the economy greater will be the

consequences assumed by the world oceans as an inexhaustible source of energy, raw materials, food and most critically as a medium for the movement of trade, materials, petroleum products and indeed of personnel; so also the portents for discord. Close to 90 per cent of global trade is borne by hulls at sea. It is no secret that to this very day, maritime power is a key catalyst of economic growth. Historically it was during periods of increased maritime activity that both China and India realized periods of significant growth. Therefore between the 7th and 14th centuries for India, when the Srivijaya Kingdom was at its zenith and for China, during the period of the Zheng He voyages (15th century), growth, commercial activity and seaborne inroads all saw a spike which is yet to be replicated. While it may be argued that societies of that day, being largely agrarian and critically influenced by demography and weather, made GDPs directly proportional to population; however it cannot be denied that it took maritime activity to convert surpluses of time and agricultural produce into imperial activity. It would be of significant interest that the two countries between the 9th and the 18th century, contributed to as much as 40 to 50 per cent of global GDP. While this share fell to less than 8% in the 1960s and 1970s; it has currently surged upwards to 20% (*Figures collected from IMF data).*

The relative size of the two economies over the last century is indicated in Table 1 and 2. What would be apparent is the stagnation for the first fifty years (in India's case two decades more) caused first by the colonial nature of the economies and later by the skewed character of rigid centralized policies. The surge that lifted growth to its current levels is more on account of three factors: end of the cold war, globalization and economic reforms.

Table 1: Economy – India & China.

	GDP levels in billion 1990 PPP dollars				**GDP, percent of world**			
	1913	**1950**	**1998**	**2010 ***	**1913**	**1950**	**1998**	**2010***
India	204	222	1,703	4,046	7.5	4.2	5.0	5.4
China	241	240	3,873	9,872	8.9	4.5	11.5	13.2
World	2,704	5,336	33,726	74,430	100	100	100	100

***** in current U.S dollars. *Source: Maddison, A., D.S. Prasada Rao and William F. Shepherd, (eds) (2002), The Asian Economies in the Twentieth Century, Edward Elgar, UK and U.S.A. and CIA Fact book, 2011.*

Table 2: India and China Per Capita GDP in 1990 $US PP.

	1913	1950	1998	2010
India	673	619	1,760	3827
China	522	439	3,117	7,400
World	1,510	2,114	5,709	10252

Source: Maddison, A., D.S. Prasada Rao and William F. Shepherd, (eds) (2002), The Asian Economies in the Twentieth Century, Edward Elgar, UK and U.S.A. CIA Fact book, 2011

An examination of the tables above and the symbiotic relationship between periods of maritime activity and the impact on growth will make apparent the intricate linkage between sea power of the State and its development, though subjective, the hypothesis is a robust one. The importance of information technology, human development and soft power in the 21st century is a factor that cannot be lost sight of in making estimates of comprehensive national power of states.

The change in China from a closed centrally planned system to a more market oriented one from the late 1970s to 2010 must be seen as having been enabled, in good measure, by vigorous promotion of maritime power. So much so that by 2010 it is the world's largest exporter, its economy at $9.8 trillion is only second to the USA and with an oil consumption of 8.2 million bbl/day she is the 3rd largest consumer in the world (2009 estimates). When we look at the growth pattern of India since liberalization, (which can be pegged to have started on 24th July 1991 with the Narsimha Rao government's package of industrial reforms along with a new open door policy on inward investment); we note a similar trend with respect to consumption patterns, energy demands, exports and trade. Indeed with one third of this growth being powered by trade to the East (in 2012 trade with ASEAN nations was pegged at $80 billion), the requirement to secure these interests become all the more vital. Already the 2011 figures make China our largest trading partner ($ 70 billion). Indeed security of this trend will be a key to development of India. At the same instant, in the race to garner limited resources for the development of two very large economies the scope for friction looms large.

The reasons many countries view China with trepidation today are similar on the surface to their reaction to the rise of Japan in the 1970s and 80s and yet rooted in very different forces. China, too, uses a competing economic model, albeit with a difference (the very phrase used is an oxymoron) – "state capitalism" – that challenges the economic ideology of the West. In many ways, China also behaves in a mercantilist fashion. It keeps its currency controlled so its exports can out-compete

those from other countries, and it corners natural resources for its insatiable growth by methods that are reminiscent of colonial dealings, not that the west did not indulge in more vicious practices. Perplexing of all, the political ideology behind China's economic ascent completely counters western ideals about democracy and human rights. China is not just competing in world markets, but offering an entirely different economic and political system, one that at times seems better at creating growth and jobs, even as it restricts 'much' cherished civil liberties. China is succeeding based on ideas that are anathema to those of the likes of the father of modern economics, Adam Smith, and his theories of the 'invisible hand' and the self regulating nature of the ideal economy.[15] The concerns with China go well beyond the cultural and economics for it openly seeks to influence and eventually dominate international political and security institutions to the exclusion of other nations. Thus far this had been the select domain of the USA, France and Britain; not so, any more. Progressively, China is using its economic clout to offer an alternative to the U.S. led political and economic system. In other words, China appears to be challenging not just today's economic orthodoxy and order, but the world's political and security framework as well.

From the Indian point of view the potential source of friction is neither cultural nor is it economic. Civilizational, encounters between the two giants of the Asian continent have, through history, given space to accommodate each others aspirations. First it was the outstanding formative influence of Hinduism, Mahayana Buddhism and Confucianism; their assimilation defined the distinctive character of the South East Asian civilization[16] which brought to flourish the Sri Vijaya commercial Empire from 7th to the 13th century. Subsequent colonization of the region by China and India in no way impeded the expansion and amalgamation of religious, cultural and political institutions. The Empire also served as the trading bridge between India and China.[17] India's preoccupation with China is therefore neither one that is fermented by an impending clash of beliefs, values or any portents of a collision due to social action, nor one that may be caused by a compression of economic space; it is more by the latter's manifest urge to use her Comprehensive National Power to challenge and change the existing global political, economic and security structures without bringing about a change within her own biological morphology. It is not as if these structures are not due for an overhaul but it is the knuckle duster methods that she has chosen to employ and the reluctance to participate in cooperative security arrangements that provide the potential cause for discord.

China and her Case for Lebensraum

China's claims on the South China Sea as a territorial sea (see Map 1); her handling of dissent within in Tibet and Tiananmen; her proliferatory carousing with rogue states such as North Korea and Pakistan are cases, amongst others, that do not inspire confidence in change occurring within that nation without turbulence. We also note with some foreboding, the emergence of China from out of its, largely, defensive maritime perimeters as defined by the first and second island chain strategies into the Indian Ocean region as a major stakeholder.

Map 1: China's claims of Territorial Sea along with the UNCLOS approved EEZs of the Littoral States. Shaded circles indicate the disputed Islands

Source: ***www.bbc.co.uk***

To this end, it has through diplomacy and economic inducements established bases in Sittwe, Hambantota, Gwadar and Marao in the Maldives. The geographic and strategic significance of these posts were apparent in the past and are equally vital today, whether for purposes of control, regulating, providing havens or assuring security to energy lines. Sittwe and Gwadar also provide the front end for piping energy into China. These long term strategic investments by China maybe seen as the coming of the 'Third Island Chain'.

China in a departure from the Western model of first identifying ends then conceptualizing methods and finally generating means to achieve ends; follows the comprehensive national power route where it sees the effect of an event on its own

endowment and its ability to control the event as primary. Therefore in articulating its strategic objectives in order of precedence it has unambiguously identified three canons, the first of which is internal and external stability to its own gauge; the second is to sustain the current levels of its economic growth and lastly to achieve regional pre-eminence. Gone is the 'power bashfulness' that marked the Deng era, in its place is a cockiness that is discernible by the contemporary conviction that "the world needs China more than China the world". Lt Gen Qi Jiangua, the Asst Chief of General Staff's comments on the building of an aircraft carrier (refurbishment of the derelict Varyag) is revealing, he stated "It would have been better for us if we had acted sooner in understanding the ocean and mapping out our blue water capability earlier. We are now facing heavy pressure in the oceans whether the South China Sea, the East China Sea or the Taiwan Straits."[18] At the heart of the matter lie three vulnerabilities:[19]

- Vulnerability of the economic powerhouses located along the east coast and the communication lines by land, air and sea that bring in resources to fuel the economy and transport finished products.
- Vulnerability of Taiwan, and therefore the need for its denial as a base for foreign powers. This accent highlights China's continued sensitivity to sovereignty issues.
- Vulnerability of the sea spaces, so dramatically demonstrated by the crisis of 1995-1996 and consequently the need to deny the theatre to any interventionary power.

Seen in this frame of reference General Liu Jinsong's words carry new meaning, for if the first salvo is the build up; then it is not from the precincts of pre-emption that a strike emerges but as a reactive and a defensive strategy. This rationale gives form to the 'Access Denial Strategy'. When projected in consonance with the Third Island Chain, one cannot but note that 'Access Denial' would apply not just to the region of purpose, but also to the points of origin and to the Sea Lines of Communication (SLOC) along which energy, trade and resources are moved. The waters and littorals of the Indian Ocean and specifically the West Pacific Ocean and

the Bay of Bengal (together here after termed as the Eastern Ocean) will now become the region where this strategy will be played out.

A Theory of Maritime Warfare and a Concept for Structuring the Fleet

A fourfold classification of maritime forces has dominated naval thought since the Second World War. The grouping is largely functional and task oriented. The differentiation comprises of aircraft carriers, strike units, escorts and scouts, denial forces and auxiliaries (the last include logistic and other support ships such as mine layers, sweepers, tenders etc). In addition contemporary thought has given strategic nuclear forces a restraining role to define and demarcate the limits within which conventional forces operate. This leads us to hypothesise that within change and the realism that pervades international relations, the dynamics that condition military conflicts are largely predicated on the two faces of warfare. The primary face as defined by conventional forces and the shadow face as circumscribed by strategic nuclear forces. Application of the former is an active art while the latter scripts the perimeter and imposes cut-offs.

Through the years there have been other concepts governing the constitution of the Fleet and its development, often driven by a well reasoned logic and at other times motivated by nothing beyond the instantaneous intimidation. That being as it may, clearly the make up of fleets must logically be a material articulation of the strategic concepts and ideas that prevail. The principal demand of the theory of naval war is to attain a strategic position that would permit control of oceanic communications. Against this frame of reference the fundamental obligation is therefore to provide the means to seize and exercise that control. It therefore comes as no surprise that China develops forces necessary to realize an ‘access denial’ strategy.

Pursuing this line of argument, the rational formulation that remains consistent with our theory of naval warfare is that upon the escorts and scouts depends our ability to exercise control over the objective sea area or of Sea Lines of Communication; while on the aircraft carrier group and its intrinsic air power assisted by strike and denial forces depends the security of control. It is here that the true impact of the latter is felt when it is sought to exercise sea control permitting the escorts to persist unimpeded with their specialized tasks. Control and Security of Control is the relationship that operationally links all maritime forces.

It may be argued that the best means of achieving control is to incapacitate the adversary's ability to interfere. It would then appear that even in the maritime environment the doctrine of destroying the enemy's armed forces reasserts itself as the paramount objective. This is what must concern the planner to the extreme; that is, should we not concentrate our maritime exertions with the singular aim of dealing that knock out punch. But the maritime environment and the vastness of the hydrosphere that we choose to influence is of a nature that force compromises will have to be made that depletes the escort forces in order to pull away the carrier group to seek out and destroy the adversary's denial and strike elements. At the same time the antagonist may hardly be expected to be so accommodating as to expose his main forces till he found a more favourable opportunity. As Corbett so eloquently put it "the more closely he induces us to concentrate in the face of his fleet, the more he frees the sea for the circulation of his own trade, and the more he exposes ours to cruiser raids."[20]

Indeed, there is no correct solution to this dilemma of how best in time, space and most economically, can sea control be established as this would often be dictated by the relative strength, structure and constitution of the fleet, intentions and the geographic character of the theatre of operations, which favours one or the other protagonist. However, we may draw a general conclusion that the object of maritime power is to establish control over a predesignated area of interest for a desired period of time. The process may be preceded by strikes against the foe and actions to deny that sea space. The consequence of control may either be operations to secure the object on land or an assurance of passage on that sea area in order to further the war effort. In order to achieve this state efficiently it is necessary that maritime power be equipped with the appropriate mix of vessels specially adapted for the purpose.

We have thus far noted that the theory of maritime warfare is governed by the ability to control maritime space and put it to use that furthers the national effort. However it is the conditions of use of sea power and the nature of twenty first century conflicts that is now of significance. If we were to look at the two defining characteristics of the international systems as mentioned earlier, it is apparent that instability and the concept of sovereignty play a disproportionate role in the roots of conflict and yet there are a host of other factors that influence relations between nations. Kissinger in his survey of the United States strategic problem[21] pointed out that war was not just a continuation of politics but that politics and military strategy merged at every point. He, further in the same essay, underscores that the nature of

power is such today that if the risks have become incomparably greater, the essential principles of strategy have remained the same, the characteristics of which are governed by offensive, defensive and deterrent power. It is therefore a combination of power and diplomacy that would in effect serve to, not just assure stability but also to act as a shield against conflicts.

Access Denial, the 'Uncertainty Paradigm' and Contemporary Challenges

It is now necessary to understand that with this shift in global economic and geo-political power, the first imperative for India is to bring about coherence between security dynamics, strategic space and growth. It begins by defining the geographical contours within which the strategy to 'deny maritime access' to China's military power or other inimical extra regional powers (should such an eventuality arise) will operate and the requirements to provide the necessary security structures so as to enable and bring to fruition policy. The broad parameters in this definition must factor in the areas from where the mechanics of trade originate, the energy lines run, the sea lines of communication pass, the narrows contained therein which China would endeavour to secure and the geographic location of potential allies. In this context the sea space between the 30 degree East Meridian and the 130 degree East Meridian extending to the Antarctic continent provides the theatre within which the 'Denial' strategy will function. We may call it the Indian Ocean and Eastern Ocean region (IOEO).

This hydrospace, bound by landmasses on all sides except the 130 East Meridian, has some unique features. Its weather is dominated by the monsoons and tropical systems, the hydrology of this Ocean makes it difficult for underwater surveillance operations between the 30 degrees north south parallels. Widespread clouding impairs domain transparency. Small ship operations, other than in the littoral seas, are particularly inhibited during the 6 month monsoon period. Density of traffic through the narrow passages and straits makes surveillance without identification incoherent. This Oceanic body is dominated by ten important choke points. From west to east these may be identified as follows:

- The Cape of Good Hope: The Cape of Good Hope is a way point across which transoceanic shipping traffic plies to and from the Atlantic Ocean and the Indian Ocean. The International transport Forum in 2010 reported that

between 3-4 million containers (twenty-foot equivalent unit) transit the strait annually. This sea line of communication is critical for China and for trade between the BRIC nations

- The Strait of Babel Mandeb: The Strait of Babel Mandeb is a strategically important strait that separates the Arabian Peninsula from Eastern Africa. At its narrowest it is 17 miles wide and provides the oceanic link between the Mediterranean and the Indian Ocean. Through this strait passes 3.3 million barrels of oil/day (global demand 43mbl/day in 2006).
- The Strait of Hormuz: The Strait of Hormuz is a key energy corridor shipping 40% of seaborne oil traded globally. At its narrowest the navigable channel is 2 miles wide. Through these narrows pours 16.5-17mbl/day of oil; it is forecast that by 2020 the figures are likely to be 30-34mbl/day. 50% of China's energy imports is sourced from this region.
- Dondra Head: Provides the passage which connects the sea lines of communication (SLOC) from the 9 degree channel to East Asia provides a deep water route for a third of global traffic while it provides considerable sea space to the south it remains a critical passage for commerce particularly so for very large container carriers discharging at Colombo for onward carry to the sub continent.
- 6 Degree Channel: The 6 degree channel is the primary route that feeds into the Strait of Malacca. It stretches for 90 miles south of the Great Nicobar Island and its deepest channel runs within 60 nautical miles from Indira Point. Between 200 and 220 ships transit this Channel everyday of which more than 15 % are oil tankers bound for East Asia, 10 % of which is to China.
- The Malacca Straits: At the heart of the Eastern Ocean lie the Malacca Straits which links the Indian Ocean with the Pacific Ocean. Being the most commercially viable sea route with considerable depths, it offers the most cost efficient SLOC, connecting the energy and mineral rich African continent and the oil rich regions of the Persian Gulf and the Middle East with the Eastern Ocean. At its narrowest it is 1.5 nautical miles in width.
- The Sunda Strait: The Sunda Strait has north east – south west orientation with a maximum width of 15 nautical miles. It is very deep at its western end and narrows to the east as soundings decrease to 20 metres. While it can

accommodate very large crude carriers and very large container carriers it is not easy to navigate due to strong tidal flow and the presence of both natural and man made obstacles. Ships whose draught inhibits movement in the Malacca Straits generally choose the Sunda Strait. It is admirably suitable for fast passages underwater or on the surface.

- Lombok Straits: The Lombok Straits is an alternate passage to the Malacca and Sunda Straits. While it provides stealth, the strong cross currents inhibit passage of commercial traffic; it also involves a diversion of close to 1500 nautical miles. It s virtue lies in it's the discretion it provide for the transit of nuclear powered submarines.
- Makassar Straits: The Makassar Straits is a natural route for ships transiting the Sunda or the Lombok to and from ports in the Celebes Sea, Sulu Sea and the South China Sea.
- The Luzon Strait provides the Pacific passage into the South China Sea.

In essence this ocean space of interest with its ten choke points/passages provides in general the strategic context within which Indian maritime strategy must operate and gives to global trade the maritime routes and Sea Lines of Communication that power the regions growth and in particular China's development.

In order to seek strategic, economic, political and security leverage in today's international arena which is dominated by the quest for economic power, an oceanic vision is the first essential and the idea must be backed by the development of a strategic military posture that characterizes our resolve to fulfill the quest. The inspiration may take the form of a policy declaration in relation to a geographic region or entity such as the 'Look East Policy', the 'India Africa Forum Summit' declaration or the Antarctic Treaty. Policy provides a study and a frame work that has wide-ranging application that not only merits closer scrutiny, but will remain in the spotlight for purposes of force planning to develop a strategic posture in support of policy. An analysis of the current state of international relations and the developments in the region will demand continuity in growth, development and modernization of regional militaries. National power as a function of economic development and strategic postures will remain an abiding factor in any calculus of a nations standing. This continuity in military strategy will most affect China, India and Japan. While the

littorals may well develop denial capabilities with their focus on individual interests in these waters, their effectiveness can only be assured through co operative engagements with like minded nations whose combined presence in the region would serve individual as well as collective interest.

Within such a co operative group it is reasonable to assume that individual friction would be subsumed to the larger denial objectives, the expansion of the ASEAN and the creation of the ASEAN Regional Forum (ARF) are suggestive of the littoral's aspirations to counter balance the looming presence of China in their grouping. Indeed, the India Africa Forum Summit (IAFS) is yet to articulate a security perspective, but clearly this is the course to steer and no diplomatic effort must be spared to widen and deepen the scope of the Forum. USA's presence will dominate activities in the region in the immediate and mid term future. Flash points such as territorial claims both in the maritime and continental domain will remain a source of friction that would necessarily demand military capabilities and a strategic orientation that serves to assure restraint. Where American interests differ with the three major players the latter will demand a role in order to assure its own interests. The eventuality of a US drawback from the region, while of a low probability, remains a contingency that will leave a vacuum which has the potential for friction between China, India and Japan.

Since the declaration of India's Look East Policy, the ASEAN-India relationship has grown in leaps and bounds from the limited sectoral partnership in 1992 to a full dialogue venture in 1995 and subsequently to a summit level collaboration in the first ASEAN-India summit held in 2002. This reflects a new found mutuality between the two entities. The 10 original ASEAN countries include Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam. The current membership of the original ASEAN grouping plus 6 is symptomatic of the shifting center of gravity of geopolitics to the East, and from a security angle, the inclusion of India, USA, Russia, Japan and South Korea in addition to China (which was the avatar of ASEAN plus 1) provides the context for security checks and balances in the Eastern Ocean. India and China along with ASEAN are set to become the world's largest economic bloc. The grouping is expected to account for about 27 per cent of Global GDP and will very quickly overtake the EU and USA economies. The buoyancy of the Indo-ASEAN relationship is backed by surging trade figures which in 2007 was USD 15.06 Billion, and is slated to hit USD 80 Billion in

the current year. With such burgeoning stakes in the region, the reason to establish strong and stable security ties now becomes a core issue. A tacit understanding in this is the measures put in place to counterpoise a situation when the activities of the grouping could be engulfed by the Chinese viewpoint

Notwithstanding the above, contemporary challenges in the region are dominated by three currents. While there are several regional and sub regional issues whose influence on the region cannot be denied it is these three that will have the greatest impact on the success or otherwise of our policy.

- **The Challenge of a Rising China**: Towards the end of 2003 and early 2004 senior leaders of the Communist Party of China studied the rise of great powers in history noting the destructive inventory of conflicts that proved to be the engines of supremacy from the 15th century onwards. This brought them to the central theme of their examination: could China dominate without recourse to arms? Unfortunately, in its relationship with India it has shown no propensity to establish co operative stabilizing arrangements nor has it taken any measures to resolve long standing boundary disputes (it must be said that nor have they put in place measures that aggressively vitiate the situation). Its collusion with reprobate states further pushes Sino-Indian relations downhill, the nuclear tie up both in the weapon and civilian field with Pakistan along with possible doctrinal links and in March 2010, the failure to issue a condemnation when North Korea sank a South Korean warship does not suggest a pacific approach to relations. It's disputes with Japan and its forceful reassertion of claims to sovereignty over virtually the entire South China Sea are very serious ulcers in current relationships in the Eastern Ocean. This conundrum continues to push affected parties and like minded states into countervailing arrangements. As, no doubt, the history lesson would have told Chinese leadership that the relationship that determines regional conflict or otherwise is the stability of relationship between powers that have the greatest impact on the region.

- **The Hyper Power**: The overwhelming ascendancy of the single hyper power and its penchant to resort to military force seen against the backdrop of the

intricate economic relations that the US and China currently enjoy poses an ironic dilemma. Is the American posture in the Pacific and Indian Oceans intrinsically antagonistic and would it break out into a hot conflict given the strategic links that USA enjoys with Japan, South Korea, Taiwan and the other littorals of this region? The noises that currently emanate would seem to suggest that the war of words is just a few turns away from a conflictual situation. The impact of instability in this region will be to adversely affect India's economic and developmental aspirations in addition to the hazards of being drawn into an unintended clash.

- **The Mixed Blessings of Globalization, Rise of Nationalism and Non State Actors**: Impact of globalization and the inability of the State to reconcile with the stresses that it places on the very concept of sovereignty makes historical sores take centre stage, when their resolution ought to be the focus. Nationalism and Ideology which was the underlying force that sparked off the major wars of the 20th century has today become the source of China's confidence, to an extent, when the words of Chairman Deng who started the reforms in the early 80's "Coolly observe, calmly deal with things, hold your position, hide your capabilities, bide your time, never try to take the lead, accomplish things where possible"[22] which became the essence of Deng Xiao Ping's 24 character strategy, now has a hollow ring about it, particularly so, since there is a growing perception within that the arrival of the 'Middle Kingdom'[23] is nigh (!). According to Yuan Peng of the China Institute of Contemporary International Relations "many Chinese scholars suggest that the Government give up the illusion of US partnership and face squarely the profound and inevitable strategic competition." [24] It is also apparent that the surge of nationalism that sweeps China has led it to formulate an affordable military strategy of asymmetric weapons (the 'Access Denial' and 'Assassin's Mace' strategies are part of such a concept). These unorthodox strategies have set into motion three areas of rapid modernization in the military establishment; firstly the most active land based ballistic and cruise missile program in the world, secondly an enlarged nuclear attack and nuclear ballistic missile submarine fleet, and lastly concentration on what China calls "informatisation," an active and passive method of waging information

warfare. China's intriguing involvement with maverick nations such as Pakistan and North Korea does not in anyway enthuse confidence for the prospects of a stable future. The direction in which the Sino Pak alliance is headed is a vexed question. If it is the image of China that is going to predominate, then collusion with Pakistan on military and nuclear matters must witness a dilution and yet if the intention is to keep the Indian establishment on the boil, then for China to set aside an enthusiastic collusive partner would be tantamount to Janus shutting down his second face. In this calculus what would be a dampener for Sino Pak complicity, is the worsening non-state actor and political situation in Pakistan, which presents some nightmare possibilities for all parties involved including China.

Of these three dominant currents what direction China's rise will take and whether it wears a largely benign or malignant mantle is a matter of conjecture that will be influenced by both internal as well as external factors. With the coming of the Third Island Chain; the maturing of the long range access strategy and the cultivation of the string of pearls, what is of significance is that the potential for a collision is a reality and the only consideration that could deter it, is the ability of India to attain a strategic posture in the Eastern Ocean that serves to stabilize. On the 'globalization-nationalism' non state actor conundrum, clearly plural societies with decentralized control are more likely to transform, adjust, adapt and tweak their systems than monolithic centrally controlled States such as China which are intrinsically brittle in form; as cracks begin to show, the fallout on the region can only be traumatic.

It is only India's relationship with the USA that is, to some extent, within the hands of our policy makers and therefore it would be in order to examine this in some detail. Since Independence, Indo American relations have seen dizzy highs and plummeting lows. However, it was only after the 1998 nuclear tests that the two countries awoke to the realities that an engagement suggested. The consequences was the inking of the 'Next Step in Strategic Partnership' an agreement that identified and formalised areas of bilateral cooperation in January 2004 which included civil nuclear enterprises, civil space programmes, missile defence and high technology deals. Of critical importance was the opening of technology doors which culminated in the watershed Indo-US nuclear agreement of 18 July 2005. The larger significance of this deal was the arrival of India on the global stage as an equal and an acceptance

of its potential to play an influencing role in the rarified environ of the club of nations that sought to control and oversee world order (the impending G8 +5).

Force Planning and Structures

In evolving a vision for maritime military forces, their planning, build up along with infrastructure and their actual use, of essence, is the understanding of the three dominant currents that influence and change the Eastern and Indian Oceans within which policy would have to operate. These have been discussed earlier. In the broadest of terms our vision would be 'to create and deploy such forces which would establish and contribute to stability within these waters. While our focus would be to concentrate on maritime forces, it would also be necessary to recognize that the other elements of national power that would be required to realize such a vision and contend with the shape that the challenges may take in the long term within these Oceans. This long term may be identified as a period of half a century. When dealing with the problem of means, a balance is necessary between objectives that are identified with available resources. Force planning must be driven by three overarching considerations. In the first part clear understanding of what the articulated national policy is (in our study this is the Look East policy and the IAFS), in the second part what challenges may arise in the short and long term to this policy and the nature of conflicts which conflicting interests may degenerate into. The last part must include an estimate of potential loss or harm that may occur to our national interests if forces were not developed to address the first two parts.

Infrastructure and logistic planning to deploy in the IOEO must factor not just the expanse of this region but also the ability to reach and sustain operations between 3000 – 4000 nautical miles from Indian ports / bases that may be provided by like minded littorals. Ideally the potential for development of infrastructure for such long range operations towards the east lies in the Andaman and Nicobar islands which offers the necessary springboard into the Eastern Ocean and for the South Indian Ocean; forward operating bases in like minded East African littorals cultivated through the IAFS. Such focused development endows us with the Mahanian logic of being able to provide the very "unity of objectives directed upon the sea." This advantage, as the strategist pointed out is one not enjoyed by those whose boundaries are continental. A major infrastructural centre in the Andaman Sea must be accompanied by establishing base support facility arrangements in Indonesia

(Djakarta), Vietnam and Japan in the Southern islands (Kyushu/Shikoku). To the west, the Indian Ocean littorals such as South Africa, Malagasy,Tanzania, Mauritius and Seychelles will have to be cultivated. Such infrastructural back up would serve the Policy admirably. It would also call for diplomacy of a nature that we have not thus far seen practiced.

The types of military maritime missions that the Navy may be tasked with in the IOEO may encompass the following:

- War fighting which includes Sea Control, Access Denial operations and littoral warfare.
- Strategic deterrence which would be a feature that would be persistent and consistent with our nuclear doctrine.
- Coercive maritime deployments: This may include deployments in Straits and along SLOCs.
- Co operative missions including intervention, peace enforcement and peace keeping.
- Diplomatic missions, policing and benign role.

Forces that would be required at all times to fulfill these missions in area would comprise of one carrier group along with strike elements on task at all times with an amphibious brigade assault group attached and with suitable fixed and airborne ASW and surveillance Escort assets while the SSBN nuclear deterrent would be on a patrol at all times. Auxiliaries required to sustain forces would have to be attached or be taken up from trade. To summarize, forces will include the following:

- 1 x deployed Carrier Group.
- 3 x LPDs – with a Brigade lift capability.
- 1 x Squadron SU 30s with ARR.
- 1 x Squadron Long Range Maritime Patrol aircraft (LRMP)
- Squadron of long range surveillance UAVs.
- 1 x Amph Div Stand by A&N Islands.
- 1 x SSBN on deterrent patrol under Nuclear Command Authority (NCA) control.

- Nuclear submarine force to deny hostile aircraft carrier operations. Conventional submarine force for littoral operations.
- Non lethal anti shipping devices.
- Appropriate forces for surveilling, seeding and monitoring of straits.
- Appropriate 'marking group' to shadow hostile nuclear forces, ASAT batteries and cyber warfare teams.
- Forward submarine operating base and enhancement of air stations.
- Appropriate in theatre logistic support facilities.

Concept of Anti-Access Denial

Having also brought about a modicum of coherence between security dynamics, strategic space and growth, it would now be appropriate to define and derive objectives of the concept of Anti-Access Denial Strategy as applicable to the larger Indian Maritime Military Strategy.

Anti-Access Denial seeks to contest and deny regional or extra regional countries the ability to unilaterally project military power to secure their interests either through aggression or through other destabilizing activities. The instrument to achieve denial is by convincingly raising the cost of military intervention through the use or threat of use of methods that are asymmetrical in form and disruptive in substance. The strategy's first impulse is to avoid a hot conflict.

To 'contest and deny' would first suggest a clear understanding of where the centre of gravity of power projection forces lie. In China's case it is the triumvirate of the Aircraft Carrier; security of the narrows and of the 'string of pearls' that would be needed to assure sustenance of forces (on which is founded the integrity of the Third Island Chain); and safety of hulls that convey resources and energy vital to fuel growth. Use of aggressive means is clear enough, but prying open faults that could destabilize and therefore distract the main exertions, are not at all patent. In India's case both internal as well as external stresses obtain that could be leveraged in order to subvert and undermine the primary thrust to contest and deny the ability to project power; more importantly China not only has the will and capability to exploit these opportunities but also has a willing ally in Pakistan. 'To raise the cost of military intervention' is a matter that resides in the mind of political leadership, yet there will always be a threshold, the verge of which is marked by diminishing benefits of

intervention or power projection. It will be noted that it was a similar calculus (albeit in reverse) that must have come to play in the 1995 Taiwan Strait crisis (discussed elsewhere in this paper) that inhibited and forced China to reconcile to humiliation in the face of a possible debilitating confrontation. Also the logic of weakening out-of-region motivation clutches in, diluting the efforts of the intervener. Lastly the threat of 'use of force' must not only be credible but also the 'value exchange' in terms of losses must weigh against the power projecting force. At the heart of Anti Access Denial in the Indian context must remain deterrence. The objectives of India's 'Anti Access Denial' Strategy may therefore be summarized as follows:

- To devise operational and material strategies to deter, threaten, (and should the need arise) strike and neutralize Chinese aircraft carriers that may menace our vital interests in the IOEO. Value-exchange in the engagement must be in our favour
- To deploy denial forces that effectively blockades the 'string of pearls' ports. Platforms of choice would be conventional submarines, maritime strike aircrafts both supported by long range surveillance efforts.
- To disrupt and disable operational networks through ASAT and active cyber action.
- To surveil and seed the straits and narrows (as identified earlier) with seabed sensors, surface and air scouts and through cooperative arrangements.
- To devise material and operational strategies that serve to disable energy and resources traffic through non lethal methods and to ensure that own escorts keep open our rights of passage on the sea.
- To raise the cost of military intervention will suggest a strategic posture that by signalled disposition of forces, demonstration, marking and resolve declare our orientation, will and intent that the cost of intervention will far outweigh its benefits. All the while maintaining the primary value of conflict avoidance.

Leaving aside, for the moment, material aspects of generating capabilities, the most critical issue is one of timing, that is, what would be the enabling circumstances that would trigger India's Access Denial Strategy. While the short answer may, with some justification, be "when national interests are threatened" this does not in any way assist the planner in resolving the quandary with any clarity. Two considerations must, however, dominate. The first is that initial moves must be so calibrated that unequivocally the intervener is made aware that a threshold is being approached and that the next rung in the escalatory ladder is a 'hot' exchange. This may take the form of 'marking' or through hotline communications. The second is by initiating demonstrative action which may serve to disrupt and disable operational networks or even measures instituted in some other theatre where correlation of forces would suggest Indian superiority.

A maritime Anti-Access Denial strategy unlike a continental standpoint, abhors 'Lakshman Rekhas' for there are no readily definable geographic 'redlines', what is of greater import is context, circumstances and events, which brings us back to the original dilemma of characterizing the conditions that would bring the strategy into play. In any event, we have in an earlier section noted China's security narrative and the challenge that a rising China poses. Both advocate the centrality and compelling force of an aggressive drive to corner resources. It is this dynamic coupled with the absence of a cooperative impulse that provides the potential for conflict. Adopting a much more assertive posture, China is emboldened by new military advances and increased economic leverage. Also of significance is a growing sense of entitlement, rooted in a national identity that demands a pivotal role in the emerging strategic scenario. Rebutting the "integrationist" notion of peaceful incorporation into world order as yielding to the West, China seeks today a new international order. In many publications the concept of "responsible stakeholder" is derided as a trick to get China to assist in preserving an 'unjust' status quo international order. China is leaving no doubt that it is a revisionist power impatient to take centre stage. Under this order of things, we may define our 'red lines' as follows:

- Any large scale military attempt to change the status quo in our territorial configuration.

- Large scale military build up either at Hambantota, Gwadar or at Sittwe with the explicit purpose of threatening India.
- Aggressive deployments that disrupt our own energy and resource traffic or dislocate networks.
- Any attempt to provide large scale military support, covert or otherwise, to promote an internal war against the State.

In execution, our Anti-Access Denial Strategy will be implemented in three distinct phases. The First will involve selective Access Denial deployment, surveillance and marking in the IOEO; the Second will entail demonstration through cyber action and possible ASAT intervention; the third and last is hot action including sea control, blockades and SLOC severance. Phases I, II and III will be preceded by and concurrent with bilateral and multilateral diplomacy to and stabilize and defuse the situation keeping in perspective that conflict avoidance remains principal. Any one of the Phases may be brought in to play singly or sequentially as a part of an escalatory ladder. We have in an earlier section identified maritime forces required in order to enable this strategy in addition to other missions that these forces may be tasked with. For obvious reasons details of ASAT batteries and cyber warfare teams along with NCA controlled strategic forces will remain discreet.

The next issue that requires our attention is what nature of technologies would have to be fielded so that the strategy becomes a reality and relevant for the middle term. In developing a technology plan two considerations will influence our approach; the first being an incremental approach to adapt and modernize existing knowledge tools, skills and hardware, while the second is to develop new technologies. Viewed in this perspective areas that would merit the notice of our scientific community are identified below:

- ASAT capability and deployment.
- Development of seabed sensors for tracking nuclear submarines.
- Development of non lethal devices to disable merchant ships.
- Building cyber warfare teams for both defensive and offensive tasks.
- Development of high speed networks with failsafe firewalls for command and control and information sharing.

Conclusion

The ultimate reality of the international system is the place that power, in all its dimensions, enjoys in the scheme of assuring stability in relations between nations. Uncertainty in international relations queers the pitch, in view of the expanded space of possibles. The strategy of Anti-Access Denial is one such defensive power tool which is available to a nation provided it nurtures and develops capabilities that serve to 'contest and deny' adversarial power projection. History has suggested that for the strategy to have impact not only must in-theatre force balance be tilted towards the rebuffer through asymmetricity, but also, the first salvo must be his. China takes the comprehensive national power approach, where it sees the effect of an event on its own endowment and its ability to control the occasion and its outcome as a primary virtue. In articulating its strategic objectives it has unambiguously identified three stability, growth and regional pre eminence. Gone is the 'power bashfulness' that marked the Deng era. In the absence of a security oriented cooperative impulse, the problem with such sweeping strategies specifically the coming 'Third Island Chain' superimposed on a long range power projection strategy is its blindness to recognize that, we are in fact dealing with a sea space that is the busiest of all the "vast commons". The reluctance for collaboration makes the potential for friction high.

Contemporary challenges in the IOEO are dominated by three currents. What direction China's rise will take is a matter of conjecture, of significance is that the potential for a collision is a reality and the only consideration that could deter it, is the ability of India to attain a strategic posture in the IOEO that serves to stabilize. On the globalization-nationalism-non state actor conundrum, clearly plural societies with decentralized control are more likely to transform, adjust, adapt and tweak their systems than monolithic centrally controlled States such as China which are intrinsically brittle in form, the fallout on the region caused by a transformation inconsistency can only be traumatic. The third current is India's relationship with the USA. It is here that some control exists in the hands of our policy makers. India has shown itself, through restraint, pluralistic and popular form of governance to be a responsible State that upholds the status quo yet invites change through democratic forces. Its rise, in the main, is not only welcomed but is seen as a harmonizing happening that could counterpoise China. The next step would logically be to establish an Indo-US strategic framework in the maritime domain, if we are to resourcefully contend with the challenges that the IOEO presents.

Phased implementation of the Anti-Access Denial Strategy, from deployment through demonstration prior to a hot exchange is intrinsic to the scheme and essential to its mechanics if the interests of deterrence are to be served. The question of when or under what conditions the plan is to be brought to bear is a dodgy call for if Phase III is arrived at, it may well signify a point of no return. The paper has suggested four 'red lines' which when breached may enable our Anti-Access Denial strategy; it is the second of these which will challenge decision makers to the extreme, for if a military build up at Hambantota, Gwadar or Sittwe is threatening, then at what stage of the mobilization should the strategy be called into play? The obvious answer is "at an early stage" at which time we must find the will and resolve to translate rapidly from Phase I to Phase II. A focused 50 year technology and infrastructure plan in support of and in harmony with our Anti-Access Denial Strategy must be placed on the anvil and resolutely hammered out, if we are to come to grips with the 'Uncertainty Paradigm.'

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END NOTES

[1]Fukuayama Francis. "The End of History." *The National Interest*, 16 (Summer 1989), pp 4, 18.
[2] Huntington. Samuel, P. *The Clash of Civilizations and the Remaking of World Order*, Penguin Books, India 1997, pp 30-39.
[3] Article by author titled "The Gwadar-Karakoram-Xinjiang Corridor", published in the September 2012 issue of the DSA. The Northern Passage was a fabled sea route theorised by adventurers, merchants and money chandlers over the last six centuries to link the Pacific with the Atlantic Ocean. The Route lay through the Arctic archipelago the treacherous ice flows that frustrate passage across the Arctic Ocean.
[4] Security analysts have examined China's efforts to develop weapons systems that can retard or even stop a potential adversary from entering an area of interest. Dubbed "access-denial," the aim of such a strategy is to use weapons that deter and should the need arise challenge or indeed prevent inimical forces from operating in conlict zones or oceanic areas of interest . The teeth of this strategy is an anti-ship missile. Such a missile, fired from land, sea, underwater or air can cause tremendous damage to an enemy surface vessel. While such technology isn't new, the effective ranges of such weapons have increased tremendously,

along with their accuracy, speed of delivery and precision. Defending against such systems is therefore a major problem for planners

[5] The World at War http://www.globalsecurity.org/military/world/war/index.html.The United Nations defines "major wars" as military conflicts inflicting 1,000 battlefield deaths per year. In 1965, there were 10 major wars under way. The new millennium began with much of the world consumed in armed conflict or cultivating an uncertain peace. As of mid-2005, there were eight Major Wars under way [down from 15 at the end of 2003], with as many as two dozen "lesser" conflicts ongoing with varrying degrees of intensity.

[6] Occasions of US military intervention 1989 – 2010 :
1989 - Panama, 1991 – Iraq, 1992 - Somalia,1994 – Haiti, 1995-96 – Bosnia, 1998 - Iraq, 1999 - Kosovo, 2001 – Afghanistan, 2003 – Iraq, 2009 – Pakistan (Drones), 2010 – Libya .

[7] *The Economist*, June 25th – July 1st 2011, special report China.

[8] Howard, Michael. *The Lessons of History*, Yale University Press New Haven and London, p39.

[9]Peter Hays Gries, *China's New Nationalism. Pride, Politics and Diplomacy* Berkeley & London, University of California Press, 2004, p 105.

[10] Ma Cheng-Kun, *PLA News Analysis,* "Significance of 2008 China's National Defense White Paper" no. 15, pp. 49-60

[11] Ibid

[12] Lewis John Wilson and Litai Xue, "The Quest for a Modern Air Force" in *Imagined Enemies China Prepares for Uncertain War,* Stanford University Press 2006, p237. General Liu Jingsong, a member of the 15th CPC Central Committee, he was also the PLA Commander of the Shenyang and Lanzhou military regions and to him amongst others is attributed the opening of Equatorial Guinea 1995.

[13] Ma Cheng-Kun PLA news analysis "China's security strategy" number 8 April 2008, Pgs 146-150. The assassin's mace program is a part of China's asymmetric war fighting strategy to develop capabilities designed to give a technologically inferior military advantages to overwhelm a technologically superior adversary. Their ASAT program, strategic hacking teams and cyber warfare, submarine programs are all a sub-set of the assassin's mace

[14] BBC E-news. www.bbc.co.uk 15 November 2012.

[15] Smith Adam , *The Wealth of Nations.*

[16] Barraclough,Geoffery. *The Times Concise Atlas of World History,* Times Books Ltd 1985 p26, 50-51.

[17] See Brittanica on line at www.brittanica.com, "Sri Vijaya Empire."

[18] BBC E-news 08 June 2011. Lt Gen Qi Jiangua speaking to the Hong Kong Commercial Daily.

[19] Lampton, David M. The Three Faces of Chinese Power. Might, Money and Minds. Berkeley, University of California Press 2008, p16, 40-41 and 50.

[20] Corbett. *Some Principles of Maritime Strategy* p. 115.
University Press 1975

[22] The 24 Character Strategy is attributed to Deng Xiao Ping in the early 90's as quoted in the Pentagon's annual China report dated 17th August 2010

[23] The phrase Middle Kingdom was first applied to the XII dynasty of ancient Egypt (1991BC – 1778BC). As the Chinese name for China it first appears in 1000 BC when it designated the Chou empire, who unaware of earlier civilizations to their west, believed their empire occupied the middle of the earth, surrounded by barbarians. Since 1949, the official name for China is 'The Middle Glorious People's Republican Country.'

[24] As quoted in *The Economist* of Dec 4-10 2010 Special report p9.