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The Masters of 'Shi:'

An Analysis of China's Nuclear Capability

To Attain a Dominant Political, Psychological and Military Posture

In Chinese strategic parlance '*shi*' is an all encompassing concept that sees in any strategic contest the relevance of every factor and every event and their correlation to the context within which they occur. It implies grasp of strategic trends and the ability to countenance the dynamics presented by these trends through the attainment of a posture that is superior not just in form, but also in substance. Statecraft then becomes the means of "combative coexistence" with adversaries. The aim being to manipulate the opponent into weakness while consolidating ones own strategic position or mastering ones own *'shi'*[1].

"Subtle and insubstantial, the expert leaves no trace; divinely mysterious, he is inaudible. Thus he is master of his enemy's fate."[2] What distinguishes Sun Tzu from other strategists of the classical period through contemporary times is his ability to lift strategic thought from the purely military and present it as an all-embracing dictum that merges the political and psychological with the military. Western strategists have persistently pondered on the means to marshal superior force at the decisive point and Kautilya in the 'Arthashastra' saw diplomacy as a subtle act of war and the "Mandala' as the *a priori* of strategic planning[3]; and yet neither of these schools of strategic thought hit upon a theory to put together a pre-eminent political, military and psychological position that made the outcome of a conflict a foregone conclusion.

Ever since the 1950s it was amply clear and comprehensively demonstrated that China would use all stratagem at its disposal to not just embarrass but also to nip any perceived challenge that may emerge from India. The exasperation that they have caused

on issues ranging from Tibet to the festering territorial differences in the North and North East; the irksome opposition to any opportunity that the international system may concede to India; their reaction to the recent Nuclear Suppliers Group waiver and their persistent rejoinder to Indo-Russian relations are cases in point. All this is despite the galloping trade links between the two ($60 billion in 2010).

A keen observer of international relations in the South and East Asian region soon comes to the conclusion that, no endeavor to achieve deterrent stability or to bring objectivity in an analysis of China's nuclear capabilities and it's strategic underpinning, is intelligible without perceiving the role of its nuclear alliance partners as represented by Pakistan and North Korea viewing them at first as one; and then as separate. This virtual dichotomy challenges leadership at every step in bringing about equilibrium in strategic relationships. Unique to this tangle is its collusive nature and doctrinal linkages. Interestingly, the strategist cannot but help noting SunTzu's thoughts behind it all, whether it is the evolution of the concept of '*shi*' in the relationship; puppeteering the fate of the adversary; combative coexistence or the strategic exertion to make the outcome of the eventual correlation a foregone conclusion, the shadow of the classical sage looms large.

With these distinguishing strategic traditions to provide a theory for development and action to establish China's stated goals of a "peaceful rise" (since changed to "peaceful development") and building a "harmonious world"[4], it would now be in order to scrutinize what exactly is implied by and the nature of China's nuclear capabilities besides it including the political, the psychological and the military dimensions.

Philosophical and Strategic Underpinnings of Chinese Nuclear Policy

Search for reasons for establishing partnerships that antagonize the primary adversary may be found in the philosophical and strategic underpinnings of Chinese policy. The first consideration is our understanding of China's Grand Strategy. Chinese strategists define Grand Strategy as "the overall strategy of a nation or an alliance of nations in which they use their combined national strengths for political goals, particularly those related to security and development."[5] What stands out in this

definition is the importance of the alliance in achieving goals related to both security and development.

The complicity with Pakistan, whether it be for ends of economic growth or energy security (development of the deep water port at Gwadar at a precarious moment in the history of that nation when investment there is plunging southward is noteworthy) or, to realize their national goals by promoting a nuclear adversary to India; is all really an execution of their larger Grand Strategy to exploit an alliance in their favour, notwithstanding norms of the international system or the proliferation that this enterprise would entail. The single mindedness to implement this policy has been the abiding leitmotif whether it was the 'Shanghai Communiqué' of 27 Feb 1972 [6], a de facto alliance treaty to stymie Soviet hegemony; or the persistent policy to back the North Korean dispensation despite its nuclear weapons programme or the periodic international embarrassment that it causes.

China's strategic culture that has evolved over the years is the second lynchpin upon which their policies hinge. Paradoxical to it is the continuous friction between their civilizational heritage and the upheavals that moulded the communist state. Therefore, on the one face, we note that there is a stated aversion to conflict, while on the obverse, is an unyielding belief in realpolitik. Three characteristics however, stand out in the manner in which their strategies are played out: meticulous analysis of long term trends, careful study of tactical options, and detached exploration of operational decisions[7]. Where aversion to conflict collides with realpolitik, it is the latter that invariably prevails.

Their No First Use of nuclear weapons (NFU) pledge coupled with a persistent sponsoring of North Korea and Pakistan's nuclear weapons program with its unabashed first strike connotations is a manifestation of this same dualism that pervades their doctrine and, when viewed in the larger perspective, a part of their 'active defense.' Then again, shades of Mao's conviction that nuclear weapons were paper tigers and that strategic matters would be decided on mass and weight of the human element[8], has influenced the size of their arsenal. All this is symptomatic of their grasp of contemporary realities, the value of ambiguities and deception and their subscription to minimalism. Their 'Assassin's Mace'[9] strategy fits into this scheme of things well, where a superior force is vanquished by an inferior through stratagem that seeks to paralyze.

History will recall that the Sino-Pak alliance owes its parentage to an unlikely set of circumstances. The Cold War was at its height; then, in 1961 comes an ideological fissure between the two main communist actors over Soviet revisionist tendencies, causing an unbreachable rift. Close on its heels comes the Sino-Indian War of 1962, the reasons for this conflict remain debatable, yet there can be no denying its impact on the over all balance of sub-continental power and the emergence of China as a cognizable player independent of the Cold Warriors. Pakistan, which till then had been the southern containment link of CENTO, saw an opportunity in the larger fracas and wooed China through transfer of territories in the Karakoram tract (5800 sq. kms. of disputed territory) giving China access to the troubled Xinjiang Province through the Aksai Chin in 1963. This relationship over the years has concretized into firm economic, military and political ties, notwithstanding the vagaries of international opinion-realpolitik by the book. So much so, that in the nuclear field there is considerable evidence to suggest doctrinal symbiosis.

A similar situation exists with North Korea where its support to the pariah state is driven by the 1961 Treaty of Friendship, Cooperation and Mutual Assistance which obliges China to defend North Korea against aggression, besides also ensuring a buffer on its north eastern border. Not forgetting that South Korea barracks over 29,000 US troops. North Korea's allegiance is important to Beijing as a bulwark against US dominance of the region and against the rise of Japan[10]. Strategic Nuclear linkage is intrinsic to this relationship notwithstanding their overt role in bringing North Korea to the negotiating table during the Six Party Talks on several occasions and their stated ire over North Korea's nuclear weapon tests in 2006 and 2009 and the nuclear brinkmanship that they have indulged in. An analogy in some respects may be drawn with the special relationship that existed during the Cold War between the USA and the UK. Their doctrines were intertwined to an extent that they share a common nuclear arsenal (warheads for the Trident D4 and D5 class of submarine launched missiles is a case in point).

In a departure from the Western model for making strategic evaluations of first identifying ends, then conceptualizing methods and finally, generating means to achieve ends; China follows the Comprehensive National Power (CNP) route, where it sees

impact on its own endowment as primary. Therefore, in articulating its strategic objectives, in order of precedence, it has unambiguously identified three canons. The first consideration is internal and external stability to its own gauge; the second consideration is to sustain the current levels of economic growth at close to the double digit level; and lastly, to achieve regional pre-eminence. If there is a conflict of interest in the execution of the three then the superior dynamic prevails. [11]

Nuclear Doctrine

China's nuclear doctrine owes its soul to a book that was ordered by Chairman Mao in 1958 which appeared before the Communist Party of China in 1959 titled *Guidelines for the Development of Nuclear Weapons*[12]. There were seven crucial tenets to the doctrine stemming from Mao's 'paper tiger' and minimalist appraisal of the nuclear question:

a) No First Use
b) Minimal Forces without Compromising Credibility
c) Centralized Command and Control
d) Assured Retaliation
e) Modernization and Survivability
f) The Value of Demonstration
g) Doctrinal Dynamism

In all but two of these precepts there does not appear to be great divergence from the Indian Nuclear Doctrine. Where there is a tangential move away is on the subject of 'the demonstration' and 'doctrinal dynamism'. The former suggests, in the abstract, that nuclear weapons would be used, if the credibility factor is ever questioned. This usage may not be against vital targets and yet will leave no doubts of their looming intentions. The latter implies a vast area of subjectivity and opens up the nature of their alliances. In this frame of reference, the scripting of the North Korean and Pak nuclear capability and transfer of nuclear technologies, duplicity on North Korea's nuclear weapon program[13], setting up of the Khushab I, II and III reactors and the moulding of an emerging first-

strike capability makes strategic sense. Alliances of this nature give their doctrine unmatchable vigour and flexibility.

Nuclear North Korea, the Spark in the Tinderbox

Through out the Cold War, though nuclear weapons were in possession of five states, the strategic underpinnings that largely determined their significance and deployment was rigidly controlled by the two superpowers. Despite ideological antagonism and political animosity which on several occasions drove them to the brink of a nuclear Armageddon, their strategic value calculations were more or less parallel. This balance was enhanced by assuring credibility, increasing transparency and reducing vulnerability. With the spread of nuclear weapons, particularly to unpredictable and opaque states which have shown themselves to be in contempt of international norms; the risks of a nuclear exchange become more probable, asymmetrical and the chances of achieving balance; considerably reduced. North Korea is such a case in point.

On 09 October 2006 North Korea conducted a nuclear test of less than 1 kiloton yield and proclaimed itself a nuclear weapon state. North Korean officials had forecast to their Chinese counterparts that the yield to be expected was 4 kilotons.[14] Notwithstanding, the test and forecast demonstrated Pyongyang's competence with the nuclear fuel cycle, weapons design and significantly Chinese complicity. This test was followed up on 25 May 2009 with a second nuclear explosion of reported yield of about 4 kilotons. The Medium range ballistic missile Nodong is the preferred vector for arming with nuclear warheads. The centerpiece of the weapons program is the Yonbyon nuclear reactor (5Mwe ex Soviet light water experimental reactor supplied in 1984) and enrichment complex. Ambitious plans were also drawn up for a 50Mw and 200Mw reactors both of which were never operationalised.

After an up-and-down period of engagement with the US and the IAEA between1994 and 2002 du an 'Agreed Framework' was signed. This accord froze all but maintenance activities on the reactor. However in December 2002, following a political altercation with the US on the accusation of running a clandestine enrichment program, North Korea withdrew from the NPT and put to rest its obligation to the Agreed Framework.

Estimates indicate a production of 4 to 6 kilograms of weapon grade Plutonium annually from the 5Mwe experimental reactor which came on line in 1994 with periodic closure of the reactor since. Allowing for 50% availability would suggest a plutonium holding of approximately 50 kilograms and a stock pile of 10-12, twenty kiloton warheads. While indications are that the plutonium weapon design is indigenous, there is evidence to suggest that there was considerable collaboration with Pakistan's AQ Khan Laboratories[15]. Substantial infrastructure for nuclear warheads, missiles and test sites has been developed since (see Fig1).

As far as Vectors are concerned North Korea (DPRK) has an extensive arsenal of short and medium range ballistic missiles. Deployed missiles include about 600 short range 'Scud' variant missiles targeting South Korea and approximately 320 'Nodong' medium range ballistic missiles (MRBM) that can strike Japan.[16] Tests conducted of the 'Taepo Dong-2' Intercontinental missiles, have thus far not proved successful (Fig2) in addition a road mobile MRBM 'Musudan' (4000km range) is reportedly on the anvil. South Korean President Lee Myung bak has gone on record to state on 02 Jan 2012 that "the Korean peninsula is at a turning point. Doing nothing in the face of the risk of new and more dangerous North Korean nuclear and missile capabilities is not an option." The statement may hold portents for the future.

Doctrinally, since 2002, DPRK has emphasized its right to counter the American nuclear threat with a strong physical deterrent, a nuclear deterrent and nuclear weapons.[17]Accepting their inability to con- front the US in a military stand off, DPRK planners' believe they must develop an asymmetric nuclear deterrence.[18] The realization of this policy will have serious impact on domestic politics in South Korea and Japan as DPRK's weapon status gains currency. Both countries have advanced nuclear power industries and technologies to match and therefore for both to reconstitute to a nuclear weapon capability is well within their means. There is also an awkward paradox here, even if the US were to reaffirm a nuclear umbrella to South Korea but Japan were to bring about a shift in their nuclear orientation then this, in all probabilities, will trigger a South Korean Nuclear weapons program. Such is the dynamics of the region.

There are several possible scenarios which may prompt DPRK to reach for nuclear weapons. Most prominent amongst these, though of low probability, is to

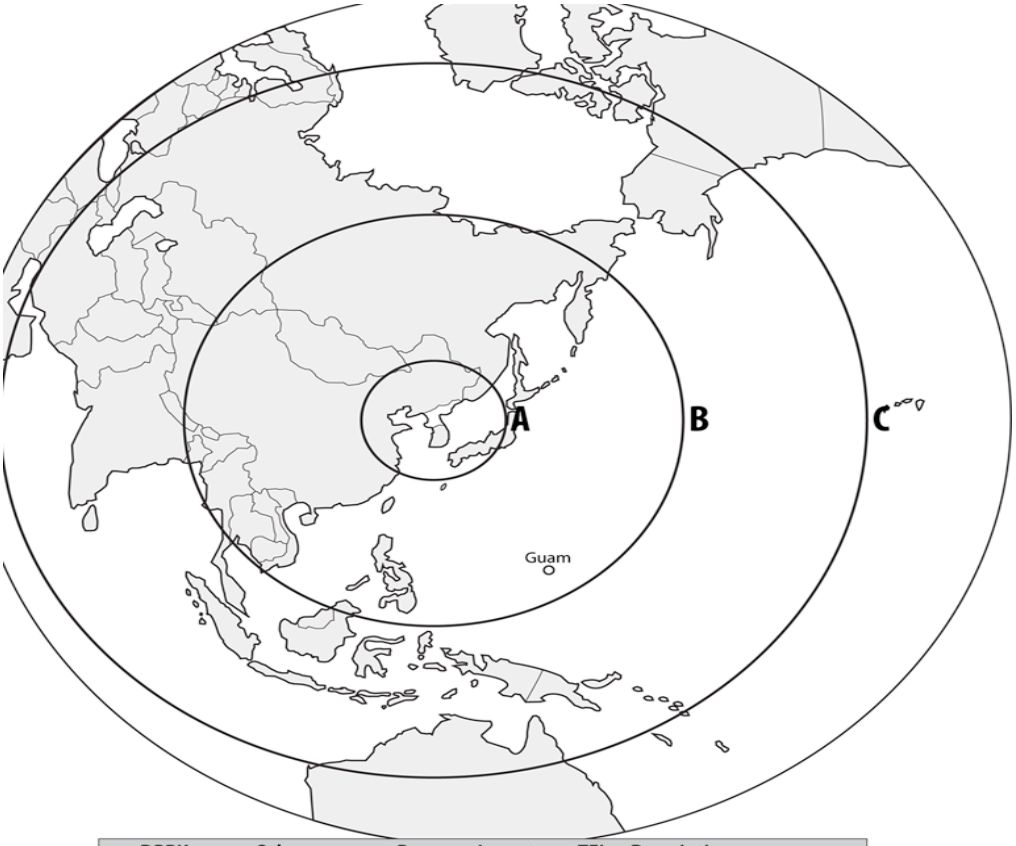
preempt and deter an invasion. Likely targets would be mounting bases in South Korea or Japan. Despite DPRK military strategy being offensive in nature, the chances of a deliberate 'bolt from the blue' first strike are remote. However, given the poor technological state of command and control, the hazards of an accidental or unauthorized release of a weapon are always present. In the end analysis, the DPRK nuclear arsenal is debatably, most effective in its non-use as a deterrent or for strategic bargaining.

Figure 1: North Korean Nuclear Warhead, Missiles and Test Sites

Source: International Crisis Group Asia Report No 168, 18 June 2009.

The problem however is hardly so simple for it does not take into account internal structural imperatives that drive policy in DPRK. The possibility of an implosion due unpredictable, unknowable and indeed unintended causes may set into motion a chain reaction of unpremeditated action by affected nations to unilaterally protect their vital interests; Japan and South Korea top this list of affected nations. A draw down of US forces in the region will catalyze this dynamic.

The effect of Japan going nuclear will, as mentioned earlier, not only cause South Korea to change its nuclear orientation but will alter both the nature and posture of China's nuclear forces. In this context the stalling of the 'Six Party Talks'[19] with little demonstrable success to show for its 9 year labour can hardly provide reassurances to the affected countries. The unrestricted development of North Korea's nuclear weapons program, its unpredictability (the sinking of ROK ship Cheonan is a case in point) and the nature of its nuclear arsenal (see Fig 2); the growing fatigue of the USA and the emergence of China as a self confident and a self centered assertive power hub would all suggest an increasing probability of Japan opting for a shift in their nuclear orientation despite abiding internal pressures opposing it.



	DPRK name	Other names	Range	Inventory	TELs	Description
A	Kwang-myŏngsŏng	Nodong	1,000km	220-320	27-30	Liquid fuel, road-mobile
B	?	Musudan; BM-25; (SS-N-6)	4,000km	20-30	22-27	Liquid fuel, road-mobile
C	Paektusan-2, Unha-2	Taepodong-2	6,700km	3-4 (?)	N/A	Liquid fuel, tower launched

Figure 2: Strike Radius North Korean MRBM and ICBM. ***Source: International Crisis Group Asia Report No 168, 18 June 2009***

China: Overarching Currents

In the pursuit of their strategic objectives, there are four overarching currents that can at any stage stall Chinese ambitions and bring about a transformation in their doctrine and to their arsenal.

- The first of these (which underscores the multilateral nature of the nuclear cauldron of the day) is the impact of the US Ballistic Missile Defense (BMD) program and the proliferation of associated hardware in what, the Chinese consider their strategic space. Also, should the nuclear orientation of Japan change.
- The second of these currents is the nature and form of resolution that the Taiwan and South China Sea imbroglio will take; if they precipitate into a

persistent sore then China would intensify focus to these predicaments at the cost of their other aims.

- Thirdly, thus far, the Chinese have adapted technologies and redefined the rules for their application to advantage. In the area of generating new technologies, they are not in the same league as the leading powers of the day. It is true that as markets merge and expand, the payoff may continue to be in the ready availability of technologies but over time, as China transits from a low-end product provider to a middle and high-end product/service economy, the benefits of value addition will diminish with a consequent negative impact on economic growth. If this is coupled with technology denying regimes, then it will adversely affect their larger objectives on land, sea and in space.
- Lastly, globalization and China's growth are largely dependent on how adroitly it manipulates its image on the world stage. Its nuclear alliances with maverick states hardly contribute to the image of an emerging global power. On the economic front as the surge for cornering resources continues it is bound to tread on the interests of the other large economies, at which time, cooperation and openness with compromise in every strategic area is more likely to provide answers then by being selective. In a recent article, Richard Behar draws our attention to the "parasitic" relationship between China and the sub-Sahara: "The region is now the scene of one of the most sweeping, bare-knuckled, and ingenious resource grabs the world has ever seen."[20] These are strategic moves which are more than likely to cause friction between powers and demand an approach that embraces compromise and cooperation, which to this day China has been extremely coy about, whether it is operations in Burma, in the Indian Ocean, Africa, relations with rogue states or indeed in the South China Sea.

These four currents are, during the next decade, going to redefine China's world view and the course alterations it is likely to take in order to achieve its larger objectives.

Of these, the third and fourth would appear to be the most critical in order to fulfill their global ambitions and bear underscoring. That is, their ability to technologically graduate from a 'value adder' to a nation that ideates, invests in cutting edge research and moves into the realm of a knowledge power; while in China's ventures abroad, their facility to enter into more collaborative enterprises, be it economic or security related at the same time avoiding the predictable friction that such activity will invariably throw up.

The Nuclear Arsenal in Form

The Chinese arsenal, in form, exhibits marked influence of the Maoist heritage in as much as their belief in minimalism is concerned and their reliance on alliance partners and doctrinal dynamism, in order to provide their arsenal with the necessary effectiveness. During the Cold War Mao's stratagem to exploit overlapping super power hostilities was unique in its ability to take advantage of the Soviet-US fear of a nuclear holocaust through brinkmanship, bluster and by creating the illusion that China was impervious to nuclear devastation. And in the wake of the Sino-Soviet split, to engage and enroll the US as a de facto ally (through the instrument of the Shanghai Communiqué) against the Soviets was a masterful piece of diplomacy in the Sun Tzu mould. In one stroke not only were the two super powers rendered powerless to contain China but also she had catapulted herself on the global scene as a power to be reckoned with. China had put together a pre-eminent political, military and psychological position that made the outcome of a potential two sided conflict a foregone conclusion in its favour. It is these very factors that collaborate to project the overall strategic capability of that nation. They also come to play when China set out to answer the question how much (nuclear weapons) is enough?

The logic for the size of their arsenal is an interesting one and is graphically depicted in Fig. 3.

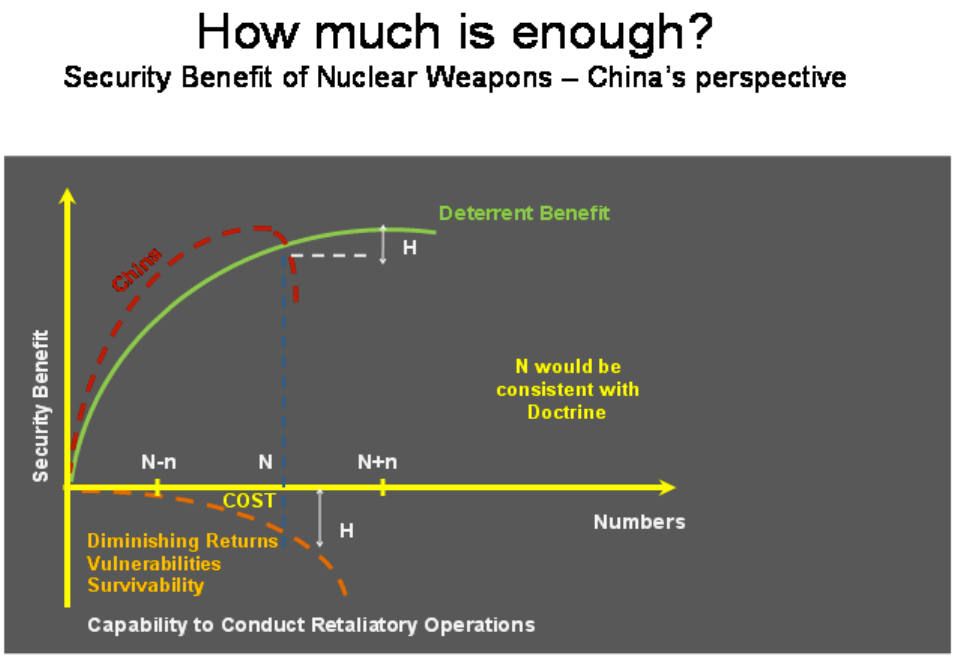


Figure 3: Logic for Size of Arsenal. ***Source: Minimum Means of Reprisal, Lewis J MIT, 2007, pp. 5-11.***

The logic for determining the size of arsenal is a statistically or mathematically true expression. The green curve represents deterrent benefit, which plateaus at a particular size of arsenal, when it may be taken that further destructive potential would be meaningless. The orange pecked curve represents diminishing returns with size of arsenal and at some point depresses in a steep downward curve. In China's perspective, this depression below the plateau, shown as value 'H,' represents the size of arsenals that provide optimal security benefit, particularly when viewed against the increasing costs of ensuring tight command and control, survivability and denying vulnerabilities of the arsenal. The problem with such a statistical solution is of the imponderables presented by perceptions, after all, where does deterrent benefit plateau? This would have to be an assumption. Also when does diminishing return depress steeply? Again, this is a matter of perception. Yet, this has worth in reaffirming the belief that limits to the arsenal make good sense in a deterrent equation when the rationale remains war avoidance. However, in a situation where a belligerent believes that, on account of technological advantage or the effectiveness of a disarming first strike, there is gain to be had through the use of

nuclear weapons, either tactical or otherwise, then this logic along with the graph breaks down, since the base of the graph is the inevitable plateauing of deterrent benefit.

China's planners, in stressing the importance of the land and submarine vectors, have fallen into a traditional mode. Appreciating the high vulnerability of the air vector and the need to assure survivability, coupled with their policy of minimalism, they have approached the development of their arsenal in conformity with conventional wisdom. This is depicted graphically in Fig 4. It is rational that a nations that have doctrinally adopted a No First Use strategy (as India and China have) as the controlling principle for their nuclear deterrent take all measures necessary to ensure credibility of the deterrent particularly so when the approach to arsenal size is minimalistic

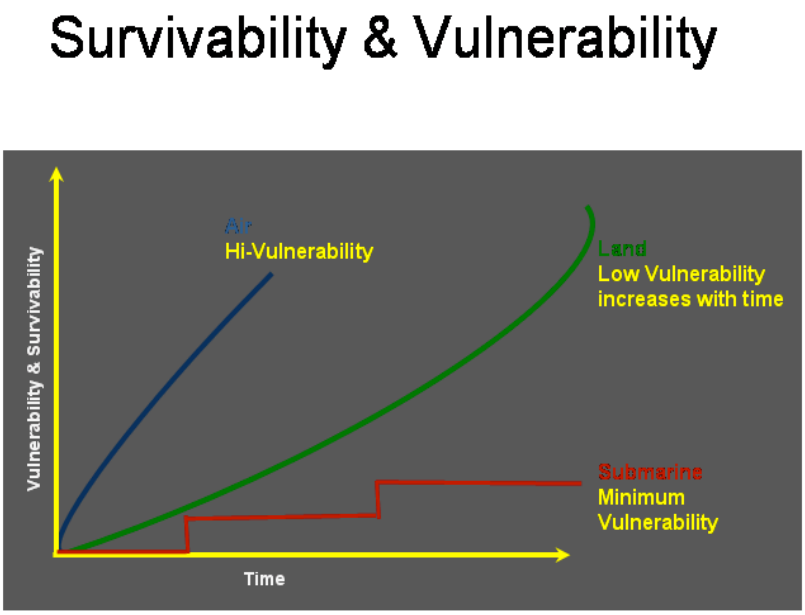
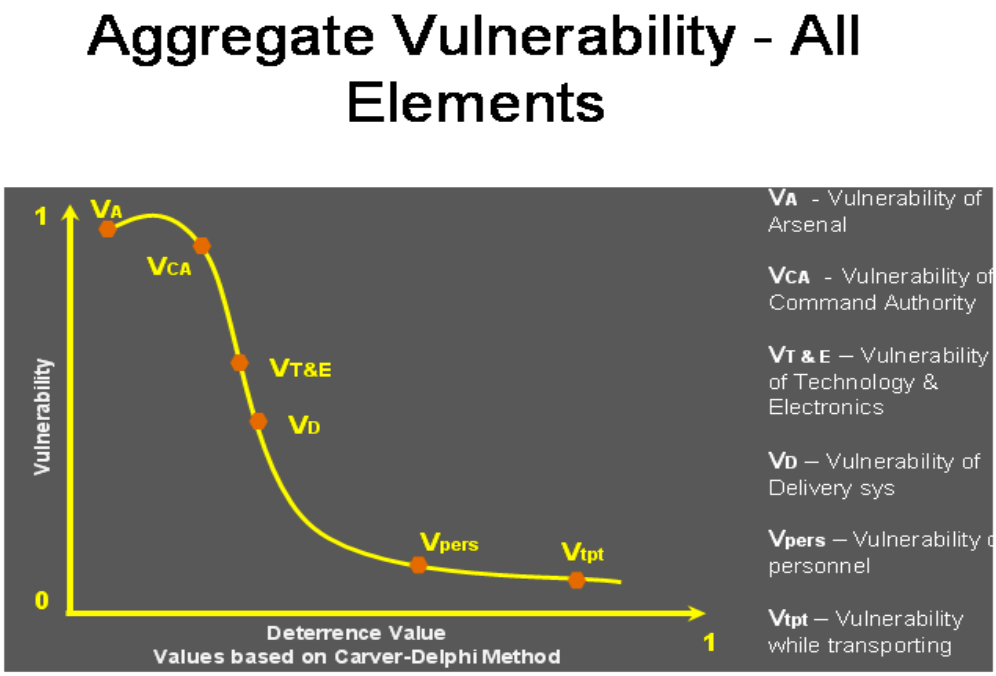


Figure 4: Survivability and Vulnerability. *Source: Author*

In a rigid, centrally controlled system, there is a persistent fear of vulnerabilities involved in building an arsenal. While Fig. 3 has notionally expressed this in the form of the depression 'H' of the diminishing return curve, it actually represents an aggregation of a series of elements that contribute to overall vulnerability. These vulnerabilities range from physical security of the arsenal to those associated with personnel and transport. Fig. 5 graphically represents the aggregate effect of all the elements that make up vulnerability of the arsenal. Notional values to these elements are depicted on the Y axis

on a scale of 0 to 1 while their effect on deterrence, in the event of compromise, is on the X axis. It would be noted that in a system of control such as that adopted by China, it is the physical vulnerability of the arsenal and of the command authority that are pivotal**.**



Source: Author

Figure 5: Aggregate Vulnerability – All Elements. ***Source: Author***

The Arsenal in Content

The Chinese arsenal in content is faithful to the dictates of its doctrine and true to its centrally controlled tradition. An examination of Table 1 would reveal three salients; the first of these is the extent to which the Chinese leadership subscribes to discreet numbers that make up their arsenal; secondly, their willingness to give time for technological intervention and leapfrogging in terms of hardware, as represented by their DF 21 and DF 31 series of missiles, the mainstay of their missile force. What must be noted is the time gap between the coming of the DF4/DF5A, their intermediate and long range missiles operationalized in 1980 and 1981, and the appearance of the DF 31/JL2 series of missiles in 2008/2009, a move from the static silo base to the highly mobile quick reaction weapons. Thirdly is their deliberate de-emphasis on the air vector (perhaps on account of vulnerabilities and the perceived hazards of having to decentralize control).

As yet there have been no confirmed reports of the nuclear weaponising of their HN2/3 cruise missiles. When viewed in the context of the ongoing Pakistani acquisition program of the 'Babur' nuclear capable cruise missile, it may well provide the doctrinal link between the two countries.

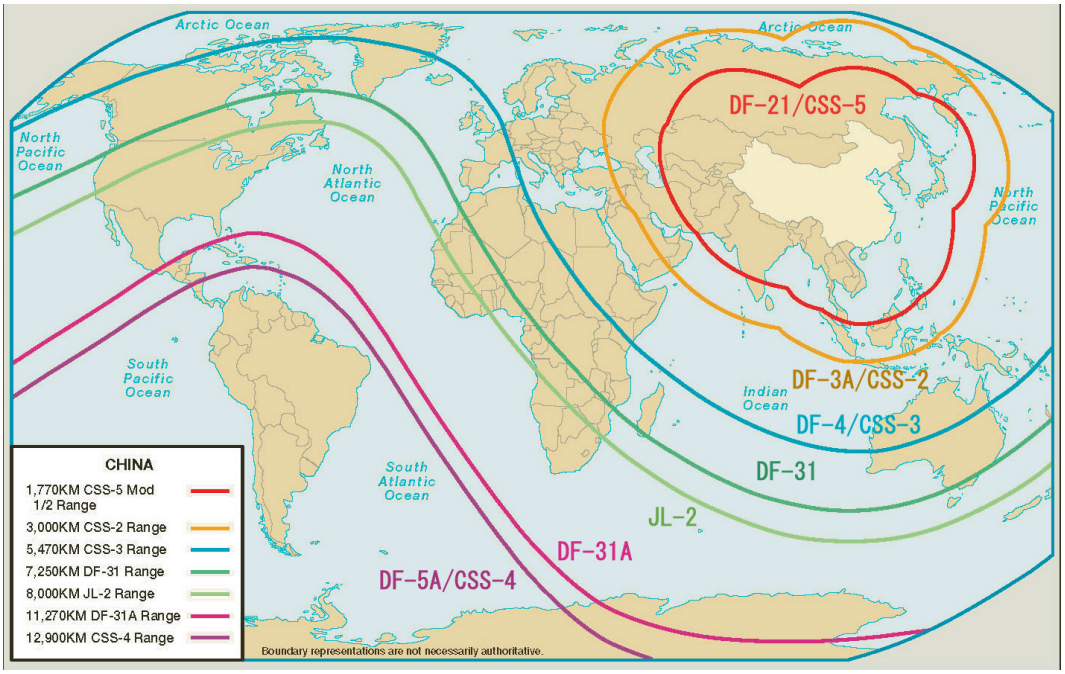
Table 1: The Arsenal in Content

Source: NIAS China's BM and Cruise Missiles 2007, Bulletin of the Atomic Scientists and Lewis, Jeffery, "The Minimum Means of Reprisal," MIT Press: Cambridge and London, 2007, p.30.

LAND BASED MISSILES					
Type	**Numbers**	**Deployed**	**Warheads x Yield(kt)**	**Range**	**Warheads**
DF 3A	17	1971	1 x 3,300	3,100	17
DF 4	17	1980	1 x 3,300	5,400 +	17
DF 5A	20	1981	1 x 4000-5000	13,000	20
DF 21	55	1991	1 x 200-300	2,100/3,000	55
DF 31	6	2008	1 x 200-300	7,200	12 (?)
DF 31 A	6	2008	1 x 200-300	11,200+	12 (?)
HN 2/3	-		1 x 200-300 (?)	1,800/3,000	?
SUBMARINE BASED MISSILES					
JL 1	-	1986	1 x 200-300	1,000+	0
JL 2	-	2009	1 x 200-300	7,200+	0

AIRCRAFT BASED MISSILES					
Hong 6	20	1965	1x bomb HN 2/3 (Cruise Missile)	3,100	~20 ~15
Qian 5	?	1972	1 x bomb	-	~20
TOTAL = 176					

Fig 6: China's Medium and Intercontinental Ballistic Missile Strike Range



Source http://www.defenselink.mil/pubs/pdfs/070523-China-Military-Power-final.pdf
Fig 4. Graphic description of China's Medium and Intercontinental Ballistic Missile strike radius. Newer Systems such as the DF-31, DF-31A and the JL-2 give China a more flexible and survivable nuclear force.

Stockpiles and Potential

The Chinese reportedly stopped production of fissile material in 1990. As their stockpiles would indicate, this was not on account of any pacific motive but more on account of the adequacy of their inventory. Also, when accounting the Chinese stockpiles, one cannot overlook the fissile material which was used for making nuclear mines deployed along their borders with the erstwhile Soviet Union, which have since

been dismantled, but their cores are available. Current estimates place their stockpiles as follows:

a) Highly Enriched Uranium: 20-40 Tonnes

b) Plutonium: 3.5 Tonnes

A location map of Chinese nuclear facilities is shown in Figure 7 below:

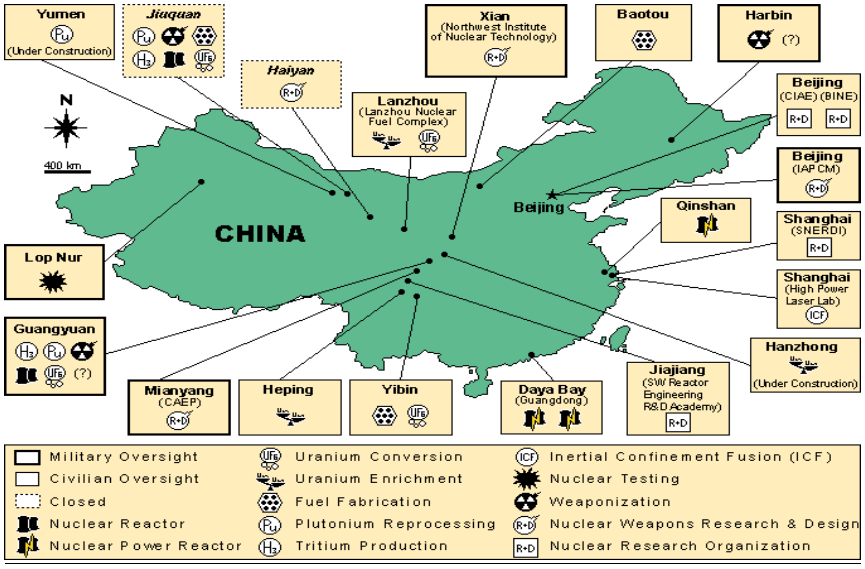


Figure 7: Location of Chinese Nuclear Facilities. ***Source: www.nti.org and www.fas.org***

Chinese nuclear infrastructure has evolved with great maturity and focus on the all round development, central to which is human resources, as indicated by the complexes that have been built up at their Mianyang and Guanyang facilities which combine training, research, enrichment and the physics package. Mianyang is also home to the China Academy of Engineering Physics (CAEP). In addition, what cannot be overlooked is the number of sites that are under direct military oversight.

Impact of Indian and Chinese SSBNs on Regional Security

In assessing the impact of induction of Nuclear Ballistic Missile Submarines (SSBN) into the region on security dynamics, two assumptions will have to be made:

- Firstly, that the basis of taking the deterrent underwater onboard a nuclear platform is the long endurance, relative invulnerability the medium provides and therefore the increased survivability that is on offer. However, as the platform moves closer inshore towards the adversary's waters the probability of detection increases (surveillance means remaining a constant, this follows a roughly inverse cube law), vulnerability increases and survivability drops; in sum, defeating the rationale for which the nuclear submarine was the chosen platform. The assumption therefore is that the onboard Ballistic Missile will have ranges in excess of 5000kms (at the height of the cold war, typically the US Ohio class and the Russian Delta class SSBNs mounted Ballistic Missiles in the 8000-9000kms range).
- Secondly, waters of interest which include the Indian Ocean and the West Pacific Ocean as in the past will continue to be host to American and Russian SSBNs.

The theory behind the SSBN was novel to the concept of warfare as existed right up till 1945. For its primary role was war avoidance, to deter nuclear conflict by virtue of its catastrophic destructive potential and the assured promise that this potential would be released should an escalating situation demand. Much of its impact was addressed to the minds of leadership. After all if the weapon could in one stroke remove the object of going to war, then armed with this weapon, warfare as an extension of politics by other means lost discretion, sense and direction. Obviously any armed venture would in future have to account for this awesome capability.

Tensions that arise between nations are rarely influenced by the presence or absence of the SSBN; however its uniqueness lies in that it serves to ensure, in a convincing manner that these tensions remain within limits; the outer rim of which is conventional warfare. Opacity and absence of trust are natural corollaries to a state of tension. At which time the holding of acknowledged and discrete weapons that serve to persuade the protagonists to circumscribe tensions holds perverse logic. One may argue why take up arms at all? From the author's perspective, this line of argument is blind to

the contemporary state of international relations where much of what is conducted between nations is in an environment of global suspicion. Over the years it is an accepted fact that US and Russian SSBNs have served to enhance deterrence value of their arsenals, so much so that in the SALT talks the preferred platform for retention has been the nuclear submarine.

Relations between states may be considered relatively stable if the required level of confidence in each other is achievable through diplomacy. When diplomacy is plagued by mistrust, the relationship concentrates on military strategy which then increases the probability of armed confrontation. Continuing in the same vein, the relationship between conventional warfare and nuclear forces must be seen as a correlation between two of a nations power tools; the one that accomplishes a purpose and the other that destroys purpose. This standpoint may be summarized as follows: 'within change and the realism that pervades international relations, the dynamics that condition military conflicts are largely predicated on the two faces of warfare. The primary face as defined by conventional forces and the shadow face as circumscribed by strategic nuclear forces. Application of the former is an active art while the latter scripts the perimeter and imposes cut-offs.'

The Sino-Indian situation falls clearly into this mould. There is mistrust between the two which has periodically confounded the diplomat and maneuvering for strategic advantage at every opportunity, add to this the current state of the rise of China and the emergence of India with their differing visions to political and economic growth; a wave of Chinese triumphalism; and a belief in the centrality of China and her systems, you have the portents for confrontation.. Given the fact that both countries have a NFU nuclear doctrine, clearly for both sides the SSBN is a tool of stability. Its contribution to regional security will be positive as it provides a countervailing posture to the Chinese SSBN force.

The Future

China has taken steps to put in place a very deliberate strategic orientation which is marked by a small but credible and survivable No First Use nuclear arsenal comprising of about 200 operationalized warheads. The structures it has created to adapt technology

and infuse it into the arsenal are there to be seen in their nuclear academic institutions and the human resources that they have developed over the years (It is reported that during the devastating Central Chinese earthquake of 2008, over 160 Ph.D. academics and close to 7000 other technicians, all devoted to the physics package, were evacuated from their complex at Mianyang).

Modernization of the arsenal is a continuum. They are focusing on increased ranges, rapid mobility and precision in control and targeting, the induction of MIRV'd warheads and operationalization of the JL2 SLBM is imminent. Efforts to reduce vulnerability of arsenal without compromising central control would be key to future developments. There is the matter of how American BMD would impact on the arsenal. Clearly there would be qualitative and quantitative changes to the arsenal, both for which, China already holds the potential as demonstrated by their ASAT capability. Their 'Assassins Mace' strategy will remain an abiding approach.[21]

As mentioned earlier, the issue of Taiwan and the future of the South China Sea imbroglio are significant to the larger arsenal development. If these are resolved with finesse, then China's aspiration-capability gap will reduce. If not, this gap will increase. Their nurturing of a first strike capability in the arsenal of their alliance partner, Pakistan, will progress with rapidity and precision. North Korea's role as a strategic buffer in the '*shi*' tradition will persist.

These prognostications may be summarized as under:

- China's Nuclear Arsenal will remain small but credible and survivable, numbers operationalized are likely to be less than 200 warheads (author's estimate).
- US deployment of BMD in the South China littorals and Japan:-

  If Yes, would bring qualitative and quantitative changes to the arsenal. Warheads are likely to be MIRV'd.

  If No, stability of deterrence would remain.
- Third possibility, US BMD targets rogue states; this would in effect amount to deployment with its impact on China's arsenal.
- If Taiwan and the South China Sea Islands problem are resolved with finesse then China's 'aspirations – capabilities' gap will reduce, if not the gap will increase.

- Technology intrusions affecting range, mobility, precision, C4ISR and penetration will be invited.
- Reducing vulnerability of nuclear arsenal will remain an on going process bringing to fore the SSBN.
- Arms race in the cold war mould will be abhorred (dangers of the Soviet Model).
- Internal stability, economic growth, social development and global image will retain primacy.
- Strategic orientation will include nurturing a first nuclear strike capability in Pakistan providing doctrinal dynamism when relating with India and a nuclear weapons capability in North Korea to keep the USA and Japan in a state of strategic imbalance.

Conclusion

We began with an understanding of the phrase *'shi'* in Chinese strategic parlance as an all encompassing concept that sees in any strategic contest the relevance of every factor and every event and their correlation to the context within which they occur. It implies grasp of strategic trends and the attainment of a posture that is superior. Statecraft then becomes the means of "combative coexistence" with adversaries. The aim being to manipulate the opponent into weakness through denials and brinkmanship while consolidating ones own strategic position. Examination of the Chinese nuclear arsenal in this context have made apparent the Janus faced approach that it has adopted — the one face that it presents to the world at large is that of the No First Use, minimalistic, rigid, controlled nuclear power while the other face, to retain the First Use alternative through alliances and pursue the aims of combative coexistence. All this makes for ambiguous and unpredictable intentions which in the nuclear dimension, compel planners to respond in like. The probable nuclearization of Japan, if and when it should occur, would in large measure be on account of the need to bring about balance in the regional power calculus.

The 'shi' concept owes its origin to a board game based on seizing and denying space till the opponent is maneuvered to a position of weakness. Whether a globalized world will be accommodative of such dangerous self centered power politics is a moot question but what is becoming increasingly apparent is the growing strategic gap in

perceptions of what China's intentions with the probable portents of friction that is intrinsic to such discernment. Another sage voice from the classical orient, that of Kautilya, reminds us that the power of a state is not just the counting and deployment of armed physicals, but also of '*mantra yuddha*'; the impact of good policies, sound judgement, searching analysis and wise counsel. Ironically the very Sino-centricity of contemporary developments may hasten the maturing of a countervailing Asian bloc centered on American capabilities.

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End Notes

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