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Kautilya's Mantra Yuddha

Role of the Military in determining Comprehensive National Power (CNP) of States

By

Vice Admiral (Retd.) Vijay Shankar

Preamble

In our search for a point of entry for understanding the special nature of contribution of the military to Comprehensive National Power, we tread into a minefield that encompasses civilizational factors, societal nuances, institutional characteristics that make for political systems and the continuous friction that emerges when state intervenes into the various functions that govern the growth of nations. Equally fundamental is the search for reasons that impel the urge to power.

If we consider encounters between civilizations as a possible impulse to power, we note a peculiar paradox in the Indian experience. Indeed, while the Indic civilization flourished, a restraining geographic boundary, in the modern sense to these exertions never quite emerged. Communities moved, spreading as they assimilated the periphery, as much influenced by the core and its centripetal tug as by the novelty of the fringes; in the process the mainstream adapting, transmitting and flourishing. Modern historians, particularly those in the late 19th and early 20th century were not quite able to understand this phenomenon particularly when viewed through the Westphalian¹ lens.

In his treatise Arthashastra, on war, politics, economics, diplomacy and statecraft Kautilya, in the fourth century BC underscored the importance of dynamism in the growth of a state. To him passivity was outlandish² and the objective of a State was power not just to control outward behavior but also the thoughts of one's subjects and one's adversaries.³ He outlined eight precepts that governed the general power of a State⁴:-

- Every nation acts to maximize power and self-interest.

- Moral principles have little or no force in the actions amongst nations.
- Alliances are a function of mutuality.
- War and peace are considered solely from the perspective of what advantages they provide to the instigator.
- The 'Mandala' premise of foreign policy provides the basis of strategic planning of alliances and a general theory of international relations.
- Diplomacy of any nature is a subtle act of war in contrast to the Clausewitzian view of war being a continuation of polity.
- Three types of warfare are upheld, the first is open hostilities, the second is war through concealment and lastly a war that is waged through silence and subterfuge.
- Seeking justice is the last desperate resort of the weak. This sentiment would appear to be a common theme amongst the ancients for in Thucydides History of the Peloponnesian War, when the Melians talk of justice and fair play confronted with the prospect of conquest by Athens, the latter contend that such tactics were the last desperate move of a nation facing defeat⁵.

The story of Horatius Cocles' last stand on the northern bridge across the river Tiber in defense of Rome against its enemies, encapsulates the spirit of the Roman citizen. It won for them their commonwealth and empire that spanned from West Asia to the British Isles. In a short period of 53 years (219 – 167BC) this entire area was brought under the dominion of the single city of Rome. The story goes that Horatius standing at the head of the bridge, fearing that a large body of Rome's enemies would force their way into the city, turned around and shouted to those behind him to hasten back to the other side and break down the bridge. They obeyed him and whilst the bridge came down he remained at his post obstructing the progress of the foe. The assault was reigned in. Cocles himself followed the bridge into the river. It was this enthusiasm for noble deeds and a lofty spirit engendered by Roman traditions in addition to their customs, institutional faith in the design of their political systems and their moral incorruptibility that made for Empire.⁶

One hears a similar message in the voice of Kautilya when he summarizes the wellspring of a King's power. He states in the Arthashastra "A King's power is in the end tied to the popular energy of the people; for not being entrenched in the spirit of his subjects, a king will soon find himself easily uprooted".⁷ In this context the spirit of the people refers to their adherence to dharma, faith in the king and his leadership, their wealth generating capabilities and their belief in the general superiority that their way of life represented.

In as much as the decline in power of both the Mauryan and Roman empires are concerned, the words of Gibbon are equally applicable, "The decline was the natural and inevitable effect of immoderate greatness. Prosperity ripened the principle of decay; the causes of destruction multiplied with the extent of conquest; and as soon as time or accidents removed the artificial supports, the stupendous fabric yielded to the pressure of its own weight"⁸. There is also another school of thought that believes that it was the new religion that weakened the will to look for rewards in another world and not in this, that contributed disproportionately to the decline of empire; Buddhism in the instance of the Mauryan realm and Christianity in the case of Rome.

The Roman Moment⁹

The diamond jubilee of Queen Victoria's ascension to the British Empire's throne was celebrated on 22nd June 1897. The jubilee stretched over five days on land and sea. A military procession of over 50,000 soldiers included troops from India, Nepal, Canada, its African possessions, Australia, New Zealand and Naples. At sea, 165 ships manned by 40,000 sailors and 3,000 heavy guns saluting Her Majesty gave teeth and 'hard power' to the fact that the realm was always, not just protected, but also had the capacity to vanquish any foreseeable opposition. Eleven viceroys and premiers of Britain's self governing colonies stood in prominent attendance alongside kings, princes, maharajahs, ambassadors and emissaries from the rest of the world. The event was celebrated in every corner of the Empire from Hong Kong to Singapore to Hyderabad, Bangalore, Zanzibar to the Table Bay and in Ottawa. In Fareed Zakaria's words and as one historian covering the events wrote this was a 'Roman Moment'. In sheer military strength, organizational and administrative excellence, in the virtues of its political systems, the self ordained legitimacy of their imperial systems and the superiority of their cultural and structural strengths there was no peer to this Empire.

In the present day environment it is difficult to even contemplate the extent, grandeur and the dominance of Queen Victoria's bequest. From the time she wore the mantle of the Empress of India (1876) the Empire had been linked by a web of 170,000 nautical miles of trans oceanic cables and 662,000 miles of terrestrial cables creating a vast network of information highways that enveloped the globe, even a fledgling radio network; invention of which made its appearance in 1896 was included in this complex. Railways and canals were enlarged, deepened and pushed through volumes of commerce inconceivable hither to. The appeal of the Empire, its literature, its norms and sense of fair play, its emphasis on the outdoors and sporting activities, dressing habits, schooling and health programs provided the necessary soft power for dominance of British ideas and the universality of the English way of life; all of which long outlived the impact of their hard power.

The indices of British power and therefore the applicability of this model do not readily conform to the scale of their Empire. After all neither geography nor demography (2% of the world's population) could conceivably drive and support 30% of global GDP of the day, energy consumption five times that of the United States and 155 times that of Russia, accounting for 1/5th of the world's trade and 2/5th of its manufacturing trade¹⁰; without the abiding support, incorruptible control and skewed systems that fed it with the life blood of its colonies

In our examination of national power it would be interesting to also see, what were the causes of the fall of this lofty empire. For many scholars the watershed year was 1899 when Britain entered the Boer War. Queen Victoria's exposition of 'hard power' was far more brittle than its 3,000 naval guns would seem to portray. After all there was one gun for every ten of the 30,000 Boer farmers that were lined up against the Empire. The events of that war are well known. By 1902 over 450,000 Imperial troops were deployed in and around the Transvaal in this 'righteous' war for control over the diamond mines of Kimberly and gold mines at Witwatersrand; they were confronted by a rag tag militia largely made up of 45,000 farmers. The Empire won but in a historical sense this was a strategic loss for to have waged a bloody

repressive war for 3 years and to have sustained casualties in excess of 45,000 dead and wounded against a guerrilla adversary was a toll that underscored the fragility of the realm's hard power. Britain had stretched its military to breaking point and had discovered enormous incompetence in its war effort and at home the will to empire itself was on balance. She was never to recover from this calamitous reversal as the empire blundered into the First World War and bankruptcy by 1919.

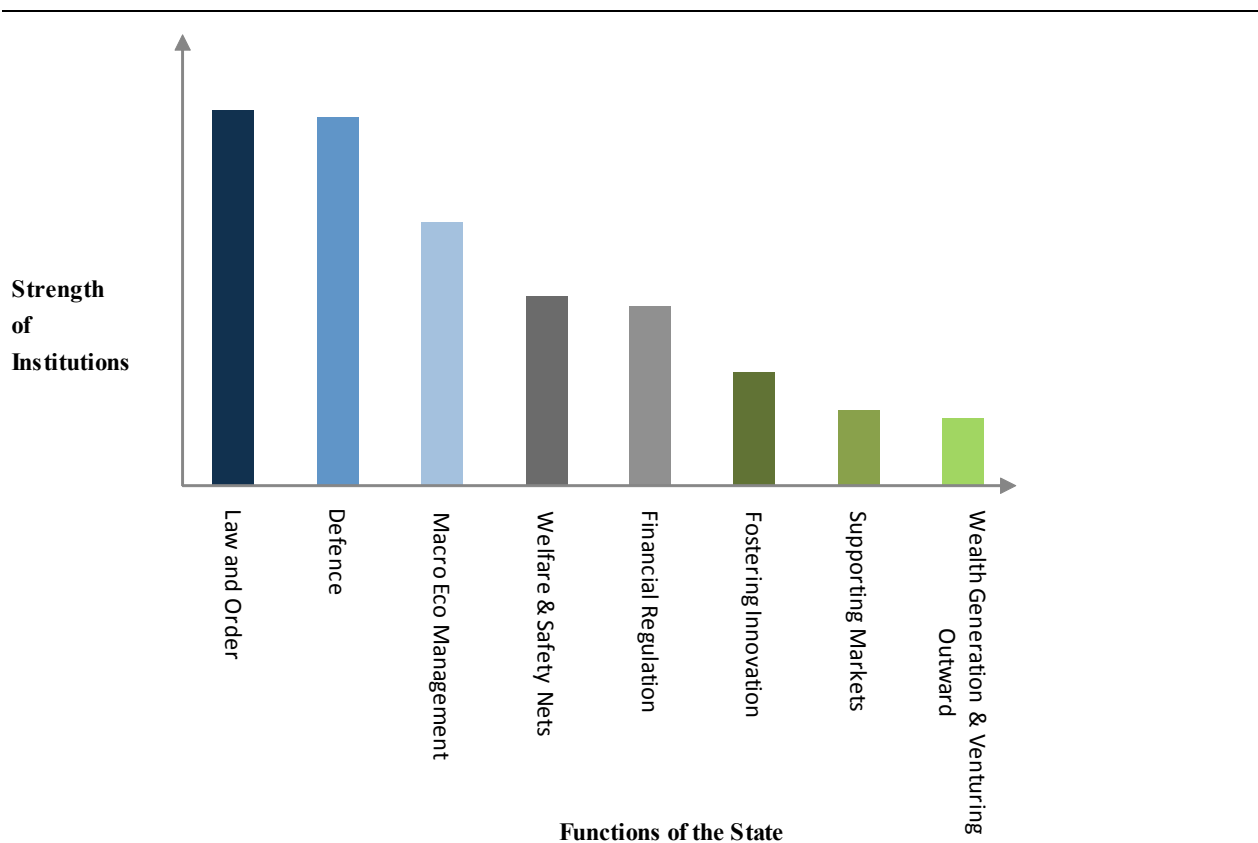
It is a moot point whether the British empire unraveled because of bad politics, failure of its military to appreciate the changing nature of warfare brought about by technology and the aspirations of men, ill advised economics or even a blindness to the transformation that its own soft power had wrought in terms of the spread of education and the ready availability of a wide range of knowledge. In the end analysis it must be said that it was a combination of the four mired in the wilting of the will that brought about the demise of British power.

The Fukuyama Matrix

Francis Fukuyama in his book, *State Building – Governance and World Order in the 21st century*, has argued that the modern state is anything but universal. The reasons for this, is that there is continuous friction between the determinants that make for power. The two augments that must in interplay enhance the power of a nation are the strength of a state in terms of its institutions that impartially plan, regulate and implement policies transparently and efficiently; and the scope of its intervention in the activities of state. This friction tends, in less developed nations, to either stunt growth or in the extreme to encourage corruption and evolve into a bizarre predatory system, particularly so when there are prejudices in either its institutions or in the scope of intervention.

In his analysis he has stated that there is no commonly accepted measure for either the strength of institutions or the degree to which they must intervene in the functioning of the state. Fig.1 below shows a bar graph in which a hypothetical relationship is drawn. On the X-axis is a sampling of various state functions while the Y- axis indicates the strength of institutional capabilities. It would be apparent that in areas of defence, law and order, macroeconomic management, welfare activities and safety nets, financial regulation; institutional strength must be high while in state functions like fostering innovation, supporting markets, wealth generation and willingness to venture outwards, institutional intervention must be low.

Fig.1 Strength of Institutions -- Scope of Intervention in State Functions.



Source: Fukuyama Francis, *State Building—Governance and the World Order in the 21st Century*, Profile books 2004, pp. 10-15)

Politics in the 20th century have been dominated by this interplay between the strength of institutions and the extent of intrusion of the government in the activities of the state. The century began with world order being led by the British Empire where the scope of state intervention was minimal while key institutions were strong. This prescription worked to the larger benefit of colonial powers where state activity did not go very much beyond the military, law and order and the sponsoring of business ventures. Thus one stream of development led to extremely liberal and powerful states while on the other, totalitarian states emerged which in their quest for power strived to subordinate the individual to the state's own political ends by the creation of repressive institutions. This, as is today historically well known, led to the right wing power structure in the form of Nazi Germany and the left wing version in the form of Soviet Union; both of which rose and failed very rapidly under the weight of their own contradictions.

The dilemma associated with building the power of a nation through the interplay of the two augments is that there is no fixed prescription for a favourable outcome. This is apparent from the experience of the 20th century when liberal nations with minimal state intervention developed into powerful nations while the same prescription when applied to some of the African nations such as Kenya, Zimbabwe, Nigeria and Congo resulted in systems that were predatory and debilitated potentially prosperous nations. Similarly, countries such as Pakistan, where strength of the military became such a dominant force within the nation, that it recreated

the Prussian situation without the necessary larger cultural and societal strengths resulting in a Voltairesque army with a country. The break up of the Soviet Union and the mushrooming of authoritarian regimes, with their known record of being able to undertake reforms without having to face societal demands, came up against a different set of problems because of the release of pent-up urge for benefits that were in contradiction to the very goals of reform. Yet, there is the success story of the authoritarian Lee Kwan Yu's Singapore which defies conventional wisdom.

In the end analysis the empirical relationship between authoritarianism, development and power remains complex and as ambiguous as the relationship between democracy, development and power. China's case emphasizes a host of complex societal, technological factors that underscores the apparent success in striving for national power through political centralization.

The Pivots of Power

In concept, the comprehensive capability of a country to pursue its strategic objectives through freedom of action internally and externally defines its comprehensive national power. In achieving this freedom of action, three core factors play a disproportionate part. The first and primary of these is the strategic capability in all dimensions. Second, is the resolve of that nation as underscored by the will of its people and leadership to power. And lastly, is the state's ability to face up to and manipulate strategic outcomes. Klaus Knorr defined national power as the aggregate of a state's economic capability, its administrative competitiveness in terms of the influence it was willing to bring to bear globally and its readiness to use its military in order to bring about a favourable conclusion¹¹. Theoretically this correlation was Clausewitzian in nature when war in fact was seen as a legitimate tool for the pursuit of strategic objectives, the other tools having been tried and found ineffective. In Knorr's construct economic factors within the larger international system was seen as a necessary base for power but not a very effective instrument of coercion for which military capability and aggressive intent were the determinants that could deliver desired outcomes. It is true that his writings were against the backdrop of the cold war; at a time when the possibility of a direct catastrophic clash between the two super powers was ruled out and the flavour of the period was proxy wars between clients. Yet, even then as now, economic sanctions whether by individual states or the international system remains a less than efficacious mechanism.

Another political economist, David Singer in the 1960s introduced the concept of a Composite Index of National Capability in order to assess the power of a state¹². He saw power as those attributes of a state that could influence other nations in three time dimensions the short, medium and long term. The short term capability was represented by military strength and military personnel both in terms of quality and quantity. The medium term capability was characterized by industrial activity particularly in terms of iron and steel production and energy consumption. While the long term capability was a function of demographic factors which included the vigour of people, their will and creativity. This formulation again reflected the mores of the time. It was during the most turbulent period of the cold war and the industrial age hadn't quite given way to the information era. Therefore the structure of this formulation was to use the military in order to bring about a conclusion that could eventually permit the medium and long term capabilities to reconstitute the situation into one favourable to the patron. In fact this

model would appear to be one lifted off from the World War II experience. Military victory of the allies infused industrial activity in the vanquished nation in the medium term and was capped by a tide of the American way of life. The success of this ideal is there for us to see. Yet in its relevance for contemporary times it does not factor the larger effects of globalization, civilisational factors and the dawn of the age of knowledge; all of which can inhibit the achievement of the short term objectives. Iraq, Iran, Afghanistan and North Korea in recent times are cases in point.

The Ray Cline recipe, though one that emerged during the height of the cold war, moves away from the Second World War mould and introduces soft power attributes at the very outset when change in the international environment is sought. It places before the statesman the natural subjectivity which arises, when dealing with strategic factors and the will and vigour of people, at the same time it does not lose sight of the hard objective factors that contribute to power. This blend of the abstract with the realist's point of view is its most abiding virtue.

The other significant feature of the Ray Cline paradigm is that it sees power through the eyes of the international system or a potential adversary¹³. This is a fresh and sophisticated approach to dealing in matters related to the power of a state which in part is an abstraction. In mathematical terms this concept is expressed as follows:

$$\mathbf{Pp} = (\mathbf{C+E+M}) * (\mathbf{S+W})$$

where,

Pp - Perceived power

C - Population and geographic factors

E - Total economic capacity

M- Military capability including nuclear facility

S - The strategic purpose expressed as a coefficient of the synergic value provided by the cohesiveness of plans and the objectivity with which these plans are executed.

W - The national will to power of the people and resolve of leadership.

The Chinese believe that the purpose of Comprehensive National Power is to render the adversary (or the international system) powerless to stop its will. In this definition there are shades of an expanded Clausewitz when the latter defines 'war as an act of force to compel our enemy to do our will.'¹⁴ Clausewitz, in his understanding of the application of national power, perceived two inseparable factors that had to be overcome, the first of which was the total means at the disposal of the adversarial state to pursue their interests and the second the strength of their will to resist. The rub in this knowledge is that as a combination while the former is measurable, the latter is much less easy to determine and can only be gauged by the strength of motivation¹⁵. This form of calculations will invariably lead to an upward spiral of power application against increased resistance till one or the other breaks, at which point an extreme would have been reached. In a nuclear context this may mean the end of purpose.

China perceives CNP as the single most critical indicator and measure of the aggregate economic, political, military, and technological prowess of a nation. In its calculus the nature of

power is made up of two ingredients; the first and the primary is that set of dominance that manipulates and forces desired outcomes, termed as Command Power; while the second are ideational virtues (soft power) that serve to influence and mould finales with no great certainty. Professors Hu Augang and Men Honghua, in their paper on CNP and grand strategy identify three core factors that establish the CNP of states: Strategic Resources, Strategic Capability and Strategic Outcomes. They go onto add that while the latter two are a function of the former, CNP, is in fact a summation of the total Strategic Resources of a nation.¹⁶

Strategic resources in their scheme of things come in eight categories which are a summation of the attributes listed by political economists of the past with a difference that in their impact on power, the weightage given to knowledge and technology and the state of economy is double that of the remaining six. This was in recognition of the arrival of the information era. The strategic resources identified are: capacity of the economy; human capital as a function of those in the working age and their educational qualifications along with total numbers; natural resources with an emphasis on energy consumption and those that have a direct impact on building infrastructure; capital resources in terms of FDIs and institutional investments; knowledge and technological resources; government resources in terms of government expenditure; military resources including nuclear capabilities and lastly international resources as a function of the influence of soft power. The key strategic resource is military power and capability since it is seen as an all pervasive enabler for internal security and also to provide the external power for maximizing interests overseas. In addition military power is not only an explicit function of CNP but is also a tangible expression of the will to power. The Chinese approach is a natural progression of the various formulations that we have seen thus far from ancient times through the cold war and to the present day global scenario. What is of particular significance is the all pervasive nature of military power from the precision it provides to the National Power of a nation, to the abstract as a manifestation of the will to power.

The Study

The study undertaken to evaluate the role of the military's contribution to CNP began with the use of the Carver Delphi method to elicit the views of 150 middle and senior grade Indian and foreign military officers along with other scholars on what they considered to be the determinants of military capability. In order to arrive at an objective analysis each determinant was rated on a scale of 1 to 10 as a relative integer for eight countries besides India. Fifteen determinants were initially identified as shown in Table 1.

Table 1: Military Capability Average result of the Poll

Determinants	US	Germany	Japan	Russia	China	India	Indonesia	Brasil	South Africa
Institutions to Regenerate Military Thinking	8.60	6.38	5.60	6.80	7.24	5.73	3.59	4.40	4.27
Defence Expenditure/GDP	8.44	5.55	5.05	6.44	7.83	5.18	3.59	4.43	4.21
Ordinance Delivery	8.56	5.84	4.68	7.03	7.09	5.45	3.43	4.37	4.41
Defence R&D as % of Total R&D	8.52	6.16	5.15	6.78	7.16	4.43	2.91	4.25	4.39
% of Regular Forces employed in Internal Security Forces	5.29	4.85	4.75	5.35	5.44	5.53	4.56	4.63	4.52
State of Indigenisation of Conventional Expeditionary/Transnational Capability as % of Defence Expenditure	8.53	6.62	5.56	7.58	6.96	4.56	2.97	4.35	4.51
Omniscience as % of Defence Expenditure	8.55	5.94	4.74	6.76	6.46	5.05	3.09	3.90	4.07
Networking as % of Defence Expenditure	8.43	6.00	5.16	6.76	6.84	5.00	3.06	4.02	4.16
Command Structure for Speed of Battle	8.44	6.43	5.71	6.25	6.57	4.77	3.00	4.01	4.18
Independent Defence of Space Assets or in Alliance	8.56	6.63	5.52	6.94	6.82	5.50	3.52	4.33	4.35
Civil Military Relations	8.57	5.85	5.47	7.20	6.70	5.10	2.69	3.59	3.58
Tactical Capability	8.02	6.86	6.25	6.48	6.66	5.32	4.03	5.14	5.04
Nuclear Capability	8.24	6.34	5.38	7.02	7.30	6.63	3.96	4.61	4.71
Arsenal	8.81	3.95	2.64	7.59	7.26	5.88	1.55	2.20	2.68
	8.81	3.76	2.24	7.75	7.19	5.28	1.61	2.27	2.60

Source: Based on the Carver Delphi Method. A USI Study, 2010.

The following paragraphs are devoted to providing an insight into each of the determinants for clarity of the subsequent arguments and to give them weightage on a relative scale for an aggregate of 1. Product of weightage with the poll results will give an indication of country standing in terms of ‘perceived’ military power:

- **Institutions to Regenerate Military Thinking:** In warfare as with most matters that affect human affairs, change is the only certainty. And change is driven by need, technology, the times, human vision and creativity. Planners’ device strategies, lay down doctrines, evolve tactics and commandeer technologies in order to contend with and harness change so that the operational ‘high ground’ is not surrendered. In years gone by it was the humble stirrup that caused a revolution in the manner in which horsemen

could free their arms and provide rapid mobility to the archer; much in the same way as information technology has today laid bare the battle space enabling precision assault of targets that yesterday were discrete and near invulnerable. The continuous regeneration of military thought is the only tool to anticipate, challenge and confront change. To institutionalize it provides the wherewithal to transform and come out with war winning strategies. In its absence the war is lost before the first salvo is fired. Barring the US military, this has been an area of conspicuous weakness with most military establishments. This is attributable to three factors; firstly most militaries are slow and uneasy with change, secondly the immediate economics of change can be forbidding and lastly training in the military is incestuous in form; unfortunately it thrives on yesterday's battles. **(Weightage awarded is 0.15).**

- **Defence Expenditure as a Percentage of GDP:** Defence expenditure and human resource development will remain key indices of a qualitative and quantitative measure of military capability as long as they are a part of integrated force planning. In our specific context the blindness to the indivisibility force, if not remedied, can only result in the frittering away of resources and fragmenting of force. In this circumstance integrated force planning attains critical proportions. Defence expenditure as a percentage of GDP in a democratic system such as ours is representative of national will to power; having said that this percentage in the vein of other major democratic powers maybe pegged in the region of 3-3.5% of GDP. Countries such as Indonesia which have turned their sights inwards have done so at the cost of there ability to have their will in global affairs. **(Weightage awarded is 0.033)**, this is on the assumption that defence spending will be pegged at 3 to 3.5% of GDP).
- **Ordinance Delivery:** Delivery systems must at all times be cognizant of the impact technology has on the effectiveness of munitions over time. This is a truism that is plain to all defence planners. The problem arises with the pace at which technological interventions are available and the time compression that this feature enjoys. On the other side of the argument is the danger of chasing technology for its own sake which can result in economically wasteful expenditure. The key lies in determining what technologies will serve the interests of effectiveness over the life of the delivery system; for this precision technology forecast along with its adaptation should be an intrinsic part of the acquisition/developmental process keeping scope for upgradation through technology injections. The technologic aging of hardware in most countries including Japan, Brazil, Indonesia and South Africa is symptomatic of the growing economic burden of unplanned upgradation and an unwillingness to transform. **(Weightage awarded is 0.1).**
- **Defence R&D as a percentage of total R&D:** By nature R&D is a stand alone investment. It is the application of its fruits that may take various forms. The need is to continuously sponsor and promote basic research. This is a national endeavour and must not find itself curbed by viewing defence R&D as something different. Therefore investments in this field will remain a part of national planning. The essence lies in being able to build structures that extract, innovate and apply. To this end R&D forecasts and tasking should find expression in the defence planner's agenda. The problem is that

fundamental research is not an area that works like other enterprises where you plough in money and you get returns. The US are leaders because they are willing and have the financial clout to invest without expecting returns for each investment. Paradoxically it is failures that often indicate resolve. To give some idea of the relative differences, in 2011, the US budget for R&D was about \$144 billion of which \$79 billion is allocated to pure defence R&D.¹⁷ The second big investor is China at \$36 billion (reported) while India is at about \$9 billion. At \$4.1 billion Brazil's approach is particularly significant for the success of its collaborative ventures (**Weightage awarded is 0.033**).

- **Percentage of Regular Forces Employed in Internal Security:** The Chinese in their formulation of the role of the military in CNP, as mentioned earlier, do not make any bones about its significant and abiding role in assuring internal security. While it maybe argued that this is natural to authoritarian states, it must also be said that it is equally relevant to emerging powers. The external dimension will remain hollow unless the internal is secured. Our calculus must at all times allow for this without it being made to seem as an 'add-on' extraneous and avoidable function. Resource planning in this field must factor the Internal Security facet. (**Weightage awarded is 0.05**).
- **State of Indigenisation of Conventional Forces:** In a globalised economy indigenization as a mantra would need to be retooled. While past experience has made us sensitive to sanctions, one would not fail to note that as the means of production move out of the boundaries of origin, the bite of sanctions have diminishing effect. There are, indeed, key areas of technology that must be identified and indigenization investments enhanced in those fields. After all, the object not being to reinvent the wheel but to boost our design, adaptation and innovation capability. The ubiquitous personal computer has components from practically all over the world put together by a second agency for wide spectrum application. The same would apply to components that would go into making ships, aircrafts and other vehicles. The US model is much too finance intensive; what perhaps presents an optimal compromise is the collaborative strategy adopted by China and Brazil. (**Weightage awarded is 0.1**).
- **Expeditionary/Transnational Capability as a Percentage of Defence Expenditure:** To have a military establishment out of sync with the larger strategic objectives of the nation is the surest recipe for a fall. Our interests today range from our oil commissions in Kamchatka through the Middle East to South America, our interests in Antarctica and the burgeoning trade with China would all demand a military capability to secure these interests either through cooperative ventures or individually. In this perspective we must witness a growing transnational force structuring. Many of these capabilities will have multi tasking competence. The growth of China's Navy is a case in point. (**Weightage awarded is 0.05**).
- **Omniscience as a Percentage of Defence Expenditure:** The contemporary global scenario is marked by the omnipresence of knowledge and it is the availability of this knowledge that makes for potency in every endeavour including the battlefield. To not just be aware of this but also to grasp and invest in omniscient (all knowing) structures is an imperative of the future. As our interests expand our transnational forces

will find themselves handicapped unless this capability is intrinsic to their make up. **(Weightage awarded is 0.05).**

- **Networking as a Percentage of Defence Expenditure:** In an era where mass of the industrial age has been transformed through knowledge to precision in all activities; the enabler that has made it possible has been rapid networks that moved information from the gatherer to the warrior. Exceedingly the dependence on precision and shielded networks will be the nervous system of future battlefields. **(Weightage awarded is 0.05).**
- **Command Structure for Speed of Battle:** Flatter structures will be the order of the day. This would imply not just empowering our future leaders at every level with authorizations to act but also equipping them intellectually with the necessary material and knowledge base to come out winners. To this end our investments in training and preparing our officers and men would have to be enhanced. Also command structures would have to be sensitive and flexible enough to permit action at every level. **(Weightage awarded is 0.1).**
- **Independent Defence of Space Assets or In Alliance:** Space assets would be central to all networks, surveillance, targeting and knowledge denying activities. Their defence would therefore have to be through providing physical, electronic and force shields; a field which is new and would have to take the form of integrated space defence structures. **(Weightage awarded is 0.033).**
- **Civil Military Relations:** Traditionally in our context civil military relations has been an area of considerable weakness. This frailty is more on account of a refusal to accept that the larger aims of harnessing CNP are better served by having the military a part of and deeply involved with the decision making process that goes into providing security in all its dimensions to the nation. Till such time that institutionally and structurally it is accepted that the military is not only an explicit instrument of CNP but also an implicit statement of the nation's will to power, this frailty will remain a critical flaw. **(Weightage awarded is 0.1).**
- **Tactical Capability:** Hitherto prowess in the tactical field was an area of considerable strength of the Indian military establishment. However the future demands far more integration in planning, equipping and force structuring than is currently apparent. In India the absence of the CDS, squarely on account of the reluctance of individual service headquarters is a damning case in point. The future holds no place for tribal approaches and turf centric decision making. Transformation of individual tactical capability into a larger joint operational competence is the key. The strength of yesterday may well be the fatal failing of today if not remedied forthwith. **(Weightage awarded is 0.15 on the premise that transformational goals in India are addressed forthwith).**

The last determinant is nuclear capability and the nuclear arsenal that the nation has stockpiled. The quandary that arises when dealing with nuclear weapons is that on the one hand is the absolute nature of destruction that they represent while on the other is that its efficacy lies

in its non use; that is in the deterrent effect that it thrusts upon belligerents. This brings us to an interesting understanding of how nuclear weapons have in fact changed the nature of warfare and the dynamics that condition military confrontation between nations. In the nuclear age armed 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 the nuclear forces.

Application of the former is an active art while the latter scripts the perimeter and imposes cut offs. It is this distinctive ability of nuclear forces to lay down limits to the conventional war that gives it weight when computing national power. It is also for the same reason that in our study we give this feature special attention.

Table 2 gives the relative standing of the nine countries listed in Table 1. Product of the poll average and weightage awarded for each determinant decides standing. In as much as the nuclear dimension is concerned it is, due to its special nature, dealt with separately and finds expression as a ‘power limiter’.

Table 2: Relative Standings

Determinants	US	Germany	Japan	Russia	China	India	Indonesia	Brasil	South Africa
Institutions to Regenerate Military Thinking	1.29	0.96	0.84	1.02	1.09	0.86	0.54	0.66	0.64
Defence Expenditure/GDP	0.29	0.19	0.17	0.22	0.27	0.18	0.12	0.15	0.14
Ordinance Delivery	0.86	0.58	0.47	0.70	0.71	0.55	0.34	0.44	0.44
Defence R&D as % of Total R&D	0.28	0.20	0.17	0.22	0.24	0.15	0.10	0.14	0.14
% of Regular Forces employed in Internal Security Forces	0.26	0.24	0.24	0.27	0.27	0.28	0.23	0.23	0.23
State of Indigenisation of Conventional	0.85	0.66	0.56	0.76	0.70	0.46	0.30	0.44	0.45
Expeditionary/Transnational Capability as % of Defence Expenditure	0.43	0.30	0.24	0.34	0.32	0.25	0.15	0.20	0.20
Omniscience as % of Defence Expenditure	0.42	0.30	0.26	0.34	0.34	0.25	0.15	0.20	0.21
Networking as % of Defence Expenditure	0.42	0.32	0.29	0.31	0.33	0.24	0.15	0.20	0.21
Command Structure for Speed of Battle	0.86	0.66	0.55	0.69	0.68	0.55	0.35	0.43	0.44
Independent Defence of Space Assets or in Alliance	0.28	0.19	0.18	0.24	0.22	0.17	0.09	0.12	0.12
Civil Military Relations	0.80	0.69	0.63	0.65	0.67	0.53	0.40	0.51	0.50
Tactical Capability	1.24	0.95	0.81	1.05	1.10	0.99	0.59	0.69	0.71
STANDING	8.28	6.25	5.39	6.81	6.92	5.45	3.52	4.41	4.43
RANKING	1	4	6	3	2	5	9	8	7

Source: Author Sept 2010, Based on the Carver Delphi Method and standings based on empirical weighted mean, A USI Study, 2010.

Nuclear Capability and Arsenal

At first appraisal, nothing can appear more ludicrous than to approach the total power of a nation through the sights of an aimer armed with nuclear weapons. For if war is a continuation of politics by other means then, a weapon of total annihilation obliterates the very purpose of that polity and therefore must be an absurdity. Yet, nuclear weapons exist and nations have over time, evolved a theology that not only recognizes its influence on international relations but have granted it a certain grudging legitimacy as an ultimate currency of power and, as we have noted earlier, an agent that scripts the perimeters of conflict. Therefore, in the overall context of the role of “hard” power in CNP, not to factor nuclear forces would be to suspend ourselves in denial of its existence, influence and of technology.

Strategists have long developed a doctrine of rationality (which some may call the doctrine of the absurd) which breathes life to the implementation of a deterrent relationship between nations. This doctrine has only one purpose and that is to establish solidarity between all the elements of CNP. It is in the absence of such a theory that India, in its short independent history, has suffered an awkward fragmentation in strategic posture whether it was to contend with the Chinese in the past and in the present or in the immediate wake of 26/11. The theory of strategic deterrence begins with an understanding that sovereign leaders are rational and will always be willing to engage in “interest-benefit” calculations while making policy decisions. The assumption of rationality is considered universal in terms of context, challenges and responses. It is, indeed a labour in mirror imaging. It is this factor that removes strategic forces from the realm of abstraction and places it on the pedestal of reality.

Strategic nuclear forces, as mentioned earlier change the very nature of the application of power by scripting perimeters and drawing limits. There are five considerations related to strategic forces and their operationalising that have an impact on CNP. These are:

- Doctrine
- Credibility
- Vulnerability
- Command and Control
- Will and Resolve

Doctrine for strategic forces is its soul for it drives development, structure and nature of arsenal; it serves to develop deterrent relationships based on rationality. Its absence contributes negatively to CNP for one very good reason that is nations do not readily take to unpredictability or clandestine programmes. A declared doctrine provides the necessary strategic cohesion within and, more importantly, without. For having evolved and operationalised nuclear forces the absence of visible guiding principles for their command and control leaves the larger global community in a state of deep suspicion of both capability and intent. This brings with it a host of responses triggered by the uncertainty of not knowing ranging from economic sanctions to frosty relations to downright hostility; all of which in a globalised situation hurts acutely the development of national power.

Credibility is the key to operationalise doctrine, its value is largely determined by resolve, alternatives, readiness, reliability, technology and nature and survivability of the Arsenal.

Credibility lies in the eyes of the beholder and its absence is a source of instability which casts a negative shadow on CNP. Credibility is to doctrine what the 'Emperors new clothes' were to that naïve child! The empty nakedness of words must be clad by all the elements listed above.

Vulnerability is the chief anxiety that invites technologies. It is minimized by providing options of vectors, locations, security of enabling codes and stealth. Vulnerability of an arsenal is again a source of instability with its negative impact on CNP.

Command and Control is central to nuclear deterrence. Its survivability and redundancy not only enhances credibility but will also avert the temptation of a decapitating strike. It provides a positive inflexion to CNP.

Will and resolve are essential features that reinforce the stability of a deterrent relationship. They must be backed by selective transparency with the aim of periodically exposing our will and assured security. Both factors add positively to CNP.

As long as our nuclear doctrine and its operationalising is sufficiently transparent; credibility of the arsenal assured and periodically emphasized; and the vulnerability of the arsenal minimized, nuclear forces will remain a factor that changes and limits the military application of power.

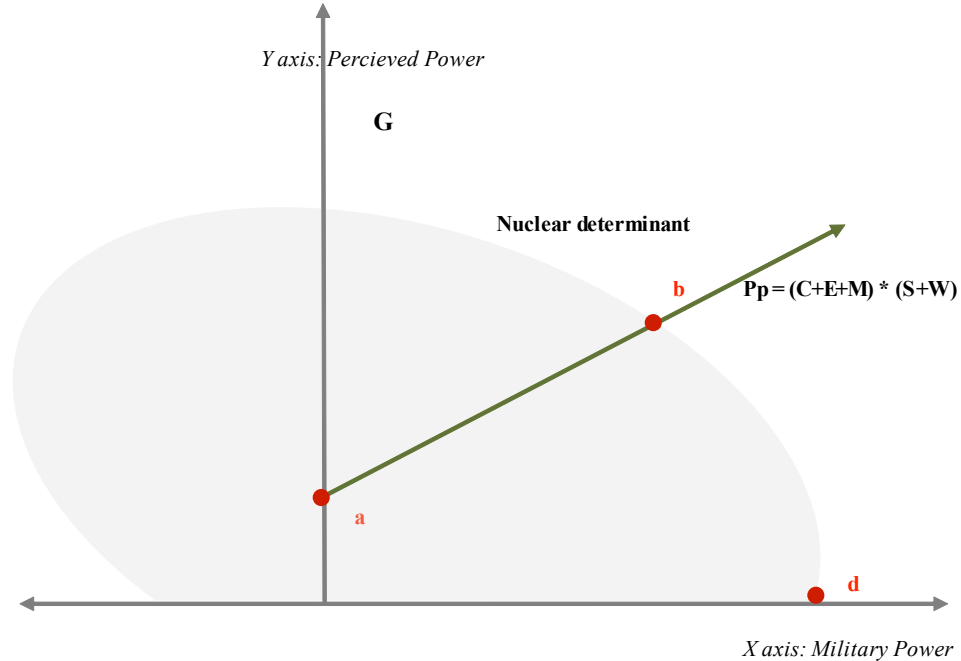
Effects of Determinants on Perceived Power – The Matrix

The matrix at Fig 2 is indicative of the effects of the determinants on perceived military power and provides cues as to how best it could be enhanced. The Ray Cline expression for perceived power has been adapted in order to develop the matrix. The grey wash is suggestive of the impact of credible nuclear forces to circumscribe the limits to which conventional power can be applied, the spread of the wash into the -X region would imply that under certain circumstances conventional military power may be totally inhibited, also when credibility of the deterrent breaks down or when doctrine abandons nuclear capability to a potential that does not translate to an operationalised arsenal then the limits imposed on conventional warfare are nonexistent.

In Clines equation, perceived power (P_p) = $(C + E + M) * (S + W)$, C and E are taken as positive constants; for in India's case, demography in terms of work age, technological grounding and geography (C) is positive till at least 2050; economic growth (E) is positive in the 8% - 9% range and is likely to remain in that region for the next decade or more. Strategic purpose (S) and the will of the people (W) are taken as 0.5 each, as may be appreciated, this is game changing factor which through soft means can alter the slope of the line a-b enhancing perceived power. The equation in this instance is linear and is represented by the line a-b. The point (a) is taken as the origin since even if military power due to obsolescence or technological anachronism is near zero, there remain the other elements of CNP that contribute to (P_p). At the same time a situation defined by point (d) is also possible when the internals of the country are in turmoil and obsolete hardware makes up military power (Indonesia in the 1970s). By increasing

weightage of the determinants through investments the slope of a-b can be altered to enhance perceived power.

Fig. 2 **Effects of Determinants on Military Power**



(Source: Author, September 2010)

Note: We have adapted Ray Cline's equation of Perceived Power using weightages as applied in the previous section of this paper. These determinants are subject to the limits set by the nuclear determinant.

C & E are taken as constant positives, demography (C) in terms of work age and technical qualification is positive till at least 2050. Economic Growth (E) is positive in the 8% to 9% range.

M is the summation of the weightages while S and W are the intangibles represented by strategic purpose will of the people and resolve of leadership.

Conclusion

In the past, as peoples of the Indic civilization, we as a society were marginally troubled by the role that the military played in National Power. If our fate was ruled by our '*karma*' or by providential laws then, that was as satisfactory as if there had been no such divine intervention; for we assumed that the future of mankind would be secured by the activities of free and intelligent people. If even this was not quite satisfactory, nature's law of inexorability took over. Unfortunately by the middle of the 20th century such convenient illusions were well and truly dispelled. Civilizations and empires had collapsed with increasingly rapid frequency and at times in violent storms, leaving in its wake broken ideologies, battered leadership and impoverished societies.

At the heart of the matter lay power. Its quest, accretion and relevance have been the only constant through all of history. It has provided a rationale for stability and, in its own right, been a regulatory agent. We have noted that given the international system that we are a part of and the realism that pervades it; of all the determinants of power, military muscle is explicit in its application and at the same time implicit as an expression of a country's will to power. An attempt has been made to place this abstraction within the larger framework of the nation's standing, or in Fukuyama's words the 'Stateness' of the country. While the task of the international system has been to tame the exercise of power, it is a paradox that the same power provides the facility to regulate and control its exercise. Nuclear power takes the debate to its logical extreme of absolute destruction and in arriving at this macabre conclusion it provides the basis of drawing boundaries and limiting conflicts.

We have in the course of our debate examined the views of several scholars on the subject and noted in some details the Chinese approach to the formulation of CNP and the manner in which they have transformed their centralized approach, which to some schools appear as a weakness, into strength. Decision making that is command and control and integration of our resources including civil military relations, technology adaptation and our propensity to operate in stove pipes are areas of weakness that we must remedy. Failing which our ability to rise beyond the tactical will remain an enduring impediment. The sage voice of Kautilya reminds us that the military power of a state is not just the mere counting of armed physicals, but also of '*mantra yuddha*' the power of good policies, sound judgement, precision command, analysis and good counsel.

(Word Count 7941)



Vice Admiral (Retd.) Vijay Shankar PVSMA, AVSMA, ADC, holds an MSc in Defence Studies and is a graduate of the Naval War College, Newport, Rhode Island, USA. He is the former Commander-in-Chief of the Andaman & Nicobar Command, Commander-in-Chief of the Strategic Forces Command and Flag Officer Commanding Western Fleet.

On retirement after 45 years in uniform, he is settled in the Nilgiris. He passes down his operational and strategic experience through articles in professional journals and participation in seminars. He lectures at the Staff College, Higher Command College, the United Services Institute and the National Maritime Foundation. He tenanted the Admiral Katari Chair of Excellence at the United Services Institute. Internationally, his participation in the Track II Ottawa Dialogue seeks to provide a new paradigm for nuclear security on the sub-continent.

End Notes

- ¹ 1648 circa Treaty of Westphalia between Spain and the Dutch acknowledged to be the beginning of modern international relations based on mutual recognition of State sovereignty.
- ² Kautalya: The Arthashastra. LN Rangarajan (Ed., Rearranger and Translator). Penguin Classics, India, 1992.
- ³ *Ibid*
- ⁴ *Ibid*
- ⁵ Thucydides. History of the Peloponnesian War Penguin Books Ltd. 1954 Pgs 400-8 ‘The Melian Dialogue’
- ⁶ Polibius on Roman imperialism Regnery Gateway Inc. 1980, pp. 216-7
- ⁷ Kautalya: The Arthashastra. LN Rangarajan (Ed., Rearranger and Translator). Penguin Classics, India, 1992.
- ⁸ Gibbon, Edward. The History of the Decline and Fall of the Roman Empire. Ed. JB Bury. Methuen & Co. London, 1896.
- ⁹ Zakaria, Fareed. The Post-American World, WW Norton and company, New York 2008, pp. 167-8
- ¹⁰ *Ibid* p.174
- ¹¹ Knorr, Klaus. The Power of Nations: The Political Economics of International Relations. Basic Books 1975.
- ¹² Singer, David. ‘The Correlates of War. Testing some Real Politik Models’. NY The Free Press 1980.
- ¹³ Cline, S. Ray. ‘World Power Assessment: A Calculus for Strategic Drift’ Washington: Center for Strategic and International studies, Georgetown University, 1975, p.11.
- ¹⁴ Clausewitz, Carl Von. ‘On War’ Princeton University Press, 1976, p.75.
- ¹⁵ *Ibid*, p.77.
- ¹⁶ As defined by Professors Hu Angang and Men Honghua in their 2002 study (updated in 2007) on China’s Comprehensive National Power and Grand Strategy.
- ¹⁷ Office of Management and Budget of the US Government, R&D data, as quoted in the The American Association for the Advancement of Science report, <http://www.aaas.org/spp/rd/fy2013/#Defense>