POWER OR PURPOSE: MODERNIZATION OF THE INDIAN NAVY

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ABSTRACT

India’s fairly recent embrace of an open, free market economy makes it vulnerable to the pervasive impacts of globalization. This has not only had a dramatic impact on the country’s goals due to an ever expanding maritime area of interest but in the form of new challenges it has to contend with. The new realities of today make it imperative that India have not just a coherent grand strategy but that all subordinate military service strategies, including that of the Indian Navy fall in line with it. However, an analysis of the Indian Navy’s “Maritime Doctrine” and “Maritime Military Strategy” reveals that not only are they inherent tensions in the documents but that they lay at times in contradiction with India’s core principles. Furthermore, given the state of the country’s strategic sectors as well as research and development capacity, it is questionable whether India’s conventional and to a greater extent unconventional naval deterrence capacity will develop into an ideal type in a reasonable time frame or whether it will develop slowly, in fits and starts and without any real strategic coherence?
# Table of Contents

Chapter I: Introduction ........................................................................................................... 1  
Scope of the Paper .................................................................................................................... 2  
Chapter II: Military Modernization in India: A Case-Study of the Indian Navy ............... 7  
Threat as a Catalyst .................................................................................................................. 9  
Economic Constraints .............................................................................................................. 14  
Institutional and Bureaucratic Reform ..................................................................................... 18  
Political Direction ................................................................................................................... 24  
Chapter III: Strategic Coherence and Effectiveness: Navy as a Deterrent Force............. 27  
Maritime Doctrine and Maritime Military Strategy ............................................................... 29  
Maritime Contributions to National Security Objectives .................................................... 35  
Chapter IV: Conclusions ........................................................................................................ 51  
Bibliography ........................................................................................................................... 53
CHAPTER I
INTRODUCTION

The 2008 Mumbai attacks, which were enabled by a relatively sophisticated sea-based movement of ten Pakistani terrorists more than ever before brought to the fore not only the vulnerabilities India faces in defending its vast coastal borders, but laid bare, the serious shortcomings in Indian intelligence, defense and policing capabilities.

In response to the attacks, Prime Minister Manmohan Singh stated that the United Progressive Alliance (UPA) government would pursue a three-level response: (1) by seeking to galvanize the international community to deal sternly with what Singh labeled the “epicenter of terrorism, which is located in Pakistan;” (2) by taking a strong posture towards the Islamabad government in pressing it to end the use of Pakistani territory for staging terrorist attacks; and (3) by recognizing that self-help measures to improve India’s own domestic security were required. In the months that followed, the Government of India (GOI) announced a 34 percent increase in its 2009 defense, spending leading public-private sector conglomerates, such as the Confederation for Indian Industries (CII) to estimate that New Delhi is likely to spend in excess of USD 80 billion on defense modernization in the next ten years alone. More immediately however, it led to a reappraisal of the armed services, and in particularly the role of the Indian Navy (IN) in defending the country’s border, which had hitherto been the sole competency of the Indian Army (IA). The underlying rationale for this disproportionate role was a continental or

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land-based bias in Indian security affairs, which was put to the test by the sea-based attacks on Mumbai that exposed a neglected but crucial maritime dimension to Indian security.

Although the 2008 attack on Mumbai is but the most recent flashpoint between two nuclear armed states, and terrorism is one of the many challenges faced by a ‘rising’ India; it nonetheless provided an impetus for addressing India’s homeland security concerns and the ensuing need to prioritize and modernize its security infrastructure lest the ‘shining’ image of an ‘emerging global power’ be tarnished.

Scope of the Paper
This thesis will look broadly at efforts to modernize the armed forces in order to highlight macro-level factors driving these efforts, as well as obstacles that might impede the implementation of the same and apply it to the case of the Indian Navy (IN). I will be using the qualitative method of a case-study due to both, constraints of time and space, but more significantly due to the relatively little attention paid to naval modernization efforts up until this point. Second, the thesis will look at the current Maritime Doctrine and Maritime Military Strategy to test its preparedness\(^3\) in addressing articulated national security objectives within the confines of the South Asian setting. Despite this limited geographical scope, New Delhi’s national security objectives, and by extension, the Maritime Doctrine and Maritime Military Strategy require that the navy perform a diverse range of roles in its “immediate

\(^3\) Preparedness is judged more in terms of doctrinal and strategic coherence and less in terms of performance in war-fighting or conflict-termination on terms that are favorable to India.
neighbourhood⁴.” These include military, diplomatic, constabulary and benign (humanitarian) roles towards its primary maritime objective of:

“ensure [ing] national security and provide [ing] insulation from external interference so that the vital tasks of fostering economic growth and undertaking developmental activities can take place in a secure environment…”


This thesis will be more exclusively focused on the navy’s role as a military force and its concurrent strategy in achieving national security objectives in contrast to a more comprehensive focus on all four roles that combine to form a nation’s maritime power.

It is not the intention of this paper to project a disproportionate role played by the military as opposed to other tools of statecraft in determining or even executing New Delhi’s agenda, regardless of which service is under consideration. In fact, India stands in stark contrast to its neighbours in that the command and control of its military is firmly entrenched in its civilian leadership and the military’s influence on society is pretty limited. Reflecting on India’s unique construct, George Tanham, in his seminal essay on Indian strategic went as far as to suggest that this impacted India’s ability to develop a robust security policy, including the strategic formulation of military power as it was “bereft of coherent strategic thought” and therefore incapable of “altering its strategic condition⁵” vis-à-vis Pakistan. Mirroring this viewpoint, Paul S Kapur stated that Mumbai was “a symptom of a larger, strategic problem plaguing Indian security policy and until such is figured out; the country will continue to face Mumbai styled

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⁵ George Tanham, _Indian Strategic Thought: An Interpretive Essay_ (Santa Monica: RAND, 1992)
attacks in the future. Others have questioned whether the issue is less about intentions and more about capabilities.

Today with a consistently performing economy, India has the resources to modernize its defenses. Could this then lead to the formulation and articulation of a more coherent maritime strategy commensurate with India’s national security objectives? It is precisely for this reason that I chose to focus on the military role, as it is crucial that an aspiring global power have a capacity to “deter” outside interference in its area of influence and interest. While partly written in reaction to regional and extra-regional challenges, this paper will be written almost exclusively on Indian efforts to both modernize and strategize.

From the standpoint of methodology it is important to point out two things. First, given possible multi-collinearity in analysis, it is viable to examine the case of the navy independent from that of the other combat services. The Indian defense establishment is set up in such a way that the three services are bifurcated from one another. Furthermore, the lack of a joint chief of staff like position, to liaise between and lobby on behalf of the combat services ensures a top-down approach where subordinate strategies are created by each service independent of the other. The navy’s maritime doctrine and strategy while created in-house, is ultimately articulated within the boundaries set by the country’s civilian cabinet, which along with the Ministry of Defence (MOD) provides both policy context and the wherewithal to the armed services to discharge their duties. Finally, given that the thesis is only just focused on one of the three armed

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services and within that on just one of its four roles; its explanatory power in determining the overall quality of India’s defense modernization efforts and corresponding strategic effectiveness is limited.

Chapter Two will uncover the underlying themes pervasive in India’s modernization efforts through the decades since its independence. To facilitate this, the thesis will apply the main set of drivers identified in Stephen Cohen and Sunil Dasgupta’s text, *Arming Without Aiming: India’s Military Modernization* (2010) which is vital to the study of military modernization in India and apply it the case of the Indian Navy. These include the imminence of a threat to India’s national security; the state of economic development in India; impediments caused by bureaucratic and institutional blockages in the procurement of weapon systems and finally the presence of a coherent national security strategy and subordinate service-based strategies.

Cohen and Dasgupta find that it the lack of a coherent strategic doctrine as opposed to the other three drivers that is compromising the effectiveness of the national leadership in cultivating military power in a manner that is effective in addressing the country’s security challenges in South Asia and in reference to Pakistan in particular. In order to test this hypothesis, I will evaluate the cohesiveness of the official “Maritime Doctrine” (2004) and “Maritime Military Strategy” (2007) produced by the Indian Navy in addressing India’s stated national security objectives. Or, is a substantial and sustained increase in defense spending and the procurement of the most advanced conventional and unconventional capability adequate in and of itself, in securing the country’s interests?
Chapter Three will therefore begin with a presentation of both the Doctrine and Military Strategy’s most salient features as well as a discussion on any tensions and contradictions found in the documents themselves. Thereafter it will look at the navy’s military role and test the applicability of its strategy to use maritime military power in the achievement of the country’s national security objectives. The focus will remain on those objectives that employ the use of maritime military power as a conventional and unconventional force in being. While discussion is centered on preparedness in terms of doctrinal strategy, this section will also highlight possible impediments in the future trajectory of conventional naval buildup. Finally, it will undertake a general examination of the strategy for naval nuclear deterrence as it relates to the main tenets of the country’s nuclear doctrine. Finally, the thesis will end with some concluding thoughts on the implications of its findings as it relates to India’s regional and global objectives.
CHAPTER II

Military Modernization in India: A Case-Study of the Indian Navy

Traditionally, the Indian Army (IA) has set the pace of military transformation in India and as such has received a disproportionate share of attention at the expense of the other two combat services. More recently, the Indian Air Force (IAF) has received significant coverage as it enters the final stage of selecting new Medium Multi-Role Combat Aircrafts (MMRCA) at an estimated cost of USD 10 billion. This is not only the most expensive flight tender floated by New Delhi in recent years, but its high-profile is also a result of its impact on the “viability of the aviation industry” and the “international political implications” of a partnership between India and the winning bidder’s country-of-origin. The complexity of the MMRCA tender and the critical implications it has on India’s national security and military modernization has been expertly covered by Ashley J. Tellis in his very recently released report, “Dogfight: India’s Medium Multi-Role Combat Aircraft Decision” (2011). In contrast to the focus on the Army and the more recent attention given the Air Force, the Navy has been somewhat marginalized.

Literature on the navy tends to be tucked away in hard-to-decipher technical journals or private industry reports on the Indian defense market. When written about, it is either narrowly focused on India’s humanitarian missions during the tsunami, multi-national anti-piracy constabulary services, or within the broader dynamics of an Asian arms race.

Earlier this year, Sunil Dasgupta and Stephen Cohen, experts that have written extensively on Indian and South Asian affairs at large, released a comprehensive book on India’s current defense modernization efforts. The book not only includes up to date data and analysis

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but takes into consideration the viewpoint of most experts writing on India’s defense policy and modernization efforts to date. However, *Arming without Aiming* (2010), while exhaustive in its research and analysis on the military modernization in India at large, they dedicated only one short chapter on naval modernization that was shared with the air force. This section therefore, endeavors to build on the work of Dasgupta and Cohen by studying the navy in greater detail, which by the authors own admission could “upend the artificial balance of power Pakistan has been able to maintain and return [India] to prominence in the Indian Ocean Region (IOR)⁹.” They also state that a successful modernization of the IN is indicative of a “true transformation” in Indian strategic and military affairs¹⁰. Despite its restricted analysis on the navy, the book is invaluable. It highlights concepts that are integral to the understanding of India’s past approach to defense policy, its bureaucratic and institutional legacy and finally, its efforts since independence (1947) to develop a military-industrial complex under strained economic conditions.

*Arming without Aiming* identifies four primary factors that have both given impetus to, as well as frustrated India’s development of, a coherent defense policy and robust military-industrial complex. These include the imminence of a security threat; trade-offs between development and security needs; the efficacy of its bureaucracies and finally the articulation of a coherent security strategy.

Their main finding is that, while bureaucratic and institutional impediments exist and seriously hamper efforts to build an effective military capacity, it is the lack of a coherent

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¹⁰ Steve Cohen and Sunil Dasgupta, *Arming*, p. 71
strategic doctrine that lies at the heart of the country’s inability to plan and deploy its military ability optimally. Referring to Tanham’s constructivist critique of India, they portend that the country’s strategic and defense affairs are likely to continue to be shaped by the remnants of a Nehruvian and Gandhian era that promotes restraint in strategic and military affairs. “Strategic restraint” is a phrase coined by George Tanham in his book, *Indian Strategic Thought: An Interpretive Essay* (1992) which suggests that Indian historical, cultural and ethnocentric factors have not only provided a basis for Indian identity but that these factors permeate through and form a set of operating principles underlying Indian strategic thought. This restraint is evidenced by New Delhi’s lack of an expansionist agenda or offensive orientation with regards to Pakistan. Accordingly, the permissiveness of this cultural construct is likely to culminate into a modern military strategy that is still very much defensive in orientation and unlikely to result in efforts to project power or expand influence through military means.

This chapter will be divided into four sections in which each of the four factors identified by Cohen and Dasgupta will be discussed in relation to the case of the Indian Navy.

**Threat as a Catalyst**

Timothy Hoyt in his book, *Military Industry and Regional Defence Policy: India, Iraq and Israel* analyses the relationship between changing security calculations and military experiences on a “developing” country’s military-industrial policy. Employing India as one of his cases, he traces the impact of the perception of security challenges on the selection, acquisition, assimilation and
development of a military-industrial complex in India. Hoyt, studies India through roughly the same time frame as Cohen and Dasgupta (2010) and finds that, while India has failed in its confessed goal of being ‘self-sufficient,’ that is indigenous in the production of all combat equipment; it has still been effective in responding to regional security challenges by producing more superior weaponry and titling the conventional military balance in its favor. Commenting on India’s national security strategy in the future, Ashley Tellis at the book launch of *Arming without Aiming* questions whether India is likely to show restraint in perpetuity and instead argues that given the changing nature of security threats; India might have to adopt a more offensive posture when modernizing its military. Both Hoyt and Tellis operate under the neo-realist assumption that threat is a catalyst to military armament and strategy.

There exists evidence to suggest that when faced with an imminent threat, India has abandoned its political preference for restraint in strategic thought and military armament regardless of economic constraints. The army has traditionally dominated engagements between India and Pakistan in the wars following the partition of both countries. But when faced with a new specter of threat, India has been responsive to a changing security environment. For example, Pakistan’s sea-based attacks on ports and installations on the western coast of India in 1965 and the United States’ show of gunboat diplomacy in favor of Pakistan, at the height of Cold War superpower rivalry in the region called for an increased participation of the Indian Navy. In varying degrees, both incidents provided the necessary security based objective for

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12 Tellis comments at book launch.
naval armament. The 1971 USS Enterprise episode in particular, provided the catalyst condition of an imminent threat by convincing the political leadership that the US sought to establish a foothold in the Indian Ocean and contain India\textsuperscript{14}. Accordingly, the naval mission was altered from one of ‘sea control’ to one of ‘sea control and denial.’ That is the need for an ability, to not only maintain a command over the countries territorial waters in the event of a conflict with a smaller regional adversary, but the added task of deploying a modest but effective deterrence against extra-regional powers\textsuperscript{15}. Consequently the navy’s share of the defense budget rose from a mere 3 percent during the early 1960s to over 8 percent by 1971 to nearly 11 percent by the end of the decade, which, were invested towards building in-capacity for ship design and construction.\textsuperscript{16} Additionally, New Delhi when faced with the prospect of encirclement by the United States in favor of Pakistan, abandoned its ideological preference for non-alignment, in favor of the USSR. Signing of a friendship pact between both countries, opened the door to Soviet naval sales of submarines, anti-submarine frigates, long range patrol boats all of which, contributed to the development of a third operational dimension which was commensurate with its mission of sea-control and denial. New Delhi’s abandonment of ideological preference in face of an imminent strategic threat can therefore be explained in realist terms.

The twenty year naval modernization plan announced under the shadow of superpower rivalry in the region did not however actualize in its entirety. The slow pace of naval expansion was due to the economic constraints faced by the country that placed budgetary restraints on the

\textsuperscript{14} Awati, \textit{Superpower Rivalry}, p. 102
\textsuperscript{16} Cohen and Dasgupta, \textit{Arming}, p. 75
allocation of funds for the defense of India. However, the underlying reason for the slow-down was a change in the perception of threat brought on by the end of the Cold War and with it a dramatic shift in the geo-political security environment which cut the navy adrift.

The Indian Army had always held the dominant position over the Indian Air Force and to an even greater extent the Indian Navy. The reason for the navy’s continuing subordinate position with regards to funding and armament is India’s land-centric, continental bias in security affairs. The latent development of the navy is ironically enough attributable to the remnants of a British legacy on Indian strategic thinking.

Examining its impact on Indian strategy, Ashley Tellis in his essay “Securing the Barrack: The Logic, Structure and Objectives of India’s Naval Expansion” (2003) states that British imperial defense strategy came to rest on two basic tenants – the defense of India and British naval supremacy. The result of this was creation of a security system that closely resembled the “medieval use of reinforced fortifications” which was a precursor to India’s “concentric circle” security model. An inner, continental and an outer maritime ring of defense was drawn out. Given British naval superiority during that time, seaward advances to the outer ring of defense was deemed secure, thereby requiring little strategic design. As a result, the continental dimensions comprising the larger Asian landmass became a bigger priority for the defense of colonial India. The responsibility of securing colonized India’s borders from the expansionist designs of other Asian players was entrusted to British India. Therefore while 1947 marked an administrative and ideological break between India and England with regards to geostrategic policy however, such a break never carried forward. The series of wars between

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17 Tellis, Securing, p. 11
18 Mohan, “India and the Balance of Power”
India-Pakistan (1947-48, 1965 and 1971) and India-China (1965) sustained a continental bias on security affairs in India. Therefore while staunch advocates of India’s deeply ingrained ideology of restraint cite for examples the “local, limited and “territorial”\textsuperscript{19} nature of the wars mentioned above and alternative explanation could be that neither opponent had a developed maritime capacity to engage in total war. This is not to say that neither the air-force nor the navy had any role to play but that these roles were subordinate to that of the army who formed the crux of Indian defense. The 1971 war between India and Pakistan that led to the creation of Bangladesh (East Pakistan) was significant not only in the context of the US gunboat diplomacy in favor of Pakistan but for a pivotal role played by the Indian Navy in interrupting the supply routes between West and East Pakistan.

In the two or more decades, since both adversaries crossed the “nuclear Rubicon\textsuperscript{20}, India and Pakistan have engaged in a number of “limited conflicts\textsuperscript{21}” short of full scale conventional war. Following the Kargil conflict in 1999, New Delhi was confronted with the recognition that much of its Soviet-era equipment was outdated and obsolescent compared with its regional rivals. India founds itself facing a theoretical prospect of a war on two fronts, one with a major power rival (China) and the other with a powerfully-armed middle power which possesses the potential to threaten its homeland security (Pakistan). Both China and Pakistan have significantly

\textsuperscript{19} Ashley Tellis, Christine Fair and Jamison Medby, \textit{Limited Conflicts Under the Nuclear Umbrella}, (Santa Monica: RAND, 2001) p. 5-57
\textsuperscript{21} Tellis et al, \textit{Limited Conflict}, p. 5-57
expanded their military capabilities in the past decade providing a continued raison d’être for massive spending on the army who is central to these engagements.\(^2\)

The Pakistan based terrorist attacks on Mumbai in 2008 on India’s territory for the first time presents an immediate security concern, and which could in the future attest to an expanding, maritime theater of sub-conventional or unconventional attacks.\(^2\)

As indicated in the paragraphs above, India has shown a willingness to alter strategy and subsequently build needed military capacity when faced with an imminent threat. However, the country’s response to a changing security environment has been more reactive than preemptive which can be deduced as either, in keeping with a political preference for restraint in military affairs or alternatively as a by-product of a lack of financial resources. Therefore in order to test the validity of resource constraint in the formulation of an effective maritime security strategy, I will look at India’s efforts to modernize its naval capacity under an alternate scenario of resource abundance.

**Economic Constraints**

*Arming Without Aiming* takes off from where Cohen’s earlier book, *India: Emerging Power* (2001) left off. In the intervening decade, India has maintained a robust economic growth as a result of which its position in the region and world, albeit to a lesser extent; has also increased. Challenging Tanham’s assertion of restraint, an ‘emerging’ India has been focused on developing its military capabilities, making it one of the leading importers of advanced

\(^2\) Deloitte, *Indian defence market*, p. 8
\(^2\) Indian Navy warships have been deployed on anti-piracy missions across the Indian Ocean Region. The presence of Somali pirates operating 450 nautical miles off the western coast of India are another example of unconventional security threats faced by India.
conventional weaponry and systems\textsuperscript{24}, which supports a central proposition of international theory: the co-occurrence of affluence and military strength.

Following its independence, the country under Prime Minister Nehru opted for a state-socialist economic model, which was not only inward looking but which from the decades between the 1950s and 1980s was plagued by what economists called a slow “Hindu rate of growth.”\textsuperscript{25} As a consequence, security was subordinated to more pressing developmental needs. In fact, a Naval Paper Plan produced a year after independence proclaimed a ten-year strategy to develop a 69 ship navy\textsuperscript{26}; a tall order considering that at that point the GOI did not have any capital ships or shipyards under its jurisdiction at this time. Enthusiasm for naval armament however, dwindled more as a result of the financial realities of rearmament as well as, the more urgent needs of the army than for lack of a desire to develop naval capacity. Therefore in the decades following its independence in 1947, India not only continued to prioritize its development needs but that of the army over the navy due to the ground realities of the wars it fought at this time. This began to change with the opening of the Indian economy in the early 1990s. Absolute defense spending increased from USD 14.1 billion in 1988 to USD 18.1 billion a decade later to USD 36.6 billion in 2009 while simultaneously, declining as a percentage of GDP\textsuperscript{27}. The share of the navy’s budget increased from a mere 3 percent of the defense budget in

\begin{itemize}
\item \textsuperscript{24} Stockholm International Peace Research Institute, “India world’s largest arms importer according to new SIPRI data on international arms transfer” Last modified on March 15, 2011. \url{http://www.sipri.org/media/pressreleases/armstransfers}
\item \textsuperscript{26} Rear Admiral (retired) Raja Menon, \textit{The Indian Navy} (New Delhi: Naval Headquarters, 2000) p. 52
\item \textsuperscript{27} SIPRI. “Military Expenditure Database” Last modified on March 7, 2011 \url{http://milexdata.sipri.org/result.php4}
\end{itemize}
1962 to nearly 20 percent by 2006\(^{28}\). A booming, robust economy however drove not just the
country’s military armament efforts but impacted the development of the Indian Navy in more
profound ways than a simple allocation of additional funds.

In order to fuel an average growth rate of seven percent per annum, India is not only
reliant on the unimpeded flow of imported fuel but on the uninterrupted traverse of commercial
trade through its maritime area of interest, the IOR. In effect, economic and energy security have
been declared national security objectives, not only raising the profile of the navy but resulting in
a strategy that is underpinned on the ambitious and perhaps even expansive goal of ensuring the
“freedom to use the seas for [our] national purposes, under all circumstances\(^{29}\)”. To preempt any
discussion on India’s increasing maritime power projection capabilities; the Ministry of
Defence’s (MOD) annual reports explicitly state that India does not “harbor any extra-regional or
territorial ambitions\(^{30}\).” Furthermore official naval documents are not only careful in its usage of
language that might project an assertive, offensive naval posture but instead state that the navy
by virtue of its “capability, strategic positioning and robust presence in the IOR” can be a
“catalyst for peace, tranquility and stability” in South Asia and beyond\(^{31}\). This can be construed
as consistent with Tanham, Cohen and Dasgupta’s Indian narrative of “strategic restraint”.
However, given the reliance of the country on fuel and trade; it is neither a surety that India will
indefinitely maintain a defensive orientation, or if such orientation is optimal in safeguarding
Indian interests and finally, even if articulated as such, is believable. Intentions are what others

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\(^{30}\) Indian Ministry of Defence Reports (2009-2010), Forward, p. ii

\(^{31}\) Maritime Strategy, Forward p. iii-v.
make of them and therefore it is of little surprise that Pakistan is neither convinced of Indian restraint or is likely to see Indian naval buildup as benign. Additionally, these documents also place a major emphasis on the navy’s bilateral and multilateral exercises with other navies towards enhancing the Indian Navy’s role as a constabulary force in anti-piracy efforts and regional humanitarian relief missions.  

Evidence for India’s expanding naval mission is found in the articles written by Walter C Ludwig III and David Scott in “Delhi’s Pacific Ambitions: Naval Power, “Look East” and India’s Emerging Influence in the Asia Pacific” and “India’s Extended Neighbourhood Concept: Power Projection and Rising Power” respectively. Both authors chronicle New Delhi’s concerted efforts to direct its foreign, economic and military policies eastwards in what began as an economic cooperation with the nations of Southeast Asia has now expanded to a full spectrum engagement with the major powers in East Asia. First articulated under the Narsimha Rao government in 1991 was rigorously pursued by the successive administrations of Atal Bihari Vajpayee between 1998 and 2004 and Manmohan Singh from 2004 onwards. Incidentally, Singh also served as the primary architect of India’s liberalization under the Rao government.

As a result of India’s expanding maritime responsibilities and interests, it is significantly enhancing both its naval and coast guard services. The Indian Navy estimates that by 2022, its fleet will expand to include a 160-plus ships, including three aircraft carriers, 60 major combatants including nuclear submarines and close to 400 aircrafts of different types.  

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32 Maritime Strategy, p. 71  
34 Deloitte. Indian defense market, p. 28-29
Indian Coast Guard is all set to double its force levels and manpower in the next few years and triple it in the next decade in order to protect the country’s maritime zones and assets\textsuperscript{35}. Using economic and energy security as a surrogate for threat-based national security objectives, the navy has embarked on an ambitious naval modernization plan. In fact not only has India historically surpassed Pakistan and other regional contenders in absolute military spending but it has long held an advantage in terms of numerical superiority over the Pakistani navy\textsuperscript{36}. By 2008, the Indian Navy out placed most navies in the world. Ranked at number five, it not only surpassed the Pakistani navy by a 5:1 advantage in its favor but closely followed that of its potential other rival, China\textsuperscript{37}.

The success of its current naval modernization efforts which include the addition of ships, weapon systems and servicemen is squarely hinged on its ability to facilitate either the indigenous development of such systems or the efficiency with which it acquires or procures it. Central to this process, is the alacrity with which the Indian defense bureaucracy known for its red tape, corruption and interoffice rivalry operates, as well as the efficiency with which, public defence sector undertakings indigenize naval ships and armaments.

**Institutional and Bureaucratic Reform**

Timothy Hoyt, in his book, *Military Industry and Regional Defence Policy* argues that the speed and efficiency with which India undertakes reforms will determine whether the country will move up the “ladder of production” and become a major military power with a mature military-

\textsuperscript{35} Deloitte. *Indian defense market* p. 10
\textsuperscript{36} SIPRI. *Database*. Last modified on April 7, 2011 [http://www.sipri.org/databases/milex](http://www.sipri.org/databases/milex)
\textsuperscript{37} Ashley J Tellis, “Military Modernization in Asia: Overview” *Strategic Asia*, (2005-06) p. 25-30
industrial complex. In particular, a reform of its weapons development, acquisition and procurement process, aimed towards enabling a more competitive bidding process that brings in private sector participation as well as facilitates foreign partnerships integral to the transfer of state of the art technology and the development of superior weaponry. The immediate benefit of such a reform is the timely delivery, cost-effectiveness and higher quality standards of weapons systems in India.

Belaboring this point, Cohen and Dasgupta challenge conventional wisdom and assert that while threat and affluence drive the development of an assertive military posture; military change in India will be dictated by the slow pace of institutional change. Selection of modern weapon systems is inherently very complex but adding complexity is the bureaucratic nature of governance and planning of defense acquisition in India. In order to be effective, not only does one have to be able to accurately predict future threats, but given the costs and the life-spans of weapon systems in both, development and deployment, one has to ensure that the armed forces not only receive them on time but that they are maintained in mint condition.

The agencies responsible for the development, acquisition and procurement of such defense systems include:

| The Indian Ministry of defense (MOD) is responsible for all defense related activities in India, spanning the Army, Navy and Air Force. The principal task of the Defence Ministry is to frame policy directions of the Government on all defense and security related matters for communication to the Services Headquarters and other relevant organisations. |
| The Ministry of Defence is comprised of three main Departments: Department of defense is responsible for the defence budget, establishment matters, defence policy, matters relating to Parliament, defence co-operation with foreign countries and co-ordination of all defence related activities. |

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38 Hoyt, *Military Industry*
39 Cohen and Dasgupta, *Arming*, p. 143-57
Department of Defence Production is responsible for matters pertaining to defence production and indigenisation of imports.

Department of Research and Development Organisation (DRDO) is responsible for advising the Government on scientific aspects of military equipment and logistics as well as works in a range of areas of indigenous military technology development.

Most fundamentally and problematically, India’s military-acquisition process is improperly influenced by the Development of Research and Development Office (DRDO). This state agency is not only in charge of indigenous weapons and technology development, but has veto power over what India can import in what can only been seen as a serious conflict of interest. This conflict of interest brought on by its authority as a supplier and evaluator has prevented a truly competitive bidding for government defense contracts as well as led to overoptimistic claims of local production capacities. Furthermore in addition to huge cost overlays and long delays in the supply of indigenized systems, the DRDO has the first right of refusal on equipment demands by the armed services.

The development of naval capacity however differed in significant ways than the other two services in that it was for a multitude of factors elaborated on earlier, left pretty much to its own devices in the initial years of independence. Unlike the other services that were forced to develop more in reaction to unfolding events, the navy was able to take a more long-term approach to the development of an indigenous ship-building infrastructure under a newly set up Ministry of Shipping. The navy also benefited from the visionary leadership of K M Pannikar – a respected scholar and administrator but above all a naval enthusiast. This allowed the navy to be

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40 Cohen and Dasgupta, *Arming*, p. 29-33
shielded – to an extent from the self-serving agenda of the DRDO\textsuperscript{41} in contrast to the other two services. Cohen and Dasgupta are quick to point out that the DRDO has not produced a single weapon that could alter the country’s strategic condition\textsuperscript{42}.

In comparison, over the past two decades India has been working on the development of an indigenous nuclear-propelled submarine, in partnership with a private firm (Larsen and Toubro), a nuclear laboratory and Russia, officially labeled the Advanced Technology Vessel (ATV). The project encountered numerous difficulties but in mid 2009, India formally launched the 6,000 tonne, INS Arihant nuclear submarine amid mixed reports of whether this signaled the Indian Navy’s global or at the very least regional nuclear delivery capacity\textsuperscript{43}. It is expected to be commissioned and deployed into full service after undergoing two years of sea trials\textsuperscript{44}. India is expected to produce four more such nuclear-capable submarines, all of which are set to play a vital and specific role within strategic deterrence posture.

By maintaining the design and construction of warships within the service, the navy has had successes such as these. However, it is still vulnerable to the shipping industry’s ability to ensure that “modern processes are adopted to reduce design and construction periods, improve cost competitiveness, adopt modern work procedures, modular construction techniques, and induct modern equipment\textsuperscript{45}” in response to unanticipated changes in the operating environment. Although in the past it has achieved its greatest success large naval platform which require less

\textsuperscript{41} Cohen and Dasgupta, 	extit{Arming}, p. 74
\textsuperscript{42} Cohen and Dasgupta, 	extit{Arming}, p. 26
\textsuperscript{44} Prakash \textit{ATV}.
\textsuperscript{45} Military Strategy p. 12-13
advanced technological know-how for which the country’s mature manufacturing and engineering sector is well placed. The development of high functioning weapon systems however, still needs greater private sector participation and foreign technological collaboration for India to optimally modernize its navy. More basically, at present India is struggling to lift indigenous production above 50 per cent of the total cost of acquisition⁴⁶.

Historically, India has preferred to rely on the indigenous production of military equipment and systems for fear of being dependent on foreign suppliers. As a result, New Delhi has had to at times make do with less than cutting-edge equipment and systems at prices that are not always competitive. As and when India has formed a partnership with foreign suppliers, it has been extremely cautious in its selection because more often than not it signified more than a commercial exchange of goods and services. Therefore its shift from an arguably pragmatic policy of ‘non-alignment’ in the past to one of ‘poly-alignment’ in a contemporary setting is indicative of its responsiveness as well as fortitude in acquiring much needed high-technology weapons systems from a number of new players such as South Korea, Japan, Israel, the US while continuing its historical cooperation with Russia⁴⁷. India’s growing number of new bilateral defense partnerships signals an important departure from the past.

Cohen and Dasgupta instead make a case for a premature celebration of a US-India strategic cooperation based on defense ties⁴⁸. In their opinion, the steadfast commitment on the part of the Indians to abide by the principle of ‘non-alliance’ and ‘non-reliance,’ will prevent it from forming a strategic partnership with the US. The importance of a closer cooperation

⁴⁶ Deloitte, Indian defence market, p. 25
⁴⁸ Cohen and Dasgupta, Arming, p. 171-76
between both countries is most significant in terms of the opportunities it presents in the realm of technology transfer, access to advanced weaponry and systems, as well training opportunities with the US. In this regard, naval cooperation between the US and India is perhaps the most successful dimension of this budding partnership. The two nations are not only collaborating in terms of bi and multinational exercises and operations, but for the first time in the acquisition of maritime hardware and software. Furthermore the increasing number of joint naval exercises with the US has the added benefit of presenting a more confident Indian naval posture by virtue of projecting an alliance with the foremost navy in the world. Ironically enough an acceptance of an Indian narrative based on the constructivist preference of strategic restraint has placed India in an advantageous position in terms of access to defense based collaboration with nearly every military power in the world.

While an increase in both the financial ‘means’ as well as the ‘ways’ in which India can modernize its navy are certainly crucial; superseding both these factors the ‘ends’ for which such an exercise is undertaken. Central to such an enquiry is the direction set by the countries civilian leadership and its corresponding impact on the subordinate strategies of its armed services in developing as well as deploying its weapons systems towards the achievement of stated national objectives.

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Political Direction

As mentioned in the introductory paragraphs of this paper, not only is the influence of the armed forces limited in Indian society but control of these forces is entrenched in the civilian cabinet. While civil-military relations is a balancing act between too little and too much, it is the contention of Cohen and Dasgupta that India falls in the category of too much civilian influence⁵⁰. Compounding this is a charge leveled against the Indian civilian leadership is that they lack of know-how of such matters and thereby fail to give necessary political direction in military and strategic affairs⁵¹. I have already demonstrated how changes in defense policy have come about more as a reaction to events than as opposed to a systematically inferred national security strategy from which subordinate strategies are created and can be adapted to changing circumstances. Furthermore, the armed services that have the necessary expertise are not only excluded from the high-table but have to compete with civilian bureaucracies that seek to maintain their position of influence against military encroachment. Cohen and Dasgupta contend that the subordinate role played by the armed forces in deciding state policy, India had been unable to develop the institutional structures necessary to overhaul mechanisms for generating military power⁵². India’s possibly missed an opportunity to revolutionize its military affairs in both the 1960s as well the 1990s resulting in its inability to generate sufficient military power to not only alter India’s strategic position vis-à-vis Pakistan to this day but to punish Pakistani transgressions on its territory through military action.

⁵⁰ Cohen and Dasgupta, Arming, p. 4
⁵² Cohen and Dasgupta, Arming, p. 143-50
At the strategic level, the introduction of nuclear weapons did not prevent Pakistan from launching a “sub-conventional military probe” into Indian territory but henceforth any Indian response would have take into account Pakistan’s own nuclear arsenal\(^53\). Only a revolution in Indian military affairs could create options to rebuke or at more significantly deter Islamabad’s use of state-sponsored terrorism while avoiding a wider war in retaliation.

As it stands, India does not have the equivalent of a white paper or official national security document that sets forth objectives and a grand strategic direction for subordinate strategies – whether by service, organization or functional area. Instead, the military services and other national security bureaucracies develop and promulgate their own core documents for both, “philosophical and bureaucratic reasons\(^54\).” As a result the Indian Navy, much like the other two services has published its own “Maritime Doctrine” and “Maritime Military Strategy” with corresponding subordinate plans for procurement, training and education and operations per se. While it is evident that these documents are published keeping in mind the bureaucratic interests of the navy, they are ultimately produced with an implicit understanding of the general principles guiding Indian policy and the strategic objectives it seeks to achieve.

In order to test the validity of strategic coherence in India’s preparedness to achieving its national security objectives, this thesis will examine whether India’s “Maritime Doctrine” and “Maritime Military Strategy” in keeping with the above.

*Chapter Two* will begin with a presentation of both, the Doctrine and Military Strategy’s most salient features as well as a discussion on any tensions and contradictions found in the

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documents themselves. Second, looking more specifically at the navy’s military role I will test the applicability of its maritime strategy in addressing national security objectives. It will look at the navy’s military role as a conventional and unconventional force in being. With regards to its naval nuclear deterrence it will examine Strategy documents alignment with India’s overarching nuclear doctrine.
CHAPTER III

Strategic Coherence and Effectiveness: Navy as a Deterrent Force

The foundation of a modern maritime tradition in India can be traced back to the words of KM Panikkar, a leading diplomat and parliamentarian of his time – who wrote a seminal essay India and the Indian Ocean: An Essay on the Influence of Sea-Power on Indian History (1946) with the explicit purpose of changing Indian attitude towards sea power and demonstrating its relevance to strategy at large. Panikkar’s central argument was that throughout its history, India had been victim to a number of land invasions beginning with the campaign of Alexander the Great. However, it was not until it was invaded by sea, that it was “conquered militarily” and “defeated politically” suffering what Panikkar called “total defeat.” To him, then, India’s centuries-old failure to develop as a maritime power explained why western sea-faring invaders succeeded where other invading land armies failed. Influenced by the thinking of Alfred Thayer Mahan, a prominent nineteenth century naval geo-strategist, he advocated for remedying India’s “permanent geographical weakness,” on the continent by exploiting its protrusion into the Indian Ocean. Panikkar envisioned an “Indian Ocean that in its entirety ... remained truly Indian.” His naval blueprint involved more than fencing off of India’s coast but the establishment of multiple naval commands on the coast of India as well as bases as far as Singapore, Mauritius and Aden to protect waters vital to the country’s security and prosperity. Ironically, however the vestiges of a British colonial legacy led to the prioritization of the army over the navy due to

56 Panikkar Essay p. 45
57 Panikkar Essay p. 45
58 Panikkar Essay p. 47
a continental bias in security affairs and with it the necessary funds to actualize Panikkar’s maritime vision.

It was not until the late 1990s, that factors both endemic to India and attributable to the larger geostrategic environment allowed for the navy to begin building up of capacities and capabilities that it had long-sought to acquire. While being first in line to adjust to the changing realities of geopolitics by convincing the GOI to sign a substantive military-to-military collaboration with the United States, the navy would have to wait until 1998 before it undertook an internal “Strategic Defense Review: The Maritime Dimension – A Naval Vision” (SDR)\textsuperscript{59}. The naval expansion of the 1980s “established no real pattern”, whereas modernization efforts in the 1990s “threatened to lose steam,” due to the disruption caused by the collapse of the Soviet Union\textsuperscript{60}. In fact, up until this point, “no authoritative government statement” on Indian naval strategy even existed\textsuperscript{61}.

Therefore while the SDR was the very first manifestation of an official maritime vision of sorts its contribution was limited\textsuperscript{62}. It is principally, credited with establishing the basic foundation underlying the navy’s strategy to marry the ends, ways and means by which it is to use sea power and upon which the next levels of Indian maritime thought could be constructed. Most notably it was published shortly after India and Pakistan status as nuclear powers became known. It for the first time publically disclosed New Delhi’s commitment to acquire a sea-based

\textsuperscript{59} Cohen and Dasgupta, \emph{Arming}, p. 74 and Indian Navy. “The Indian Navy’s Vision Document” Last modified on April 5, 2011 \url{http://www.indiannavy.nic.in/vision.pdf}
\textsuperscript{60} David Scott, India’s Grand Strategy for the Indian Ocean: Mahanian Visions, 13. \emph{Asia Pacific Review}, (2006) p. 105
\textsuperscript{61} Holmes et al, \emph{Naval Strategy}, p. 65
\textsuperscript{62} Cohen and Dasgupta, \emph{Arming}, p. 74
nuclear deterrent capability\textsuperscript{63}. At this time the navy was also riding high because of its success in complementing the efforts of the IA and IAF during the 1999 Kargil conflict with Pakistan.

**Maritime Doctrine and Maritime Military Strategy\textsuperscript{64}**

“India’s Maritime Doctrine” published in 2004, six years after the SDR, and the “Freedom to Use the Seas – India’s Maritime Military Strategy” released in 2007 are the two most cited documents on India’s official maritime thought. These documents and in particular the Strategy piece was published a few years after the army and the air-force released their own doctrines in 2004 and 2005 respectively.

A first of its kind, the “Maritime Doctrine” was applauded for its departure from the hesitancy on the part of the country’s security establishment to put down on paper the broad set of principles guiding the development of the navy. The most salient features of the Doctrine include:

The “control of maritime choke points, islands and trade routes in the Indian Ocean, Arabian Sea and in the Bay of Bengal” expanded to include the “arc from the Persian Gulf to the Straits of Malacca” within the purview of legitimate maritime interest by 2025\textsuperscript{65}.

In line with the above, the Doctrine reiterates the blueprint of the IN as a “three-dimensional blue water force”, with the potential to undertake significant assignments and roles “on the surface, underwater, and in the air” and “project its power beyond the limits of the Indian

\textsuperscript{63} Ganguly, *Fearful Symmetry* p. 67

\textsuperscript{64} The Indian Navy has released updated versions of both the Maritime Doctrine (2006) and Maritime Military Strategy in 2009, both of which are not publically available. I will in this case refer to secondary source commentary on the same.

Shores” to counter “distant emerging threats and protect SLOC’s through and from the Indian Ocean.\(^{66}\) The pursuit of a blue-water as opposed to a brown, coastal water navy denotes just a technical capacity to operate more than 200 nautical miles from its shore on long-range missions but demonstrates a long range extension of a state’s presence into New Delhi’s “secondary area of maritime interest.\(^{67}\) The addition of more sophisticated diesel, nuclear capable submarines, aircraft carriers and newer cruise missiles is highlighted not just with the purpose of increasing New Delhi’s “strategic reach” but also the objective of producing a “stronger deterrent capability against foreign intervention by non-littoral navies” as well as Pakistan (and China)\(^{68}\). Interestingly, at the time of its publication, India did not possess an operational, sea-based nuclear deterrent force; yet the doctrines outlines future provisions for a strategic nuclear deterrent against rival navies mentioned.

The Doctrine does maintain a focus on the navies of Pakistan (and China) within the South Asian context and states that the “primary responsibility lying on the Indian navy is to guard the steel ring created by Singapore, Sri Lanka, Mauritius and Socotra … to ensure that the Indian Ocean must remain Indian” it’s emphasis on the secondary area of maritime interest that of the greater IOR seems greater\(^{69}\).

Finally there is a significant amount of attention given to the navy’s role in undertaking naval diplomatic assignments for the “promotions if it’s [New Delhi’s] causes\(^{70}\).”

\(^{66}\) Maritime Doctrine, Forward p. iii-v
\(^{68}\) Maritime Doctrine, p. 101-105
\(^{69}\) Maritime Doctrine, p. 5-7
\(^{70}\) Maritime Doctrine, p. 3
The 100 plus page Doctrine draws on, and quotes many major military theorists, including German military strategist Clausewitz and British historian Sir Julian Corbett but interestingly does not mention Mahan or his influential theories of sea power. This does not however mean that New Delhi is ignoring or dismissing the vision of Panikkar or by extension, Thayan. Much like other Asian powers on the rise, the Indian Navy is working towards “synthesizing its own strategic approach by borrowing not just from theory but by drawing on its own unique history and the current geopolitical situation it finds itself in.”

When evaluating the navy’s maritime documents a number of things stand out. First and foremost, it bears mentioning that the ‘maritime’ power is a broader concept than ‘naval’ or even ‘sea power’ as was used in the SDR. It encompasses commercial uses of the sea, diplomacy, and constabulary roles, evidenced by the listing of four roles to be performed by the navy. These include military, diplomatic, constabulary and benign. Interestingly the military role is given a short shrift and is dwindled down to a mere listing of missions to be expanded on in the discourse on operational tasks.

The Doctrine appears to defer strategic formulations on the basis of systemic as opposed to a traditional threats and challenges approach. Such a methodology accordingly allows for the development of national power, capacity and capabilities that is focused on the regional and international outreach as an exercise of national power, rather than a preparation against threats that may or may not manifest themselves. The Chief of Naval Staff in the foreword states, “if we are to fulfill our maritime destiny, all of us — the Government, the armed forces, the civil

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71 Maritime Doctrine p. 1-15
72 The American geostrategic, Alfred Thayer Mahan is cited in the Maritime Military Strategy document.  
services, the media and the public — must have a maritime vision and a thorough understanding of the maritime concepts outlined in this doctrine” to be able to fulfill such a destiny.

Subsequently, a focus on the navy’s non-combat roles while in keeping with the time-honored tradition of navies around the world also brings to the surface the unique circumstances underlying the IN’s vision of itself for the future. The Indian naval service has been historically overshadowed by the other two services in wartime; therefore a focus on its non-combat roles can also be interpreted as a “boasting of its ability or comparative advantage” in serving as a “diplomatic instrument for New Delhi” over that of the army or air-force in times of peace. Significant among which is the navy’s increasing scope, pace and level of sophistication in its engagement with other navies across the world in bilateral and multilateral exercises.

The portrayal of the navy as a supplier of international public goods in the form of humanitarian relief and disaster assistance and other ‘benign’ functions is given added traction due to its well-lauded tsunami relief operations in 2004-05. The doctrine uses this section to buttress the projection of India as a “responsible”, “benign” “great naval power” which makes it a “worthy custodian of regional security.”

Third, given that a military doctrine is defined as “a collection of fundamental principles by which military forces guide their actions in support of their actions,” analysis in the document is more on the strategic than operational or tactical level. However the navy’s approach stands in contrast to the army and air-force, both of whose doctrines were focused on defining and operationalizing war-fighting roles. For example, the army’s ‘Cold Start’ doctrine was penned in

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74 Holmes et al, Naval Strategy, p. 62
75 Holmes et al, Naval Strategy, p. 64
response to strategic and operational impasse faced by India in deterring Pakistani asymmetric warfare\textsuperscript{77}. The naval doctrine in contrast was more educational and political in its underpinnings seeking to inform and influence relevant stakeholders on the unmasked potential of the navy. This is also the first time that the Coast Guard finds mention as a partner in constabulary and diplomatic missions\textsuperscript{78}. To a degree, this is understandable given the relatively short-span of this service but its lack of organizational capacity is nonetheless alarming given the enormous sea areas entrusted under its care. In the aftermath of the Mumbai terrorist attacks, the 2009 revised “Maritime Doctrine” highlighted changes in existing policies as they relate to “maritime terrorism, piracy and coastal security” and accorded these threats as “matters of great strategic significance\textsuperscript{79}”. The inclusion of “intelligence-sharing” and “synergy among maritime agencies” indicate towards a subtle yet notable change in the ‘Principles of War’ outlined in the revised doctrine that indicates towards a greater inter-service operability and co-ordination among the services\textsuperscript{80}.

The primary sources of a doctrine are history and experience. Repeated successes and failures become generalized to beliefs over time, which are then applied to the present and future\textsuperscript{81}. Having proved themselves over time they go on to form the ‘Principles of War’ by which a country conducts itself. With regards to India’s maritime experience in the last few decades, it has had ‘limited’ engagements with adversaries in the context of war and instead has had a great success when involved in non-combat, humanitarian and constabulary roles. Yet the

\textsuperscript{78} Holmes et al, Naval Strategy, p. 64
\textsuperscript{79} Sawhney, Naval Effectiveness. p. 20-21
\textsuperscript{80} Sawhney, Naval Effectiveness p. 30
\textsuperscript{81} Adm Prakash, speech
Doctrine has been criticized for trying to “retrofit a coherent strategy and doctrine to its existing force structure” by trying to carve out a role of itself not just in supporting the army during wartime operations but by subscribing to play a number of roles in peace-time and crises just short of war. This led the influential, *Jane’s Fighting Ship* to comment that that the Indian navy was one of a kind by “buying hardware first and then thinking of how to use it.” The navy’s “Freedom to Use the Seas: Maritime Military Strategy” document released in 2009 a few years later sought to rectify this by “providing greater clarity and understanding on the various facets of maritime military power, … to our own (Indian) people in particular and the world community, at large”.

In the introductory paragraphs of the Strategy document the primary maritime military interest of the navy is to “ensure national security, provide insulation from external interference, so that the vital tasks of fostering economic growth and undertaking developmental activities can take place in a secure environment.” Consequently, India’s maritime military strategy as explicitly stated in the document, is underpinned on the “freedom to use the seas for [our] national purposes, under all circumstances and ensuring that others do not use it in a manner prejudicial [our] interests.” As might be envisaged, such a broad maritime military interest requires the navy to perform not just its military, but diplomatic, constabulary and humanitarian roles; different paths to the same strategic end.

Furthermore, the Strategy document states that the navy by virtue of its “capability, strategic positioning and robust presence in the IOR” can be a “catalyst for peace, tranquility and

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82 Holmes et al. *Naval Strategy*, p.65
83 Holmes et al *Naval Strategy* p. 65
84 Maritime Strategy, Forward, p. iii-v
85 Maritime Strategy, Forward, p. iv
stability in the IOR. This second statement not only exemplifies the need for a safe and secure environment in the IOR but projects a ‘benign’, responsible, if not essential service rendered by the navy not just to India but the other littoral states in the region.

One way to gauge the efficacy of this Strategy document is to test it against India’s national security objectives and see whether it could plausibly support those objectives. As India does not have a formal or regularly updated “compendium of national interests and national objectives” this thesis will test naval preparedness against the broad objectives spelt out in the annual reports of the MOD as a proxy for a white paper on national security.

Maritime Contributions to National Security Objectives
This section will examine the contribution that Indian officials expect sea-power to make in the support of the below stated objectives, as laid out in the 2004 Maritime Doctrine and 2007 Maritime Military Strategy.

Listed in the Indian Ministry of Defence annual reports are a list of broad national security objectives that provide both purpose and grand strategic direction for all subordinate strategies to support. The Maritime Military Strategy is one such subordinate strategy.

India’s national security objectives have evolved against a backdrop of India’s core values namely, democracy, secularism and peaceful co-existence and the national goal of social and economic development.

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86 Maritime Strategy, p. 25-33
87 Holmes et al, Naval Effectiveness, p. 65
88 I have altered the order so as to fit the discussion of this thesis better.
Accordingly they include:

1. Defending the country’s borders as defined by law and enshrined in the Constitution;
2. Protecting the lives and property of its citizens against war, terrorism, nuclear threats and militant activities;
3. Securing the country against the use or the threat of use of weapons of mass destruction;
4. Development of material, equipment and technologies that have a bearing on India’s security, particularly its defence preparedness through indigenous research, development and production, inter-alia to overcome restrictions on the transfer of such items;
5. Protecting the country from instability and religious and other forms of radicalism and extremism emanating from neighbouring states;
6. Promoting further co-operation and understanding with neighbouring countries and implementing mutually agreed confidence-building measures; and
7. Pursuing security and strategic dialogues with major powers and key partners.

It is apparent that the objectives stated above involve in varying degrees the use of all four of the navy’s states roles: military, diplomatic, constabulary and benign or humanitarian. I will however, focus on those objectives that involve the use of its military role as discussion on the strategy adopted by the other roles are outside the scope of this paper. For example, the objectives of “protecting India against instability and forms of radicalism and extremism emanating from neighbouring states” appears to be a task suited for the non-military components of national power. Similarly the last two objectives that of “promoting co-operation and understanding with neighbouring countries” and the pursuit of “security and strategy based dialogues” with major powers relate more closely with the navy’s diplomatic role than its military role as depicted in its chapter on “Strategy for Employment in Peace.” Therefore of the seven listed national security objectives; the first four objectives are most salient to my discussion on the use of maritime military power in achieving national security objectives.

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89 Indian Ministry of Defense, Annual Reports
90 Maritime Strategy, p. 34-36
Even a cursory reading of the first objective that of defending the country’s borders reflects India’s land-centric focus. However, of relevance is that both maritime documents spend a considerable amount of space describing India’s ever expanding maritime area of interest, while simultaneously underlining efforts by both international bodies and states to exert greater control over their surrounding waters. In effect, the documents equate, defense of the country’s seaward frontiers and the protection of its off-shore waters with that of defending the country’s sovereign territory. On the same point, both documents discuss how the navy can contribute to a conventional fight on land, by referencing its contributions in previous wars where it provided support to campaigns on shore.\footnote{Maritime Strategy, p. 16-18}

The Strategy document appears to have reinstated\footnote{Holmes et al, Naval Strategy, p. 6} the primacy of supporting India’s ground forces as opposed to a more second order function by promoting “power projection ashore”\footnote{Maritime Strategy, p. 57-62} to a position of prominence. Noteworthy is the navy’s proposition that the shorter duration of modern conflicts may place a greater reliance on “the land-attack capabilities by maritime forces.”\footnote{Maritime Strategy, p. 57-62} However given a focus on land-centric and extension army dominated conflicts in India’s past, the demonstration of such ability is only likely in the event of a protracted conflict, which seems unlikely in the near future. Presently, neither Pakistan nor China, a potential adversary identified in the naval documents; possess the capacity to launch a sustained amphibious assault or naval attack on India making the direct defense of India’s coastlines from other maritime powers a low likelihood scenario at this time.\footnote{Ashley J Tellis, Military Modernization, p. 25-30} Therefore, the
utility of India’s maritime power in defending a country’s border is in deterring threats to peace and stability in the waters surrounding the country. The Indian Navy aspires to deter potential adversaries through the use of conventional and increasingly unconventional deterrence or nuclear-based capabilities. \textsuperscript{96}

As mentioned above the Indian Navy force structure is larger than many navies of the world. It is currently ranked number five placing it well ahead of its Indian Ocean adversary, Pakistan and just behind that of its Asian rival, China. \textsuperscript{97} In order to maintain a conventional deterrence force in being, the navy’s current modernization plan calls for an increase in fleet size to 160 ships by 2022. Depending on the growth or decline of other navies, such an increase would boost the IN position to fourth maybe even third among world navies. However this assumes that the navy is able to reach its stated goals which seem questionable given its past track record at doing so. There are three basic reasons for this: Resource constraints and limitations either due to the economic conditions of the country at large or as a result of the navy’s standing amongst the three branches of the armed services. Second, the possibility that naval five to ten year plans are simply ‘wish-lists’ complied by the navy and divorced from broader national security goals. Third, even with the necessary financial resources and matching of strategic objectives and policy planning process; the realization of the navy’s planned force structure is dependent on the level of India’s indigenous shipbuilding capacity as well as its ability to compensate for possible shortfalls with foreign substitutes. An extensive discussion on the above three factors was undertaken in the first part of this thesis. All in all the importance of developing ships and appropriate weapons systems in a timely manner is crucial to the navy’s

\textsuperscript{96} Maritime Strategy, p. 71-74
\textsuperscript{97} Holmes et al, Naval Strategy, p. 82
readiness in executing its military role. As a consequence, the fourth stated national security objective asserts that the “indigenous development and production of defense material, equipment and technology items” has a direct bearing on India’s security.

A snapshot of the navy’s current order of battle reveals that IN comprises of 130 surface combatants including 15 submarines; a majority of these ships are built at home with few being imported\textsuperscript{98}. This is pretty impressive considering that it was not until almost 25 years after Independence, that India successfully commissioned a domestically produced and modified version of the British Leander Class, the INS Nilgiri\textsuperscript{99}.

**Figure 1: Inventory of Indian Naval and Aerial Capacity (1990-2020)**

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\textsuperscript{99} Cohen and Dasgupta, *Arming*, p. 74
Under the 2010 “Maritime Capability Perspective Plan and Maritime Military Strategy” a significant number of additions including 160 plus ships, 3 aircraft carriers, 60 major combatants, including submarines and close to 400 aircraft of different types by 2020. This three dimensional force is also to have satellite surveillance and networking capabilities to provide for force multiplication and improved inter-service operability. However despite a competent level of indigenization, the alacrity with which local shipyards contribute to force levels is inadequate. On average, the rate of induction is only 3-4 ships a year creating a scenario where the navy is unlikely to be able to maintain force levels and is forced to procure from abroad in order to bridge this gap. This includes the air-craft carrier Vikramaditya and three follow-on ships of the Talwar Class from Russia, and, two Replenishment Tankers from Italy. Complicating matters further is that a number of ships in India’s inventory are likely to be decommissioned resulting in a decline in force levels. A 2008 report released by the Comptroller and Auditor General (CAG) of India expressed clear doubts over the navy’s readiness for war operations. The audit reported among its many findings that any time only 48-50 percent of naval submarines were available for waging war due to age-related maintenance problems. More alarmingly 63 percent of India’s fleet would likely be ready for phase-out by 2012. Commenting on the veracity of the report, Defense Minister AK Antony “accepted the government’s failure to provide necessary weapon systems and platforms to the armed forces in time [sic].”

102 Vishal Thapar, “CAG report exposes India is not ready for war” CNN-IBN, October 25, 2008
103 Rajat Pandit, “In a first, govt admits gaps in defence” Times of India, October 26, 2008 accessed on December 2, 2009 assessed on December 2, 2011 http://articles.timesofindia.indiatimes.com/2008-10-26/india/27893768_1_radars-defence-ministry-air-defence
On a somewhat of a positive note, an upward trend in the global shipbuilding industry combined with a government subsidization of private and public shipyards in recent years has increased the level of output produced by public and private shipyards. According to GOI, the order-book of Indian shipyards grew from USD 333 million in 2002 to USD 2,058 billion four short years later attesting to the sheer potential of this industry in coming years.\textsuperscript{104} The dynamic nature of the Indian economy is likely to provide a continued impetus for public and private financing for maritime transport related infrastructure and services. It is imperative that these public and private shipyards as well as research and development laboratories improve their economies of scale as well as innovate rapidly as naval acquisitions have been earmarked for the greatest degree of indigenization across all naval domains.\textsuperscript{105}

With regards to funding; while India’s overall defense budget has increased substantially in absolute value to total nearly USD 30 billion, naval share of this budget accounts for about 15 percent of this total (2009-2010) which is incidentally lower in percentage terms to what it was in 2003-04.\textsuperscript{106} Furthermore, a closer look at the overall budgetary allocation indicates that a large part of the budget hike is dedicated towards fulfilling the Sixth Pay Commission recommendation for pension and salary increase and which have no direct bearing on enhancing the country’s military clout per se. The navy’s share is not projected to increase over 16 percent in the next 2-3 years.\textsuperscript{107} Additionally, even an allocation of funds does not automatically translate into better and more advanced equipment. A look at the MOD’s annual reports reveals that the

\begin{thebibliography}{99}
\url{http://www.globalsecurity.org/military/world/india/shipbuilding.htm}
\bibitem{105} Deloitte, \textit{Indian defence market}, p. 9
\bibitem{106} Indian Ministry of Defence annual reports
\bibitem{107} Deloitte, \textit{Indian defence market}, p. 9
\end{thebibliography}
ministry has been unable to spend all its capital outlay, i.e. funds allocated for new weapons purchase as opposed to funds towards the maintenance and repair of existing capacity. Over a period between 2003 and 2010 the defense service has in fact under spent about USD 6.75 billion or nearly 57 per cent of its 2011 defense budget for new weapons purchase\textsuperscript{108}. The navy for its part reversed such a trajectory in 2009 as a result of the terror attacks on Mumbai by spending nearly all its allocated budget for the year. Therefore a mere budgetary windfall is not adequate to ensure capacity generation if the underlying bureaucratic or institutional pathologies are not rectified.

Finally somewhat lesser explored but important dimension is that of recruitments in the armed services. A CNN-IBN report found that enlistment in India’s military academies is at an all-time low\textsuperscript{109} which could have the obvious bearing on naval and most pertinently coastal guard manpower in the future.

The second national security objective – “protecting the lives and property of Indian citizens against war, terrorism, nuclear threats and militant activities” is very broad both in its language and in the range it posits. Shielding the lives and property of its citizens is very much in keeping with the objectives listed above, however if one were to take a more expansive view of the “protective” function and relate to the vast number of Indian nationals living as expatriates in countries all around the IOR, it would enlarge the requirement for maritime power projection substantially. One need look no further then the navy’s evacuation of Indian nationals living in

\textsuperscript{108} Deloitte, \textit{Indian defence market}, p. 23
Libya earlier this year. The Strategy document however provides no specifics on how maritime power might help these expatriate groups or outline the requirements that such an operation might need. The Strategy document discusses terrorism in somewhat greater detail referencing both groups that exist and operate in the larger IOR as well as those with intent of attacking India’s coastal territory. In the case of the former the navy’s function is delineated in terms of ‘maritime surveillance’, ‘intelligence sharing’ and ‘multilateral cooperation’ with other states. On the more immediate task of defending the country’s coastline while similar in regards to the services performed above, is most notable for its efforts to transfer responsibility to the Indian Coast Guard. One can only surmise that by transferring “interdiction and surveillance” duties to the coast guard that the navy wishes to free itself and focus more on missions farther out to sea.

The third objective for the country’s security establishment is to “secure India against the threat of weapons of mass destruction”. This appears to be a defensive reiteration of the objectives stated above which lists the “protection of Indian lives and property from … nuclear threats.” The Strategy document includes a passage on the mission of the navy to prevent both a conventional and nuclear war but interestingly makes no mention of non-nuclear WMDs such as biological or chemical weapons or how maritime power can be used to address such threats.

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110 Indian Navy. “Evacuation of Indians from Libya by IN” Last modified on April 10, 2011
http://indiannavy.nic.in/LibyaEvacuation01Mar2011.pdf
111 Maritime Strategy, p. 32-34
112 Maritime Strategy p. 115-17; Sawhney, Naval Effectiveness, p. 31
113 Maritime Strategy, p. 34-36
114 Maritime Strategy, p. 74-76
Presently, India possesses no operational maritime leg for its nuclear triad.\textsuperscript{115} Nearly forty years in the making, India recently launched its first indigenously produced Advanced Technology Vehicle or nuclear submarine which if all goes according to plan will still need 2-3 years of sea trials. Additionally, India requires submarine launch platforms and missile delivery systems but the great degree of opacity surroundings its development has given rise to great uncertainty and speculation over the delivery date of such a capability\textsuperscript{116}. It is nonetheless, important to discuss how a hypothetical stationing of nuclear capabilities in the maritime realm will impact its interchange with other Indian Ocean powers and in particular, its adversaries.

In the paragraphs to follow I will begin with a discussion on the navy’s possible interest in acquiring such a capability, followed by a brief analysis on the impact of a sea-based nuclear deterrence capacity on the achievement of India national security objectives. Finally, I will relate the naval vision of acquiring such a deterrence capacity with the main principles of India’s nuclear doctrine at large.

Both the Doctrine and Strategy documents contain, a detailed discussion on trends in the nuclear force postures of all five nuclear-armed states on the basis of which it concludes, that “it has become the unstated axiom of the post Cold War era that an independent foreign policy posture is inexorably linked with a submarine based nuclear deterrent capability\textsuperscript{117}.“ In a not so subtle appeal to India’s political and strategic leadership it seeks to connect India’s great power aspirations with the acquiring of an undersea nuclear capability, a nuclear triad possessed by all five nuclear armed states.

\textsuperscript{115} Holmes et al, \textit{Naval Strategy}, p. 99  
\textsuperscript{116} Holmes et al, \textit{Naval Strategy}, p. 99  
\textsuperscript{117} Maritime Doctrine, p. 4
The pursuit of a sea-based nuclear deterrence places the navy for the first time in direct competition with the other two services at the strategic level. Not only does the Strategy document state that it is imperative that a country “possess nuclear submarines capable of launching missiles with nuclear warheads” in order to achieve “strategic deterrence”\textsuperscript{118}. But that the most credible of all arsenals, is a “second strike capability of a nuclear armed missile submarine”\textsuperscript{119}. The mention of credibility is in direct reference to the principles underlined in the country’s nuclear doctrine.

Five years after openly declaring itself a nuclear weapon state, in January of 2003\textsuperscript{120} India finalized its nuclear command structure and formalized its nuclear doctrine. The main principles and administrative elements underlying the Indian nuclear doctrine are as follows\textsuperscript{121}:

1. Build and maintain a credible, minimum deterrence
2. A posture of No-First Use (NFU)
3. Retaliatory attacks only to be authorized by the civilian political leadership
4. Progress on global disarmament including export controls, moratorium on further nuclear testing

India’s nuclear policy is dictated first and foremost by the principles of its strategic culture. Indian strategic culture is defined as a “set of patterns of thought and behavior” which with respect to nuclear weapons is described as nuclear minimalism\textsuperscript{122}. Its chief characteristics are; a low level of importance attached to nuclear weapons in achieving national security objectives, however when leveraged these weapons are seen more as political tools used for deterrence than

\textsuperscript{118} Maritime Strategy, p. 76
\textsuperscript{119} Maritime Strategy, p. 76
\textsuperscript{120} In the aftermath of the 1998 tests, the soon-to-fall BJP government commissioned a Draft Nuclear Doctrine to be released by a National Security Advisory Board. The Board was however not representative of all views and disbanded shortly after.
\textsuperscript{121} Harsh Pant, “India’s Nuclear Doctrine and Command Structure: Implications for India and the World” \textit{Armed Forces and Society}, 33 (2005) pp. 282
\textsuperscript{122} Cohen and Dasputa, \textit{Arming}, p. 109
an extension of conventional military means. Second, even when deterring an emphasis is placed on minimal levels of stockpiles as opposed to a costly and superior arms buildup over its adversaries. The navy’s pursuit of a sea-based nuclear deterrence, even if in the form of a political weapon contradicts the constructivist tenant underlying India’s nuclear doctrine.

In doctrinal language India’s principles of strategic thought translate into a nuclear deterrent capability that is consistent with maximum “credibility, survivability, effectiveness, safety and security” in terms of posture as well as arsenals. However what this translates to in practical terms remains matter of serious debate.

Looking at the first component; the operational definition of minimum deterrence is squarely hinged on whom India seeks to deter. If it is Pakistan, in nuclear terms it might feasible and desirable to develop and maintain an arsenal that is superior. India is likely to achieve a sea-based nuclear deterrence vis-à-vis Pakistan on account of its existing superiority over the Pakistani navy as it currently stands. This accords India with a win-win situation, where India needs to target only a limited number of Pakistani naval targets before rendering its navy compromised. On the other hand, the IN presents Pakistan with too many targets to destroy before it can do the same to India. In all likelihood, India’s conventional naval superiority is adequate enough to whittle down any Pakistani anti-submarine capability before firing a single nuclear tipped missile.

In the event of a greater and more protracted conflict in which the Indian Navy can play a more decisive role, the presence of sea-based nuclear weapons creates more of a problem than offers a solution. The inability of either state to understand the intentions of the other; in the

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“absence of serious risk-reduction measures\textsuperscript{124}\textsuperscript{126}\textsuperscript{127} could cause serious miscalculations and spiral into a nuclear war of which the maritime realm is the latest and most unfamiliar dimension. Furthermore, it should be noted that partly as a consequence of its own conventional military inferiority; Pakistan has opted to adopt a first use strategy to thwart a conventional military offensive against it by India. Operating of this premise, it has refused to accept India’s offer for a bilateral NFU treaty as a confidence building and risk reduction measure\textsuperscript{125}. Additionally, Pakistan’s strategy of on maintaining ambiguity over its nuclear redlines complicates matters further. At one level, a sea-based nuclear deterrence could cross an unacknowledged nuclear redline, at the other end it could make no difference what so ever as a strategy of ambiguity constraints the use of a conventional military options useless all together. Therefore a peace-time naval buildup and in particular sea-based deterrence capacity by India, only adds to the mistrust between both states and could destabilize the “relative stability\textsuperscript{126}” both states have achieved with one another. Additionally it could even set off a sea-based nuclear arms race in South Asia. A nuclear arms race triggered by Indian naval nuclear buildup contradicts the fourth tenant listed in its nuclear doctrine that of “progress on global disarmament.” It is unlikely that either state will disarm unilaterally.

Furthermore, when accessing the credibility of a nuclear policy based on retaliatory strikes or simply put the “\textit{ability to survive} a first strike in sufficient numbers to inflict unacceptable punishment in retaliation” several issues arise\textsuperscript{127}. First, is the unchallenged assumption of an Indian populous accepting a nuclear weapons strike or its contradiction with a

\textsuperscript{124} Michael Krepon, “The Stability-Instability Paradox in South Asia” \textit{SITREP} 65 (2005)
\textsuperscript{125} Pant, \textit{Command Structure}, p. 283
\textsuperscript{126} Krepon, \textit{Paradox}, p. 47-50
\textsuperscript{127} Pant, \textit{Command Structure} p. 285
stated national security objective of “protecting the lives and properties of Indian citizens …
against nuclear war.” Second-strike capabilities hinges on an advanced warning and intelligence
system, formal command and control structures and finally on the nuclear force structure itself. The navy’s pursuit of the maritime leg of a nuclear triad as part of an emerging nuclear
force posture while consistent with developing a “robust second strike capability” is inconsistent
with the principle of minimum deterrence listed in the nuclear doctrine above. The brings us
back to the quandary posited above, in all probability the Indian scientific-military establishment
is building a nuclear submarine project - the Sagarika equipped with a ballistic missile capability
to deter China, however with reference to Pakistan such a posture is maximalist instead of a
minimalist one. Pursuit of a naval nuclear deterrence question then raises the issue of how India
can achieve maximum credibility without its deterrence assuming a maximalist dimension?

Finally, with regards to survivability and safety, the underlying principle is the credibility
of rapid retaliation in the aftermath of a nuclear attack. New Delhi’s highly centralized and
civilian command and control structure while having its obvious advantages is vulnerable to
“strategic decapitation.” Strategic decapitation refers to the destruction of the national
command authority as a result of enemy action, which is aimed at paralyzing a state’s ability to
respond rapidly and coherently. A sea-based deterrence or cruise missiles provides a credible
second strike capability in the event of such a scenario, however with the exception of such a
scenario the decentralized nature of a sea-based nuclear deterrent capacity raises issues of

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128 Ashley, Tellis. *India’s Emerging Nuclear Posture: Between Recessed Deterrence and Ready Arsenal*, (Santa
Monica: RAND, 2010) p. 63
129 Nuclear Threat Initiative. “South Asia Recent Trends Last modified on December 5, 2010”
http://www.nti.org/e_research/e3_91.html
130 James, Moltz. “Global Submarine Proliferation: Emerging Trends and Problems” *Monterey Institute for Non
131 Tellis, *Nuclear Posture*, p. 86
command and control over civil-military interface in operationalizing nuclear forces. Given the country’s strict control over defense and strategic affairs in the country it is unlikely that issues of command and control are likely to be resolved any time soon. A failure to do so concurrently affects force readiness and by extension the credibility of a second strike capability and sea-based nuclear “deterrence to prevent military adventurism on the part of India’s adversaries – the stated objective of navy’s role as a military force. Therefore in conclusion, it is not all together clear if the navy’s pursuit of a sea-based nuclear deterrence is consistent with the broader nuclear doctrine or whether the navy has undertaken a serious examination of the cascading effect such a capability might have on India’s adversaries.

In conclusion, India’s fairly recent embrace of an open, free market economy makes it vulnerable to the pervasive impacts of globalization. This has not only had a dramatic impact on the country’s goals due to an ever expanding maritime area of interest but in the form of new challenges it had to contend with. These include both national and transnational challenges. Fears of Chinese interference and challenge to Indian primacy in South Asia are now not just seen in purely land-based terms but now include a new sea-based dimension. Second, sea-based attacks on the Indian homeland by non-state actors either operating from Pakistan or in the form of pirate attacks on commercial cargo traversing the IOR are an increasingly realistic scenario. The new realities of today make it imperative that India have not just a coherent grand strategy but that all subordinate service strategies fall in line with it. Additionally, the maintenance of rigid boundaries between the three combat services is not only impossible and undesirable.

132 Tellis, Nuclear Posture, p. 77
133 Maritime Strategy, p. 99
It is to the advantage of an ‘emerging power’ like India aspiration for a more visible leadership role in the region, that it make the most of what is generally seen as the “benign ubiquity” of a navy. This refers to generally held belief that only “navies can have a benign as well as general employment in times of relative peace because … they operate in the relatively neutral medium of the ocean’s waterways.” However as the analysis above reveals, that not only are they tensions inherent in the country’s maritime Doctrine and Strategy but that they lay at times in contradiction with India’s core principles. Furthermore the state of India’s strategic shipbuilding industry as well as research and development capacity leads one to ask the broader question. Will India’s maritime conventional and to a greater extent unconventional deterrent capacity, develop into some ideal type in a reasonable time frame or whether it will develop slowly, in fits and starts and without any real strategic coherence? Adding to this, is a level of complexity brought on by India’s ideological preference, to be not only recognized on the global stage as a major player on the basis of traditional power metrics of economic and military might, but be recognized and accepted by virtue of its professed “values, norms, principles.” This could at times create tensions in both its willingness as well as ability to achieve its strategic objectives in the region.


135 Holmes et al., Naval Strategy p. 67
CHAPTER IV

CONCLUSIONS

India’s “Maritime Doctrine” and “Maritime Military Strategy” documents open a window into how the Indian Navy as well as the Government of India more generally anticipates using maritime power to support its national security objectives. As evidenced in this thesis, even an examination of one of the navy’s four roles reveals that the Indian Navy confronts a number of tensions and contradictions on how to operationalize its existing, as well as, latent military capacity to achieve the country’s national security objectives. Furthermore, given the criticality of India’s indigenous shipbuilding capacity as well as research and development capability, the documents’ failure to address and offer strategies to improve the performance of relevant strategic industries is cause for pause. Overall, it seems apparent that both documents reveal more of what the Indian Navy as a bureaucracy aspires to achieve than a detailed strategy on how it plans to execute missions in pursuit of stated national security objectives. It is disconcerting to note that there is little discussion on inter-operability between the navy and the other two services, other than generally referring to the navy’s supportive role in land-based operations, without a clear articulation of how these strategies interact with one another.

However, upon judging the consistency of these documents, it appears that the approach and strategy professed by the Indian Navy is not altogether out of place. The starting point of strategy or a strategic plan is a threat\textsuperscript{136}. Without a specific threat, real or perceived, there is no need for a strategy. The terrorist attacks on Mumbai in 2008, while revealing the vulnerabilities India faced in the defence of its coastal borders is but one of the security challenges faced by

\textsuperscript{136} Adm. Prakash, Speech
India. The maritime domain lies at an intersection between the country’s internal challenges as well as external challenges in that it is increasingly relevant to the country’s economic development. As the Indian economy further integrates into the global economy, the ‘centre of gravity’ shifts increasingly away from its borders to include distant choke points, extensive SLOC’s, far flung markets and secure access to distant resources. The relegation of protecting India’s borders to the Coast Guard might be an efficient way to divide tasks and focus efforts on the basis of core competencies.

Finally, it is the foremost responsibility of the country’s national leadership, to develop a Grand Strategy that “conforms with national policies and objectives,” and from which subordinate strategies such as the naval military strategy should evolve. In India’s case such a Grand Strategy is yet to be articulated and as such subordinate strategies are based on general guiding principles which are clearly inadequate for a number of reasons already mentioned in previous chapters. Most pertinently, however, is whether these guiding principles are still relevant or feasible given the geopolitical and economic environment within which India finds itself today.

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137 Adm. Prakash, Speech and Cohen and Dasgupta, Armimg, Preface xii-xiii.
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