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## Editor's Note

As protests over the Agnipath scheme raged across the country, the government has announced reservations in job vacancies in sectors for around 34,000 “Agniveers” who will retire after four years of service. However, the data from the Director General Resettlement -- the nodal body responsible for rehabilitating retired military personnel -- shows that states, central PSUs, including defence PSUs, and the Central Armed Police Forces (CAPF) have failed to recruit against the vacancies reserved for veterans.

According to a Department of Personnel & Training (DoPT) provision, 10 per cent of the vacancies in central government jobs in Group C and 20 per cent in Group D are reserved for veterans. For public sector banks, central public sector units, and the CAPF, the reservations are 14.5 per cent and 24.5 per cent, respectively. But, as of June last year, ex-servicemen constituted only 1.15 per cent of the Group C strength and 0.3 per cent of the Group D strength in 94 of the 170 central PSUs.

Data shows veterans fail to find govt jobs after retirement. Figures show a meagre 2.4 per cent of the ex-servicemen who applied for a government job could get one as the Centre and the states have been unable to recruit against the reserved quotas. The reservation for Scheduled Castes, Scheduled Tribes, and Other Backward Classes is statutory and implemented by all Central government organisations. On the other hand, the reservation made for ex-servicemen is executive in nature. Without statutory backing, the DG Resettlement cannot perform the duties assigned to it diligently.

Public sector undertakings (PSUs), ministries, and officials of Sainik Boards have blamed it on the lack of skill among ex-servicemen. They say veterans' inability to qualify in selection exams is one of reasons for this. Also, non-recognition of qualifications obtained from the military are reasons why their recruitment has remained significantly low, pushing them towards low-skill jobs.

In this issue, we have an article on Agnipath by Gen Gadkari which analyses the pros and cons of the scheme. Gp Capt Bewoor in his piece on "The DSSC report" debunks the US author's belief that Professional Military Education PME in India is rather poor. Lt Gen Mathews in his article on Arthashastra opines that India in 21st Century and as emerging power needs a Comprehensive National Strategy with clear cut enunciated National Priorities and these are required to be derived from our ancient all-inclusive treatise of Arthashastra written 2400 years ago.

Capt Milind Paranjape has reviewed two books ; ' To rule the Waves" and "Land" which highlights how the hunger for ownership shaped the modern world.

Dr. V.K. Saraswat in his article brings out the Historical Dimensions to Defence Technology Development and the Need for a Transformational Strategy. Maj Gen Mahajan writing about the DAP 2020 has concluded that the new procedure will help realize the dream of our PM to make the country Atmanirbhar in Defence production. The issue closes with a brilliant analysis by Mr Umranikar of the National Security policy of Pakistan.

Enjoy the monsoon and read on.



**(BN Gokhale)**  
Air Marshal (Retd)  
Director, CASS

# AGNEEPATH : A GAME CHANGER?

 BY MAJ GEN NITIN GADKARI

On the 14th of June 2022, the government of India (GOI) announced the Agneepath scheme in a well-orchestrated presentation and press conference under the stewardship of the Defence Minister of India, Mr Rajnath Singh. Present with him on stage were the three chiefs of the Services, the Defence Secretary, and the Secretary of Military Affairs in the CDS office. The scheme relates to how recruitment for Jawans/Sailors/Airmen would ensue in the armed forces. The broad contours of this scheme are: Recruitment in times to come starting from the above-mentioned date onwards would be under the 'Agneepath' system, and the recruits would be called the 'Agniveers'. The scheme envisages a maximum duration of four years for the selected person, who would receive six months of training before induction into the armed forces. After four years, the services would retain 25% of these Agniveers in the forces, and balance of Agniveers would let off with a severance (Seva Nidhi) package of around 11.7 lakhs INR (approx.). The retention would be voluntary, but only 25% of them would make the cut. The selected 25% would join the regular army cadres and be governed by terms and conditions as existing today for the serving Jawans and NCOs (Non-Commissioned Officers) of the Indian Armed Forces. The Agneepath scheme is also called the Tour of Duty (TOD) concept.

## Genesis of TOD

Per the details made available in the conference, deliberations on the subject have been on for the last two years. K Subramaniam's Kargil Committee Report articulated the need for a change. The committee had recommended a younger profile for the rank and file of the armed forces. While this may be the initiating factor, the increasing Pay & Pension bill of the serving and retired armed forces personnel became the motivating factor behind the change. For very long the government has been asking the Armed Forces to adopt ways and means to downsize with a view to reduce the Pay & Pension Bill. Downsizing was resisted to by the three services on some pretext or the other. The two-front war, resurgence of hybrid warfare, Skirmishes in Eastern



Ladakh with China were some of the reasons cited as the reasons for inability to downsize on operational grounds. While innovative solutions could have been found, the forces did not heed to the government's warnings. The axe had to fall somewhere. The government was feeling the burden of ever burgeoning defence budget, of which Pay and Pension formed a significant part. The increase in the Pay and Pension bill meant the government could afford less and less Capital outlay which was the modernisation budget. Successive governments tried and appealed to the forces to find a solution to capping this increase, but no solution was in sight.

Lack of employment for the youth has been a concern for the GOI, BJP the ruling party. In making promises of providing jobs to millions of unemployed young people, the government has failed. Some due to its making and some due to the two years of Corona pandemic. The voices in the opposition were getting shriller. The government had to do something to make a difference.

All the above have contributed to making a change. The change came in form of a new recruitment policy for the Indian Armed Forces. Was it right to experiment a new recruitment policy for the Armed Forces of nation, before any other organ of the state? We will analyse it in the article.

## Contours of Agneepath

The new scheme 'Agneepath' applies only to the PBOR (Personnel Below Officer Rank) and not to the 'Commissioned Officer' cadre. 'Agneepath', has been hailed by the three service chiefs, as a transformational change for the nation and the Indian Armed Forces. It envisages the need to inculcate young blood, motivated to give their best to the nation. Also encompassed is their ability to imbibe newer technology and use their ability to grasp the technological innovations in weapon and allied systems in driving the Revolution in Military Affairs in the armed forces. The belief that the young crop of soldiers is better suited to align themselves to modern technology than their older peers is at the base of this assumption. With this aim, the government has, under the Agneepath scheme, clubbed the recruiting age between 17 to 21 years. (Only 2022 is an exception in which the upper limit is increased to 23 years).

In the presentation given in the presence of the Raksha Mantri, the Secretary of Military Affairs announced that before making the final draft, the Panel had studied models of militaries of 14 countries, including the US, China, the UK and the Russian Military. This model has picked the best features of all the

models studied. Principally there are three modes of recruitment, the Regular, the Contractual and the Conscription. The Agneepath model has picked the first two out of the three; The Contractual model turned Regular. Hence forth recruitment in the three services would only be through the 'Agneepath' Scheme. Thus, under the new recruitment agreement, the recruits would be on a contract with the armed forces for the first four years. For this contract, they would be handsomely paid during their Service and at the end. The recruits would continue to draw around 21000/- INR every month as pay, and all other allowances based on the place and nature of work. The balance (30%) of their payment will go to an interest-bearing corpus where the government will pay an equivalent amount in his saving corpus. The Agniveer's pay will be on an upward rising scale where he will get a 10 % hike every year. When he is ready to leave at the end of his contract of Tour of Duty, he will get a Seva Nidhi severance package of approx 11.71 Lakhs in his hand, which will be tax-free.

The original group would have the choice to volunteer for an extension of their Service for up to 15 years. Amongst those who apply, a 25 % quota of the original numbers would be retained in Service based on their performance in the last three and half years. This performance assessment will be fair, transparent and competence-based, the same has been reiterated by the three chiefs. The retained 25 % would join the crop of regular soldiers, and become a part of the mainstream Army/Navy /Airforce. They will enjoy the employment terms applicable to the regular soldiers today. This year (2022), a total of 44000 Agniveers will be recruited into the Indian army, and this quota will increase yearly. The recruitment will start in June 2022. This scheme would stabilise when the ratio between the youth and experience reaches 50 -50 to give the armed forces the optimum cutting edge in its fighting prowess of youth and experience.

Important in the features of the scheme is the curtailing of the training period across the board for all recruits. It would now be for six months. All recruit training establishments would restructure themselves for a new curriculum keeping the training period in mind. The curtailing of training has invited the maximum criticism from all quarters and is discussed later in the paper. Also intrinsic to the model is a progressive increase in recruits trained to keep pace with the high severance ratio of 75 %. This feature would necessitate the creation of new training centres or an increase in capacity in the existing ones.

## Execution of Agneepath

As per the three chiefs, all the three services are ready to dip into the new scheme. They have war-gamed and discussed the modalities, including the implementation over the last two years. They have plans to modify their institutions to meet the new requirements. Thus, the recruitment for the army would start within 30 days of the announcements. The forces believe that no test beds are created as the first batch of recruits under the scheme would form the first test bed. Any corrections to the scheme would be made as it matures and lessons are learnt from mistakes committed. The Chiefs have reiterated that the government has given the individual services the powers to make mid-course corrections should a need arise.

### **Imperatives of the Agneepath Scheme:**

- In future, all recruitment will be on a four-year contractual basis.
- The age for recruitment will be 17 to 21 years.
- The training period for recruits through the scheme will be six months.
- On completion of the four-year term, the 'Tour of Duty' period, Agniveers can ask for retention in Service. The Service would retain only 25% of the original strength. The selection amongst the volunteers would be merit-based. The merit would be based on their assessed performance with their units during their tour of duty.
- Those who leave will get a severance package of approx. 11.71 lakhs with no other benefits of an Ex Serviceman. Those selected will then be governed by the terms and conditions applicable to the regular soldiers today.
- Recruitment for all classes would be on an all-India basis.

Based on the aforementioned imperatives, the services would roll out the Agneepath recruitment scheme in the armed forces. The services have not expressed any problems envisaged for rolling out the scheme. They are sure they can confront the issues as and when they appear. Yet all the three services would make some noticeable changes. Chief amongst them are:

- Change the training curriculum for the recruits to fit the six-month training period.
- Create more training infrastructure as more recruits would be required to match the higher layoffs. (This is explained with the help of a model later in the paper).

- Induct into fighting formations soldiers who are not as well trained as earlier. Hence, fighting units must also evolve methodologies to train the new Agniveers.
- Postpone personnel selection for higher skill level trades and schedule the same after four years of Service. (This may in contrast to the aim of the scheme but may be necessary due to prolonged training period to skill the personnel)
- Set up an administrative mechanism to deal with the large number of recruits leaving the Service after four years. This set-up would mandate additional offices, staff, and housing facilities.
- Set up internal assessment mechanisms for assessment. It may contradict the close system of ACRs followed by the services. (Though each Service has a different method, no assessment portion can now be 'Hidden', as it would need to be open to public scrutiny).

## Analysis of the Agneepath Scheme

The paper has already enunciated the reasons the government adopted this scheme for the Indian Armed Forces in the preamble. Three entities are involved: The Armed Forces, The Recruits & The Government. An ideal situation is the one in which all three benefit, meaning getting into a Win-Win situation. But this state is utopian. Who shouldn't Lose? The obvious answer is the Indian Armed Forces. They are the prime saviours of the nation in case of any external threat; thus, their interests must be paramount. Has this happened? Not many people in the know of things feel that. Have the recruits lost something? Going by wide-scale protests that erupted almost immediately after the announcement, the potential recruits don't seem happy about the new scheme. In which case has the government gained? It would appear so; how else they would roll out a Lose-Lose scheme?

### Points in Favour

One has to grant the GOI and the Armed Forces, the originators of the scheme, that it was no longer conducive to continuing with the status quo. A change was inevitable. The two primary driving compulsions for the shift are the increasing need for a fitter and a tech-savvy armed forces and the second reduction of the burgeoning Pay & Pension bill for the Armed Forces. Will 'Agnepath' address the first compulsion? It's a conjecture, and only time can

answer that question, for the pool for recruitment remains the same. Some may argue it will dilute as Armed Forces would no more be the first preference due to its shortcomings on the permanency of the job. Will the second condition be addressed? It would appear so given a 15-year perspective.

Another angle is the demographic issue. It is now well known that India is in the best part of the demographic curve. Most of the Indian population is below 35 years of age, thus giving a youthful profile to the population. It would become obligatory for the government to exploit this advantage. India's median age is 28.7 years, as per CIA Factsheet. India has more than 45% of our population, which is below 25 years. It is a known fact that the age curve of a nation continues to slip towards higher age as time passes. China is grappling with a crisis in which the age curve will render most of its working population out of the age bracket (60 Years) in the next ten years. Such an opportunity comes only once in the lifetime of nations, and we as aspiring superpower cannot waste it. Could this be the driving force to change the recruitment process? Agneepath, in its inception, visualises higher recruitment percentages. Inherent in the scheme is an assumption that younger recruits would be more eager, fitter, and enthusiastic in their work. At the same time, they would be better suited to adapt to the changing technology.

The Tri services panel was at pains to explain that the Agniveers who do not make the cut would benefit substantially as they would get a handsome severance package of around 11.71 Lakhs INR. The panellists stressed that the Agniveers would get a CV unmatched with any of their counterparts at that age and hence would be the first of the picks for industry and allied government jobs. The author tends to agree with this assumption. Given the current free-for-all undisciplined youth cadres who throng any employment centres, a pool of well-trained mature and combat-experienced Agniveers would command a greater demand in the civil world. This situation assumes that the government does not come forth with any concrete proposal post-relief. Should the government realise that this pool is a sure shot fit in specific industries and absorb them post their TOD, it would be a winning decision.

## **Criticisms**

The points mentioned above are the benefits of the Agneepath Scheme. Yet many criticisms are floating on the Social, Print and Electronic media. The veteran community articulates the majority of it. It would be incorrect to presume that their concerns are not valid. Most of their concerns stem from real experience from their own TODs. Thus, to discount what they are saying

would be foolhardy. Most of the criticism stems from the hush-hush and hurried nature of the implementation of this scheme. There was hardly any public debate or a white paper circulated for anyone to debate the pros and cons of the scheme. One fine day, the government announced that the Agneepath scheme would be implemented within a month. There could have been a better way to commission such a scheme with the knowledge of the people of this country. It would be hard for the Forces or the government today to explain to the people, 'How do the three Services benefit from the scheme'? Besides giving the now repeated jargon of youthfulness and tech-savvy youngsters, there seems to be no gain for the forces. The two a/m are unrealised gains, and only time would lead to the correct conclusions. Especially when the same could be achieved by lowering the recruitment age as the pool remains unchanged. Were the Services party to asking for a change? Was the present system so bad that it necessitated a change? The answers to these questions would be negative. A change should have come after a debate or with a pilot project to assess the pros and cons.

Doubts have been expressed if these new Agniveers could attain adequate proficiency in basic soldiering skills or would they become passengers. The loudest criticism stems from lowering the training period and sending raw recruits to fighting formations. Will it compromise the operational functioning of the fighting formations? Most veterans have expressed the fear that inadequate training in the beginning would lead to operational inefficiency in fighting units and increase the burden of the Commanding Officers. These are significant concerns and need to be studied on a pilot basis before a carte blanche is issued to change the entire system.

Also expressed is the fear that the system breeds competition amongst peers. The competition to be a part of the 25% who would be retained. Competition on account of self-interest amongst peers is a death nail for team spirit, which is essential in junior level combat. Soldiers depend on each other to save their lives. Introducing cut throat competition amongst them due to insecurity of job is injustice to the ethos of team spirit. It is a valid and serious concern. It would directly affect the operational efficiency of fighting formations.

From the perspectives of the recruits, the limited period of four years of their TOD is their primary concern. What will they do after four years? They do not think they would gain skill sets which would be attractive enough for industries outside to offer them their second employment. They feel insecure that they will have to battle the system again after four years. So, they would fight two battles within five years. The monetary remuneration is not lifelong lasting and thus does not suffice.

## Mathematical Model

Below is a mathematical model of how Agneepath recruitment scheme would work for an Infantry battalion, the basic unit of a fighting force in the army. For other services and units, the logic would be an extrapolation of the arguments made.

### **Assumptions made for the model are as follows:**

- Strength of an Infantry battalion is 800
- The wastage rate yearly is 5% = 40 personnel, based on 60,000 personnel retiring annually. Add to that mortality and boarded out rate, it works to approx 5% in a 1.3 to 1.4 million strong force.
- The replacements would flow equally in all infantry battalions to keep their mandatory strength equal to 800
- 25% of Agniveers would join the mainstream army after four years, and 75% will leave.

### **(See The table on next page)**

The table above examines the effects of induction of Agniveers in a standard infantry battalion. Based on the five per cent wastage rate, 40 personnel would be leaving the battalion every year. Consequently, as reflected in Column A, 760, regular personnel will remain in an infantry battalion and to maintain the requisite strength, 40 Agniveers would be inducted into the battalion in the first year. The above would make the percentage of Regular Vs Agniveers (given in Columns C & D) 95% and 5 %, respectively in the first year. The inflow of Agniveers is equal to outflow of regulars till the fourth year. In the fifth year, the change occurs. The number of personnel leaving the battalion goes up to 70 as additional 30 Agniveers who finish their duty tour also join the regular retirees. In the fifth year, the Regular Vs Agniveer ratio will be at 76% to 24%. But to match the additional personnel going out, recruitment would have to increase, and 70 new Agniveers will have to be inducted into the battalion. The increase in numbers has connotations at the national level. The quantum of recruitment has to increase by more than three fourth.

The cycle is four years hence the numbers for each cycle remain more or less unchanged. But at the beginning of a new cycle, the numbers change. E.g. for the 9th year, the recruitment required per year is 92 as more Agniveers get converted to regular soldiers. The number jumps from 10 to 18, almost double. It is based on the premise that the battalion strength was maintained



	STR OF INF BN	800								
				A		B		% of (A)	% of (B)	Remarks
Yr	Retired/ Year	Retired A Veers	A Veer Converted to Regular/Y	Reg Pers in the Bn	A-veer inducted	A-veer Pers in Bn	Total A+B	C	D	
1st	40	0	0	760	40	40	800	95%	5%	
2nd	40	0	0	720	40	80	800	90%	10%	
3rd	40	0	0	680	40	120	800	85%	15%	
4th	40	0	0	640	40	160	800	80%	20%	*30 A veers will retire
5th	70*	30	10	610	70	190	800	76%	24%	
6th	70	30	10	580	70*	220	800	73%	28%	
7th	70	30	10	550	70*	250	800	69%	31%	
8th	70	30	10	520	70*	280	800	65%	35%	
9th	92	52	18	498	92	302	800	62%	38%	52 A Veers Retire
10th	92	52	18	476	92	324	800	60%	41%	
11th	92	52	18	454	92	346	800	57%	43%	
12th	92	52	18	432	92	368	800	54%	46%	
13th	109	69	23	415	109*	385	800	52%	48%	
14th	109	69	23	393	109	407	800	49%	51%	
15th	109	69	23	371	109	429	800	46%	54%	
16th	109	69	23	349	109	451	800	44%	56%	



at 800. The model stabilises around the 13th year based on the parameters taken. That year, the regular soldier strengths became equal to the Agniveers inducted into the battalion. By then, the first batch of Agniveer has 13 years of Service and has been in the battalion for nine years as regular soldiers. This leads to the optimum 50 -50 old and new combination. It is mathematically accurate, but on the ground, the regular cadre would have soldiers who are the product of the Agniveer scheme more than the old recruitment scheme. After 13 years, the scheme becomes skewed in favour of numbers of Agniveers, and thus the army starts to lose its cutting edge. Where to stop or modify the scheme would depend upon the three services and the government, but by then, enough data and understanding of the pattern would have emerged.

The model is generic and should be subjected to sensitivity analysis. If the wastage rate increases, the number of Agniveers will increase in the battalion faster. It would be the other way around if the wastage rate went below 5%. We can draw such deductions through sensitivity analysis. The model gives a good idea about how the demographics of old Vs new would play out in an infantry battalion, a standard unit of the Indian army. Many deductions can be made by studying the a/m model. E.g at what percentage would the fighting efficiency of a unit will be deemed to be compromised, etc.

## Recommendations

Is the scheme etched in stone? No. The government spokesman in many TV debates have mentioned that the scheme is open to modifications based on shortfallsexperienced. The view outside the government is, the scheme is untenable as it would disturb the ethos and team spirit of fighting units. Their demands are to scrap the scheme and look for another modified Agneepath which will have a healthy mixture of the old and the new. The argument that a change which disturbs the entire fabric of a system is always short-lived and dangerous. Agneepath in its current form has changed the way recruitment will be done in the forces. It also changes the paradigm of the exit of soldiers. Both these are revolutionary and untried. To carry them forward at the cost of national security is a serious concern as the nation may pay a heavy price later.

In view of the severe protests and criticism that the scheme is meeting in public, it is recommended that a temporary halt be given to 'Agneepath', and a Committee of experts be constituted which should include both serving and retired members from government ministries mainly the defence and finance. The committee should be mandated to find the best format for a new Agneepath scheme which would

satisfy aspirations of all stake holders. This can be done within six months after which a modified Agneepath scheme can rolled out for the coming years.

## Conclusion

The nation has a choice whether to make a change or to continue on the beaten path. Given this dilemma, any rational person would opt for a change. It is hard to determine if the government went for the scheme with its back to the wall due to the ever-increasing burden of pay and pensions, or was it a genuine concern for the Kargil committee report to have a younger profile? For the armed forces. Armed Forces are known to be averse to change. All important changes in the armed forces are top-driven by political authorities. Many of them have been lauded later and called successfully. The CDS is a fine example, as is the Integrated theatre commands now keenly sought by Indian Armed Forces. All these are Politically driven changes for the betterment of the forces. A change goes through the Kubler-Ross Change curve given below.



The above is self-explanatory, and change does manage to integrate itself with the system with time.

While it is too early to state if this decision to implement the Agneepath scheme would go through the first cycle or not? Agitation and violence have

erupted across eight states as this article is being written in protest of this scheme. The government is showing its resolve to push ahead with it. The majority of the aspirants are against the temporary nature of this TOD concept. They want a more permanent solution to their woes. The Home Minister of India has come out in his tweet to the protesting youth, promising them preferential treatment after their TOD in getting employment in the CAPF (Central Armed Police Force). Something in writing as a government undertaking might go a long way in assuaging the angry feelings of the youth. The frustration is enormous because there has been no recruitment in the Armed Forces for the last two years due to Pandemic restrictions. And when the young aspirants were looking to compete, the goal post is changed. The violence and protest will die unless they take a political colour, like the farm protests, and they also settle down on the Haryana, UP border for a long, drawn-out match with the government. There are enough anti-government forces who would drool at getting such an opportunity. Such a move would not be in the interest of the nation's youth and, indeed, not the Armed Forces' interest.

If the recommendation expressed above made by many veterans in the Public debates is paid heed to, and Agneepath does get a temporary halt, it would augur well for the nation. May be Agneepath in a new modified is a better option.

One way or the other, let us hope 'Agneepath' or the 'Modified Agneepath' is an idea whose time has come, and the forces have a change for the better.



**MAJ GEN  
NITIN GADKARI**



## ABOUT THE AUTHOR

Maj Gen Nitin Gadkari has had a distinguished career for 37 years in the army. He was commissioned into the Regiment of Artillery in June 1977. He commanded an artillery Regiment during Kargil operations in the strike corps in the western sector and an artillery brigade in a counter-terrorism role in the state of Jammu & Kashmir. He specializes in J&K and has done his PhD on "Motivation for Terrorism- A Study, focusing primarily on the J&K. He has a keen interest in security matters and has written in number of defence journals on allied subjects. He headed the prestigious College of Defence Management (CDM) Secunderabad. He retired on 30 June 14 from the Army War College, Mhow. He has authored two books: Growing Sino Nepal Relations and Policy Implications on India, a book which came out of the research work he had done for CASS and his second book is a work of fiction; Oscar Tango (On Target).

# KAUTILYA'S ARTHASHASTRA AND ITS RELEVANCE IN 21ST CENTURY

 BY LT. GEN. MICHAEL MATHEWS

“Without political will and good governance, no economic goals can be achieved. Without economic and administrative governance, populist ambitions cannot be realized in their true spirit”

## INTRODUCTION

**A**rthashastra is the seminal treatise on statecraft by Kautilya of the fourth century BCE era which ushered in and assisted the establishment of Mauryan Empire, the first politically united Bharat. The treatise since has been ingrained in the Indian Culture and was followed till 12th Century without much dilution. During the later Medieval Period and Modern Period, it seems to have lost its sheen and after British Rule as a Nation our thinking was prejudiced by the Western Culture and the priceless document languished as unknown to the world. Professor R Shamashastry rediscovered the book in 1904, published in 1909, and wrote its first English translation in 1915. Ever since then, only two more translations that are English have been written. One by Professor R P Kangle and the other by Shri L N Rangarajan. Now the question arises is, whether the treatise written in 4th Century BCE is still relevant in 21st Century?

There had been a significant shift in the political, economic and social conditions in the past 2400 years. From the autocratic and monarchial system of governments many nation states have shifted to the democratic form of government. The dominance of superstitious attitudes of the society has been replaced by the scientific outlook. Agriculture dominated economies have shifted to manufacturing and service activities. Internet revolution has virtually made the world borderless even in a politically demarcated world. Kautilya developed his theories based on the ultimate superiority of the King and the Kingdom as a way of governance in synchronisation with the social, economic political and security conditions prevalent in his time. But, Kautilya's

Arthashastra contains some universal truths that surpass the boundaries of time and space. Infact its relevance is increasing day by day when the nations are grappling with myriad complex issues for suitable permanent solutions, but in vain. The thoughts of the modern strategists, economists and diplomats are based on paradigms that may not be time tested. On the other hand the human progress portrayed in the Arthashastra visualises the symbiotic progress of spirituality, moral values and materialism which has stood the test of time. Kautilya's approach to various problems was very scientific, rational and practical; it was not dogmatic and utopian. The real test of usefulness of any treatise is not just its comprehensiveness or just the beauty of its logic, but also the demonstration of its practical application in real life situations with enduring success, for which the Mauryan Empire bears the testimony. Kautilya the perceptor and his masterwork the Arthashastra are much misunderstood. Chanakya is maligned and often ridiculed as a teacher of unethical, not to say immoral practices and as an advocate of the theory that "the ends justifies the means". The only theory anyone recalls is the 'mandala theory', "Every neighbouring state is an enemy and the enemy's enemy is a friend".

This popular view is not so simplistic but also untrue. The paper endeavours to emphasize the relevance of

## THEME OF ARTHASHASTRA

प्रजासुखे सुखं राज्ञः प्रजानां च हिते हितम्  
नात्यप्रियं हितं राज्ञः प्रजानां तु प्रियं हितम्

"In the happiness of his subjects lies the king's happiness; in their welfare his welfare. He shall not consider as good only that which pleases him but treat as beneficial to him whatever pleases his subjects"

Kautilya's Arthashastra treated populace as the centre of gravity and the priority was symbiotic relation between the ruler and populace focusing on their welfare. Any nation irrespective of the system of government it has, which deviates from this theme is bound to perish even in today's modern world and it thus opens up chapter for the relevance of Arthashastra in contemporary world dynamics.

## WHO WAS KAUTILYA?

Kautilya is also known as Vishnugupta and Chanakya. Name Kautilya was derived from his gotra, Chanakya from his father Chanak and Vishnugupta was the name he earned while undergoing preaching's at Takshila presently in Pakistan. A number of stories revolve around this enigmatic character.

Chanakya vowed to destroy the Nanda dynasty as he was insulted by the arrogant King of Pataliputra, Dhana-Nanda ordering him to leave a feast after he had started eating. He destroyed Nanda and instated Chandragupta as King. Chandragupta, who ruled from 324 to 301 BCE, thus earned the title of a liberator and the first emperor of Bharata or India. Another story related to his birth, that he was born with complete set of teeth, a sign of becoming King which was inappropriate for Brahmins. Chanakya's teeth were therefore broken and later prophesied that he will rule through another. So, Chanakya was a born Kingmaker who set out with a definite purpose to replace an unjust king with a just king. Chanakya was a fearless personality, not afraid of death, disgrace or defeat, was compassionate of the poor and evil to schemers. While embarking on this mission he found the earlier works on statecraft unsatisfactory in many respects, and he composed own definite work presenting ideas of statecraft, in his great treatise, the Arthashastra. Kautilya was the organizing genius behind the autocratic centralized state that Ashoka inherited and expanded. Mauryan political system reached a very high level of structural delineation and cultural secularization, as its traditional orientations and attitudes gave way to more dynamic decisionmaking processes. India attained political unity for the first time under the Mauryas. In the pre-Mauryan age, there was no centralised administration. History tells that Chandragupta Maurya was the first Indian king who established his rule over an extended India, an India greater than even British India, the boundaries of which lay beyond the frontiers of modern India along the borders of Persia. If we take into account the slowness of land and sea travel 2400 years ago, administering such a vast area was the equivalent to ruling the entire globe today.

## MEANING OF ARTHASHASTRA

Artha is one of the purusharthas, the others being dharma, kama and moksha. Artha has a more wider meaning than just wealth. The source of livelihood is wealth and the wealth of the nation encompasses the territory and

its inhabitants. Shastra is science, therefore the science by which the wealth of a nation is acquired and maintained in achieving the purpose of Dharma in context of a nation is Arthashastra.

## CONTENT AND FORM

Kautilya's Arthashastra contains 15 adhikaranas or books. The books have total of 150 Chapters, 180 topics and total of 6000 shlokas. It is also interesting to note that educational practices during Ancient India and Medieval Period were mostly by rote thus the literature was passed down the generations verbally. The first five books deal with 'tantra' i.e. internal administration of the state. The next eight books deal with 'avapa' or its relations with neighbouring states and the last two are miscellaneous in character. Book Six enumerates the seven prakritis which are constituents of ideal state. Book Seven contains the six gunas or the foreign policy. The eighth adhikarna is concerned with vyasanas, i.e., the calamities, shortcomings or weaknesses affecting the various prakritis. The ninth adhikarna deals with preparation for war and describe the kind of troops that should be mobilised for an expedition, proper seasons for starting an expedition, precautions to be taken and the dangers to be guarded against before starting, and so on. The tenth adhikarna deals with fighting, and describes the camping of the Army, its marching on a campaign, various modes of fighting, types of battle arrays and other related topics.

## UNIQUENESS OF ARTHASHASTRA

Arthashastra is unique since it contains universal truths which transcend the boundaries of time and space. The treatise comprehensively covers governance of state by dwelling in detail about economics, foreign policy, internal administration to include Law and Order, Human Resource Management, Conflict Management both internal and external and Utilisation of Military with an ultimate theme of Yogakshema which is the social welfare of the society. Kautilya was pragmatic in his approach and has focused on ends rather than means. He is probably the first to give more importance to treasury and prophesied that economy of a state should take priority since it was the source of power and welfare. Thus, all the aspects of a nation state whether it is a monarchy or democracy has been dealt within Arthashastra. There can be two schools of thought regarding the relevance. One may argue



this as popularly known in military parlance “situating the appreciation”, so to say that it is happening and we are interpreting the treatise to fit the narrative. The other can be more pragmatic and accept it as a reality, learn, deliberate and apply. This treatise in sanskrit can always be interpreted in different ways and the outcome is directly related to the ingenuity, vision and wisdom of the interpreter.

## CONTEXT OF KAUTILYA IN HISTORY

Various versions do exist on the date of Arthashastra whether it was written during the period of Chandragupta or post Mauryan period. But it is very clear Kautilya lived between 350 BC to 283 BC post Sun Tzu and Thucydides. Thucydides dealt with political realism wherein the state relations are constructed upon the emotion of fear and self-interest. Sun Tzu was a Military General and most of his writings revolve around tactical concepts touching operational and strategic realms vis-a-vis Kautilya’s Arthashastra which has been written as a statesman evolving Grand Strategy to tactics. Therefore, Kautilya’s breadth and depth of analysis is far superior to that of contemporary thinkers of that era. 2000 years down the line a similarity is drawn with Machiavelli and his treatise “The Prince”. Machiavelli is considered as founder of the modern political science, a discipline based on the actual state of the world and not the Utopian ideal state echoing very similar thoughts of Kautilya. Clausewitz through his

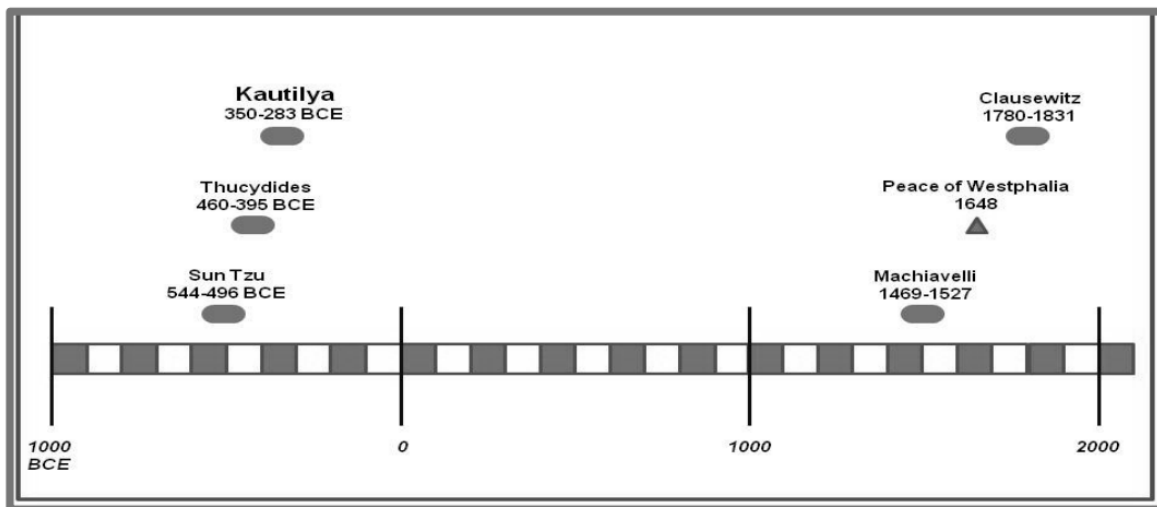
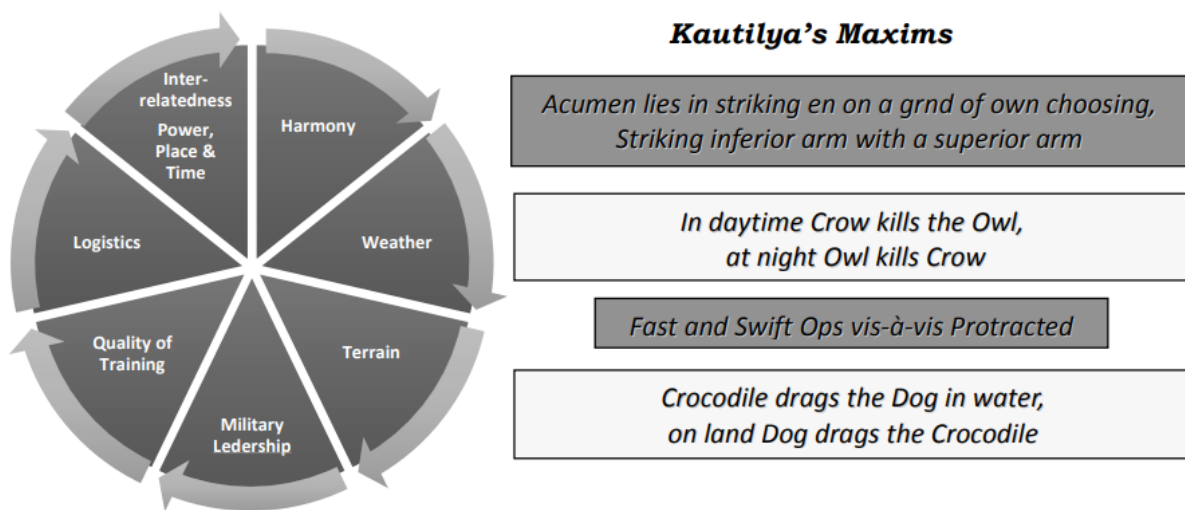


Figure 1: Context of Kautilya vis-à-vis other eminent Strategists in History<sup>6</sup>



famous treatise “On War”, initiated the concept “War is the continuation of policy by other means” and “War is an act of force to impose on enemy our will”. Clausewitz also talked about asymmetrical war including violence by non-state actors. The peace of Westphalia brought in the idea of sovereignty of nations, territorial integrity and principle of non- interference in another country’s aff airs became the basis of International Law. But the globalization, terrorism and violence by non-state actors has questioned the validity of the Westphalian system. There are commonalities between the Sun Tzu’s Art of War and Kautilya’s Arthashastra as far as Military domain is concerned; both highlighted the importance of Weather, Terrain, Military Leadership, Quality of Training, Logistics and Inter-relatedness of Power, Place and Time. Kautilya’s prowess lies in describing each aspect of Intelligence, Covert Operations, Leadership and Management of External Relations as separate operational manual. In brief, the teachings of Kautilya is much wider in scope and has maintained its relevance all through its historical timeline.



**Figure 2: Commonalities between SunTzu and Kautilya on Warfare**

## KAUTILYA'S VIEWS OF A NATION STATE

The King of the Kautilyan state is not an absolute monarch. Kautilya bound the King in an implicit social contract to ensure social welfare, internal stability,

and security from external aggression. Rangarajan defines the King's contract with society as a three-fold obligation i.e., Rakshana (protection of the state and subjects), Palana (administration of the state), and Yogakshema (welfare of the population). His views on nation state do find relevance in present context. Firstly, State has an obligation to pursue self-interest even more than glory. Secondly, no alliance is conceived to be a permanent system and even within alliance one must pursue to increase own power and manoeuvre to strengthen its position, at the same time prevent neighbouring states to align against it. Thirdly, the purpose for ruthlessness should be to build harmonious empire. Fourthly, emphasis on separation of politics from religion and theology. Infact he was the first one to propose strategic objectives should take priority over religion and morality. Fifthly, Kautilya was of the view equilibrium will never exist and Vijigishu should always endeavour to increase his power since matsya-nyaya (law of fishes) is universal. The geo-politics over the last two centuries is no different from the Kautilyan theory except for minor deviations forced upon by the environmental realities at various timelines of the history.

## ELEMENTS OF A STATE

Whatever the form of government, the presence of certain elements is essential to make a state. This is embodied as seven Prakritis. Swamin is the ruler in present context the leadership of prevailing government. Amatya is the ministers, intellectuals and diplomats. Janapada is the people, territory of the people including skills and infrastructure. Durga is the fortified capital in present context to defend the territory and people. Kosa is the treasury or economy of a nation in present context. Danda is the Army and Mitra is the ally. The Mitra or the ally is the ruler of different similarly organized state. Considering, ally to be the foreign element, the state essentially has six elements. Vyasanas are calamities which can ruin any of the prakritis and the state must guard against these. The Shastra also refers to the three powers that operate in a state. They are Utsahashakti, the personal energy and drive of the ruler, Prabhavashakti, the power of the Army and treasury and Mantrashakti, the power of counsel and diplomacy. Kautilya maintains that Mantrashakti takes precedence over both and Prabhavashakti takes precedence over Utsahashakti.

## STATE FOREIGN POLICY

Sadgunya or six gunas or policies which sums up foreign policy. Samdhi is making a treaty containing conditions i.e the policy of peace. Samsraya is seeking shelter with another king or forming an alliance. Asana is the policy of remaining quiet or neutral. Yana is marching on an expedition. Dvaidhibhava is dual policy of Samdhi with one king and Vighraha i.e the policy of hostility with other. The purpose of all policies is to grow stronger in the long run than the enemy.

## INSTRUMENTS OF FOREIGN POLICY

Alongside the Sadgunyas, there are four Upayas i.e Saman, Dana, Bheda and Danda meant for overcoming opposition. The first two should be used to subjugate weak kings, the last two for strong kings. They sum up the means that are helpful in securing the submission of other to own will. Arthashastra emphasizes that “State is fragile organization and the statesman does not have the moral right to risk its survival on ethical restraint”.

In present context, the prakritis are the essential elements of Comprehensive National Power (CNP), sadgunyas are the policies to deal with foreign nations and upayas are the means to overcome resistance being presently applied by all progressive nations.

## CATEGORIES OF VIGHRAHA

Kautilya does not limit the policy of war (Vighraha) to physical conflicts alone. Kautilya classifies war into four categories: diplomatic offensive measures (Mantrayuddha), an open war at a designated time and place (Prakasayuddha), a secret war i.e. using treachery and psychological warfare to surprise the enemy (Kutayuddha), and an undeclared war i.e. using clandestine methods, assassinations, and secret agents (Gudayuddha). The treatise talks about breaking up confederacies and oligarchies by sowing dissension using “undeclared war”. Kautilya’s principles indicate his clarity of thought for consolidating the capture of territories and creating an enduring victory.

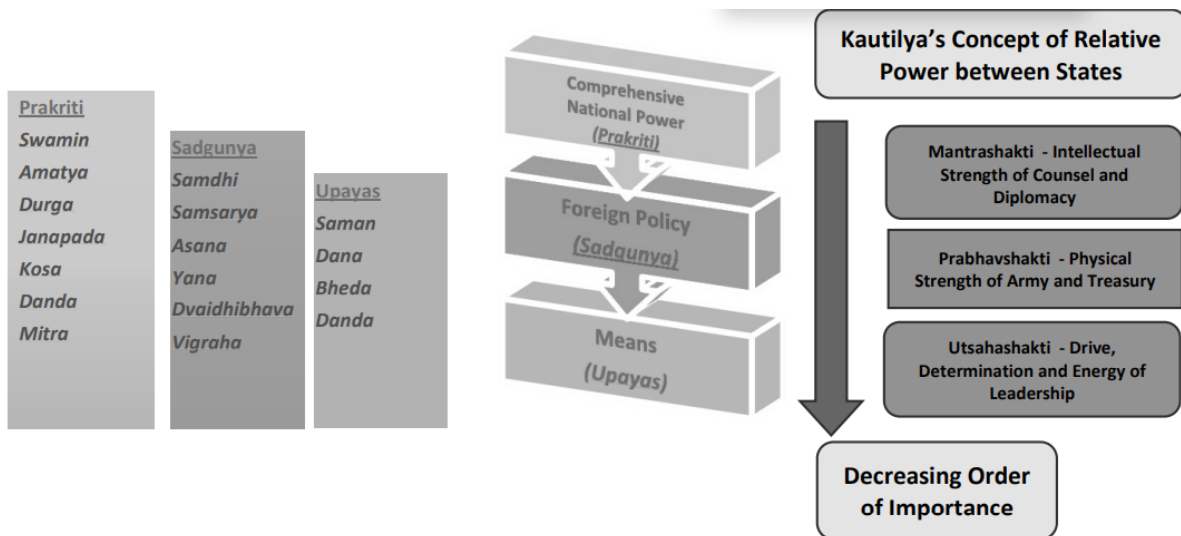


Figure 3 : Kautilya's Concept of Nation State enunciated in Arthashastra

## KAUTILYA'S STRATEGY

Kautilya's political purpose drives the design of strategy and strategic choices by the Vijigishu. Kautilya's political purpose was the happiness of the state and this objective drove the Kautilyan state's strategy. In line with contemporary emphasis on adopting a proactive strategy, Kautilya insists the Vijigishu to prevent the state's stagnation or decline. Instead, Kautilya pushes for the adoption of strategies, which would assure continued progress of the state and the decline of enemy states. Kautilya has clear ends, ways, and means in his doctrine.

Kautilya's respect for risks in strategy is evident in his elaborate examination into the aspect of Vyasana (calamities) which can reduce the strength of a state's constituent elements. Kautilya's macro strategy of optimizing and prioritizing state's Prakriti addresses the inherent risks in strategy. Kautilya's treatise provides clear territorial, socioeconomic and relative power end states for the Vijigishu's state. Kautilya's ways for reaching the end state are by optimizing the prakriti, while the means are the sadgunya (six- fold policy) as well as the upayas (four stratagems).

Kautilya's treatise includes contemporary concepts of pre-emption and prevention. For a weaker king facing a belligerent stronger king, Kautilya

prescribes pre-emptive options using diplomacy, information operations, and covert military operations. Kautilya advises the weaker king to adopt strategies, which would prevent the stronger state from launching successful offensive operations, thus preventing the capture of the weaker state. Kautilya holds contemporary concepts such as information operations and perception management as vital for the Vijigishu's policy formulation and execution. Kautilya's offensive usage of information operations is visible in his advice for breaking up rival states by sowing dissension through undeclared warfare. Kautilya indicates that a conqueror perceived as righteous will face relatively less opposition in securing the submission of the defeated king. Akin to the contemporary theory for consolidating operational victories into strategic successes, Kautilya encourages the Vijigishu to win over both the defeated king and the vanquished population through pragmatic and ethical policies underpinned on successful perception management practices. Instead of forcing the vanquished population to change their culture, Kautilya advises the Vijigishu to adopt the captured state's culture. Kautilya's doctrine sagely prescribes ethical, just, progressive, and favourable policies for the captured territories.

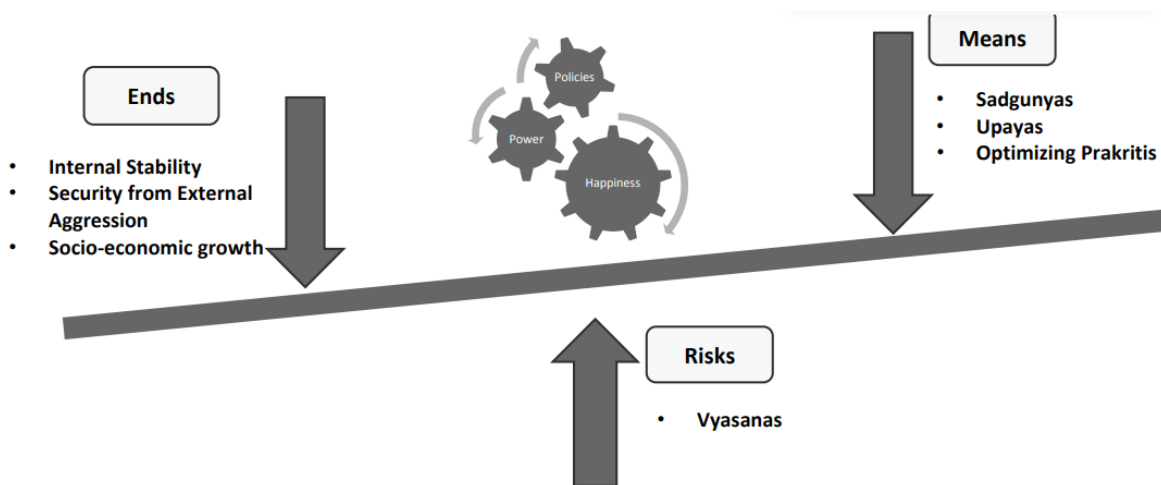


Figure 4: Kautilya's Strategic Acumen

## Comparison with the Contemporary CNP

There is a need to have a comparative look at the concept of CNP as on today and that enunciated by Kautilya. The contemporary framework of national power propounded by Ashley J. Tellis, comprises three realms: national

resources, national performance, and military capability. National resources are the “building blocks” which enable a nation to dominate “global economy and increase its hegemonic potential”. National performance analyzes a country’s capacity to convert the latent power of national resources into tangible usable power. The state’s military capability, which is the “first line of defence” against competitors in a fluid system of international politics, forms the third realm of national power. Scholars assert that political will and the populace’s domestic support for the government both play a key role in conversion of a state’s latent power into an operational reality. The Arthashastra and contemporary strategic thought are analogous in several aspects i.e. elements of power are almost similar propounded 2400 years ago.

The treatise exhibits concepts of both realist and idealist schools of thought. While remaining grounded in dharma (morality and ethics) Kautilya propounds hegemony as a solution to survival in an anarchical environment. Therefore, the nay challengers to the relevance of Kautilyan concept need to rethink.

<b>Tellis Model</b>	<b>Kautilya’s Equivalent Prakritis</b>
<b>National Resources</b> Technology Enterprise Human Resources Financial/Capital Resources Physical Resources	<b>Janapada and Kosa</b>
<b>National Performance</b> External Constraints Infrastructural Capacity Ideational Resources	<b>Swamin and Amatya</b>
<b>Military Capability</b> Strategic Resources + Conversion Capability = Combat Proficiency	<b>Durga and Danda</b>

**Figure 5: Comparison of Kautilya’s Concept and Tellis Model of CNP**

## CONFLICT RANGE

Sadgunya policy can be associated to a war-peace continuum. Kautilya's six fold policy shows the similarity to the conflict continuum of the contemporary range of military operations. A nation state will always have to deal within the war – peace spectrum and have prakritis modulated especially the Danda or the Military. Consequently, the strength of Military will have major impact on other prakritis and CNP.

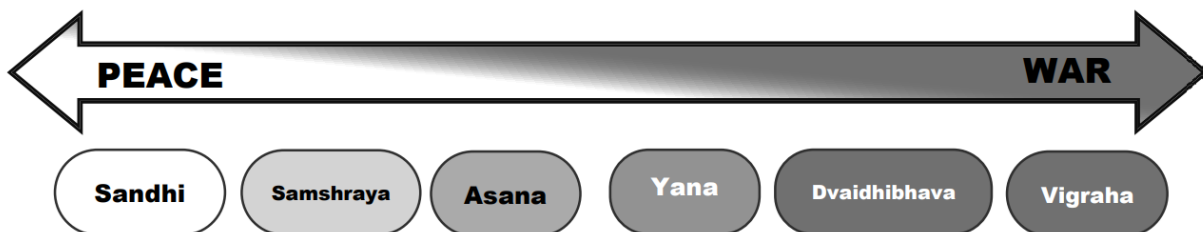


Figure 6: Conflict Continuum

## MANDALA THEORY

Kautilya based his mandala on the contention that there are twelve primary kings with Vijigishu (the conqueror) at the center: -

- A king ruling contiguous to the conqueror's territory is an enemy (ari).
- A king contiguous to the enemy but separated from the conqueror only by the enemy, is an ally (mitra) of the conqueror. A neighbouring foe of considerable power is styled an enemy; and when he is involved in calamities, he becomes assailable; and when he has little or no help, he becomes destructible; he deserves to be harassed or reduced.
- In front of the conqueror and close to his enemy, would be situated kings such as the conqueror's ally. Next to him, the enemy's ally (arimitra), and next to the last, the conqueror's ally's ally (mitramitra), and next, the enemy's ally's ally (arimitramitra).
- In the rear of the conqueror, there would be situated a rearward enemy (párshnigráha), a rearward ally (ákranda), an ally of the rearward enemy (párshnigráhására ), and an ally of the rearward ally (ákrandására).

- That foe who occupies a territory close to that of the conqueror is a natural enemy; while he who is merely antagonistic and creates enemies for the conqueror is a factitious enemy.
- The one who is situated close to the territory of the immediate enemy of the conqueror is a natural ally; while he whose friendship is courted for selfmaintenance is an acquired ally.
- A king who occupies a territory close to both the conqueror and his immediate enemy in front and who is capable of helping both the kings, whether united or not, or of resisting either of them individually is termed a madhyama (middle) king.
- A king who is situated beyond the territory of any of the above kings and who is very powerful and capable of helping the enemy, the conqueror, and the madhyama king together or individually, or of resisting any Front of the
- Conqueror (Vijigishu)
- of them individually, is a neutral king (udásína).

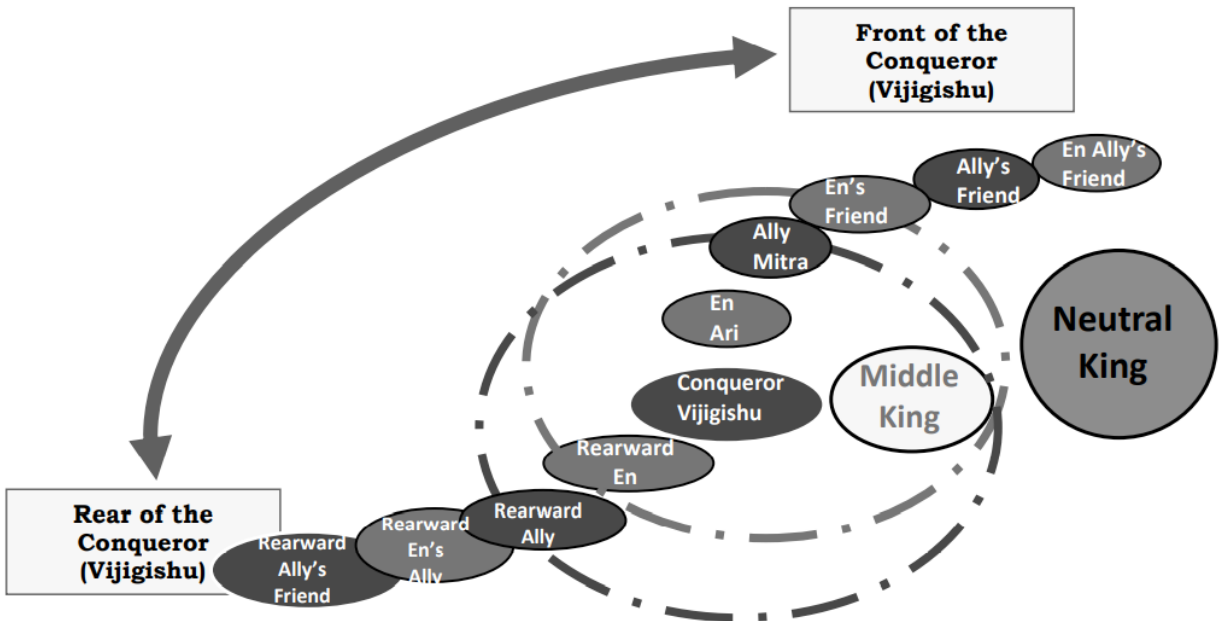


Figure 7: Schematic representation of Kautilya's Mandala



All the advice in the Arthaśhāstra is directed to the would-be conqueror (Vijigishu). The underlying assumption is that neighbours always turn hostile. Another assumption is that a common enemy creates allies. But the categories of enemy and ally are not fixed. Under certain conditions, allies can become friends and vice-versa. The twelve types of combinations are classified by the Arthaśhāstra; they are not to be taken as the permanently existing situation in a mandala. Kautilya assumes that except for the neutral and 'indifferent' kings/states, all others in the mandala are of equal strength. Therefore, in a concrete situation, the mandala gets divided into two more or less equal blocs, with one bloc's leader seeking to establish hegemony over all the others. The strengths of blocs being equal, diplomacy, strategy and tactics assume great importance in attaining hegemony.

Interplay of Kings or nation states will depend upon the capability of Vijigishu or the Ari to influence the six prakritis of own, Ally and Ally's Ally which will form 18 constituents. Similarly, to emerge stronger within the mandala, the prakritis of Middle King as well as Neutral King forming 72 constituents are required to be influenced by Vijigishu.

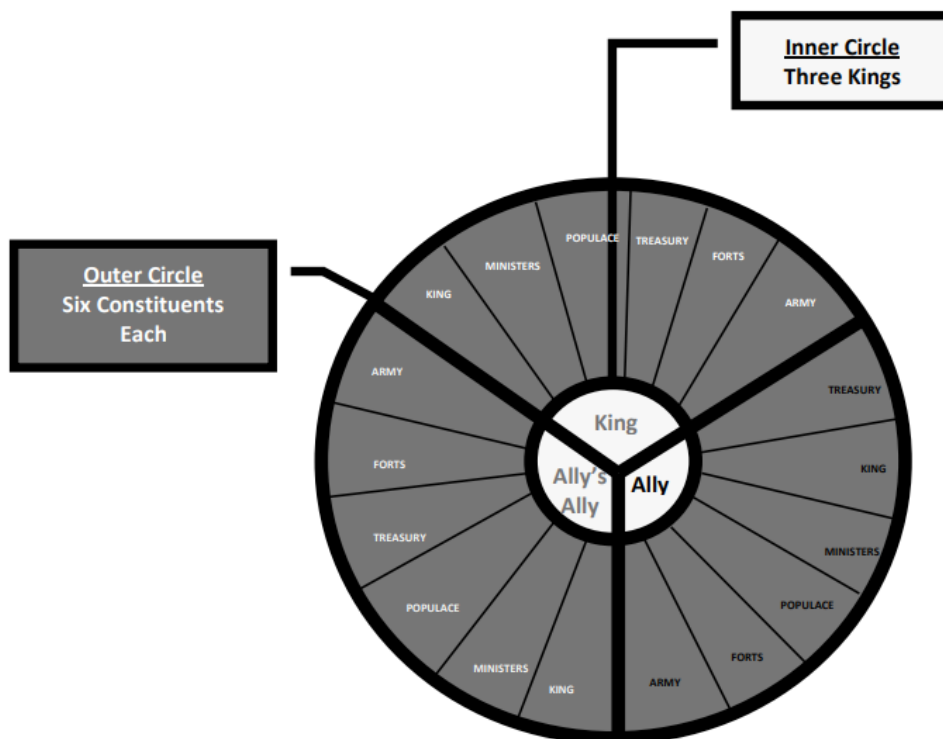


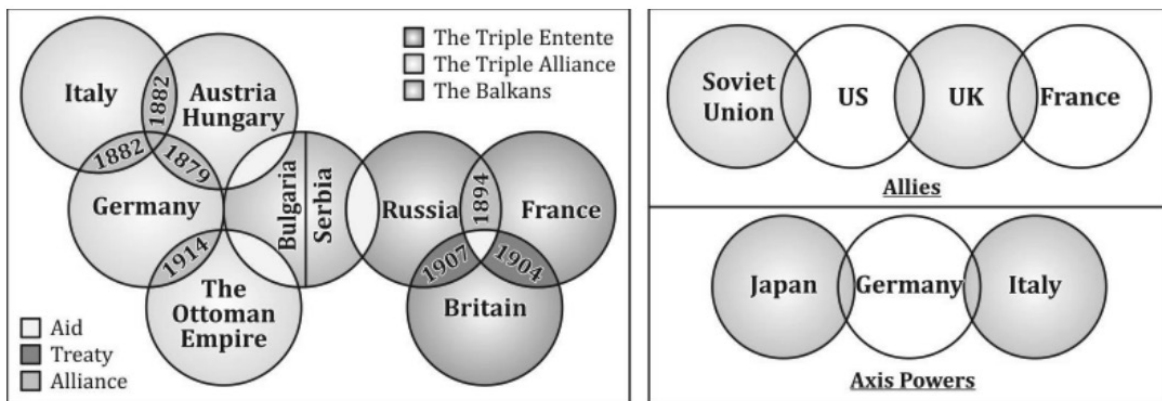
Figure 8: Schematic representation of Interplay of Three Kings and their 18 Constituents

By way of broad strategy, the Arthaśhāstra recommends that the wouldbe conqueror should first proceed against the hostile neighbour and, with the newly-acquired power, tackle the neutral king/state. If he succeeds, he should proceed against the most powerful or 'indifferent' king. That would complete his hegemony over the mandala as a whole, for the rest would fall in line. If there are no neutral or 'indifferent' kings, the conqueror should first tackle his enemies and then secure the allegiance of an enemy's allies. In the event there are only two other states, one hostile and the other friendly, the wouldbe conqueror should crush the neighbouring state regardless of whether it is hostile or friendly and then proceed against the other. Finally, if there are number of neighbouring states, they should be tackled one by one, gaining strength in the process.

## EVOLUTION OF GLOBAL ORDER IN 21ST CENTURY

Classical alliances could be seen during initial period of 20th Century when the race for colonialism was at peak. Tri-entente and Tri-alliances both pre-WWI alliances were akin to Kautilya's mandala concept. Also, the mismanagement of after effects of WWI led to WWII, major cause being the reparations and exploitation of the German people much against the teachings of Kautilya. WWII commenced with invasion of Poland, the weaker state sandwiched between Allies and Germans. If we consider Germans as Vijigishu with France as enemy (Ari) and Russians as Rearward Enemy, the mandala of Kautilya seems to fall in place. During, both WWI and WWII one could see Italy changing equations based on the self-interest much similar to sadgunya of Arthashastra. One assumption can be made when the nations with similar strength are in conflict zone the cultivation or management of allies by the policies suggested by Kautilya seems pragmatic.

Post WWII, much stronger alliances were formed in the form of NATO, leading to formation of two superblocks based on US and USSR. The cold war era saw development of WMDs, arms race, overt and covert manoeuvres apart from contest for energy and global commons. The nations chose to align themselves based on their self-interests. Nehru was known to be admirer of Kautilya, probably the Diplomatic Enclave the extention of Lutyens was therefore named Chankyapuri. The influence could be seen in the foreign policy during formative stage of the nation when Nehru chose to be nonaligned with either of the super-block till India grows in strength. The policy shaped



**Figure 9: Schematic representation of Pre WWI and Pre WWII Alliances**

the development of the nation. However, to increase their respective strength in Indian sub-continent both US and USSR made forays to cultivate allies in Pakistan by US and in India by USSR.

Beginning of 21st Century saw disintegration of USSR and World emerging into unipolar one dominated by the US. US went into Gulf War I to prove its hegemony and later into Gulf War II inspite of opposition from many other nations. Therefore, if US is compared to Kautilya's Vijigishu which had already emerged as strong power, the other states bow allegiance to its interests even though the differences exist. The Vijigishu thus crushes weaker states at its will – the examples being invasion of the Iraq and Afghanistan. If we analyse these wars further, both are militarily successful but strategically a stalemate since the populace ( Janapada) in Kautilya's parlance was not given its due importance. The Modern World is learning that population is Centre of Gravity at the cost of human casualties and economic losses while tackling insurgencies. The same was prophesied by Kautilya almost 2400 years back

The evolution of information age in this century and continuous revolution in technology has changed the power dynamics of the World. The power of information has taken a form of force which all the nations across the globe need to reckon with. A major shift is seen from military alliances to economic cooperation's, lately giant cooperation's like Apple, Google, Facebook and Amazon have grown bigger than the governments and can buy off any of their competitors. Therefore, the economics is governing the geo-politics as taught by Kautilya.

## GLOBAL ORDER IN 21ST CENTURY

The global order portends the multi-polar world but US still remains the most powerful nation both economically and militarily. There is shifting of locus of power from Euro-America to Asia with emerging China and India, resurgent Russia and Japan strengthening its military to tackle challenges posed by China and North Korea in East China Sea.

Though the militaries across the world are shrinking in strength the sophistication and military expenditures are increasing manifold. WMD proliferation is a reality today and the world is yet to arrive at any consensus on NPT, CTBT or FMCT. This will remain a sore issue in near future especially with the likelihood of these weapons falling in the hands of Non-state actors. The nations are in race of sophisticating the delivery means by Land, Sea and Air for completing the Triad.

Geo-economics is driving the world over geo-politics and accordingly number of cooperation's are emerging globally as well as regionally BRICS, SCO, ASEAN and SAARC to name a few. BRICS have overtaken G7 countries as far as economic growth is concerned with latest IMF figures suggesting cumulative GDP of BRICS at \$ 37.4 trillion while that of G7 is \$ 34.5 trillion. The race of energy will continue to drive the geopolitics and the century is likely to see dawning of post-petroleum age within a decade. The knowledge century is emerging as information century with number of innovations and inventions within a decade of 21st Century exceeding that of the complete 20th Century.

Non-state actors will continue to challenge the external as well as internal security means. These non-state actors can easily receive financial aids from external nations. The military wings of these groups do not move from the area of conflict; instead they create conflicts right from their homes to controlled areas and then to areas where they desire to control. Contrary to the state funded troops, these non-state military wings continue to attain extensive funds, financial and technical assistance from off shore accounts and untraceable bogus organizations. Arrangements like these allow the military wings to continue their fights without any external or third front opinions thus diminishing the boundaries.

National defence is no longer ensured only through maintaining the sanctity of one's borders, but is also highly dependent upon the ability to navigate safely through the global commons. These commons—sea, air, space, and cyberspace—enable militaries to protect national territory and interests, as well as facilitate the passage of goods, people, communication, and data upon

which every member of the international community depends. Yet, a number of emerging trends are threatening this freedom of action needing absolute actions to protect global commons.

## POSSIBLE SCENARIOS

Asia is likely to remain a theatre of great power competition. China's economic and strategic footprint in Asia is enormous. At the same time, many Asian powers are looking to avoid their bets against excessive dependence on a particular major power. US will retain a significant role in global politics as well as in Asia. China, Russia and US, these three powers will retain primacy owing to their economic and military strength. Therefore, the global dynamics will portend around this Strategic Triangle. The triangle does not exist in a vacuum. There are other relationships, especially with countries like India, Iran, Japan and Pakistan that will influence the triangular dynamics. Furthermore, each country in the triangle has other interests in a host of sectors and has a range of imperatives at different levels – sub-national, national, regional and global. These powers therefore are likely to increase their clout through other growing nations like India, Japan, Pakistan or nations having considerable economic growth like Brazil and South Africa or neighbours within the region affecting each other. All these nations are similar to mandala of Kautilya and

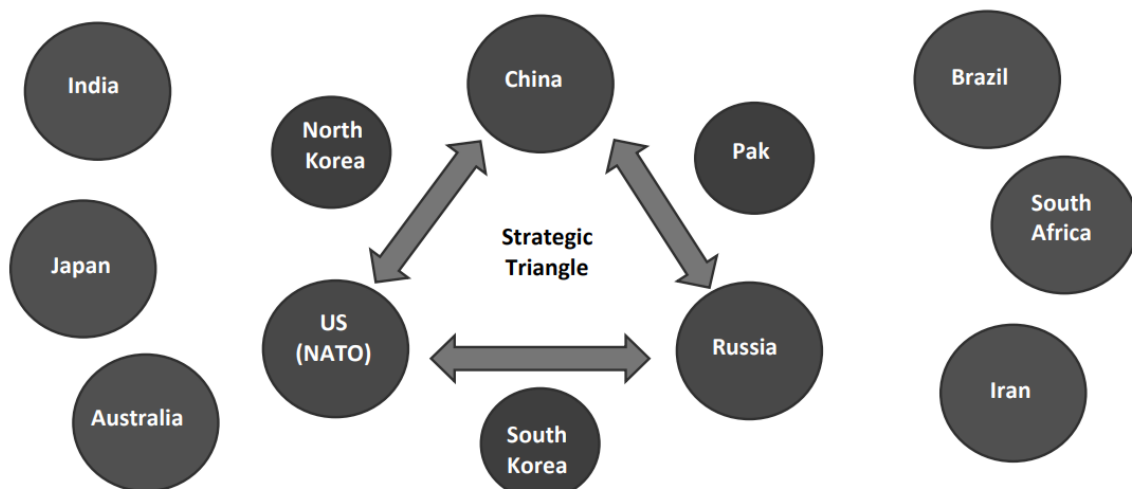


Figure 10: Schematic representation of Possible Scenarios – No Permanent Allies

likely to pursue their self-interests based on the Kautilya’s sadgunas to meet their economic and military objectives. Therefore, theory of increasing one’s own strength and decreasing the strength of the rivals is much applicable in the present context.

## ASIAN CONTEXT – CHINA AS VIJIGISHU

As a Vijigishu (would-be conqueror), China represents Kautilya’s ideal of an aspiring regional power pursuing the twin objectives of “power” and “happiness.” The concentration of China’s internal power in the political leadership is similar to Kautilya’s prioritization of prakritis. However, unlike Kautilya’s king with his social contract, China does not exhibit an obligatory leader-population contract. China’s mandala or circle of states keeping Japan (ari) and India (párshnigráha) as an adversary provides a viewpoint for Asian subtleties. China’s military modernization and diplomatic offensive strategy against the US and simultaneous strengthening of economic inter-linkages is in line with Kautilya’s strategy against a superior state. China’s foreign policies do bear certain similarities to Kautilya’s various options of the sadgunya concept.

China’s mandala model indicates the importance of the US (Neutral King) role in Asian dynamics. Developing alliances with India and Japan are key

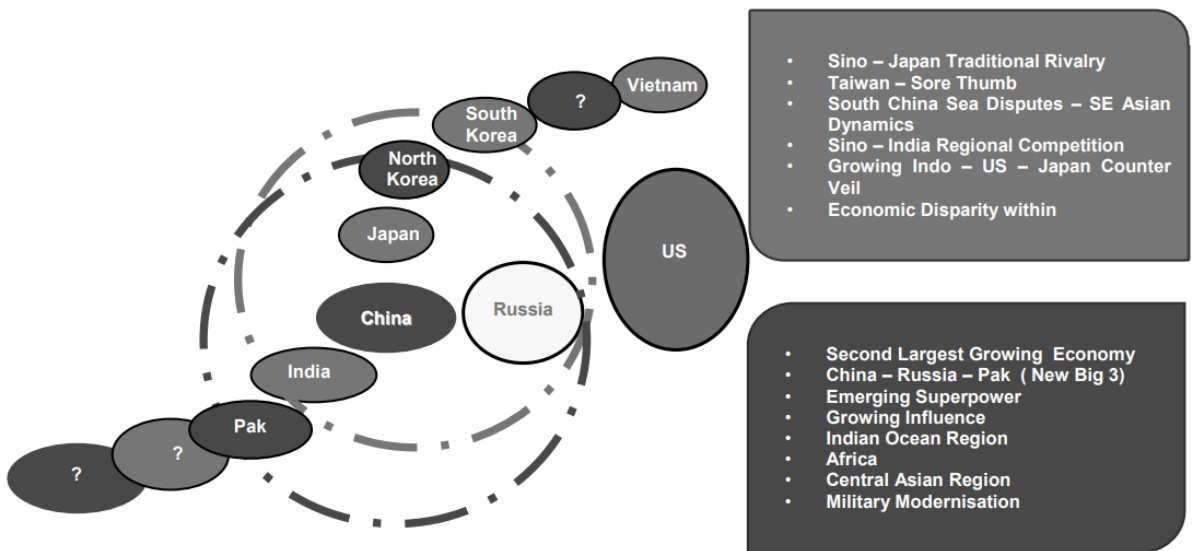


Figure 11: China as Vijigishu

aspects of the US counter-balance to China in Asia. China's lack of allies creates vulnerability in China's policies. Repeated disruptive actions in the South China Sea have renewed tensions with US led countries in the region. Both China and Russia (Middle King) are distrusted by West for opposing US global dominance.

As well both countries do not support the values of democracy being embraced by US, Japan and India. Therefore, China is founding mutually supportive alliances with Russia and Pakistan to form together a new bipolar global order and neutralize challenges posed by US, Japan and India.

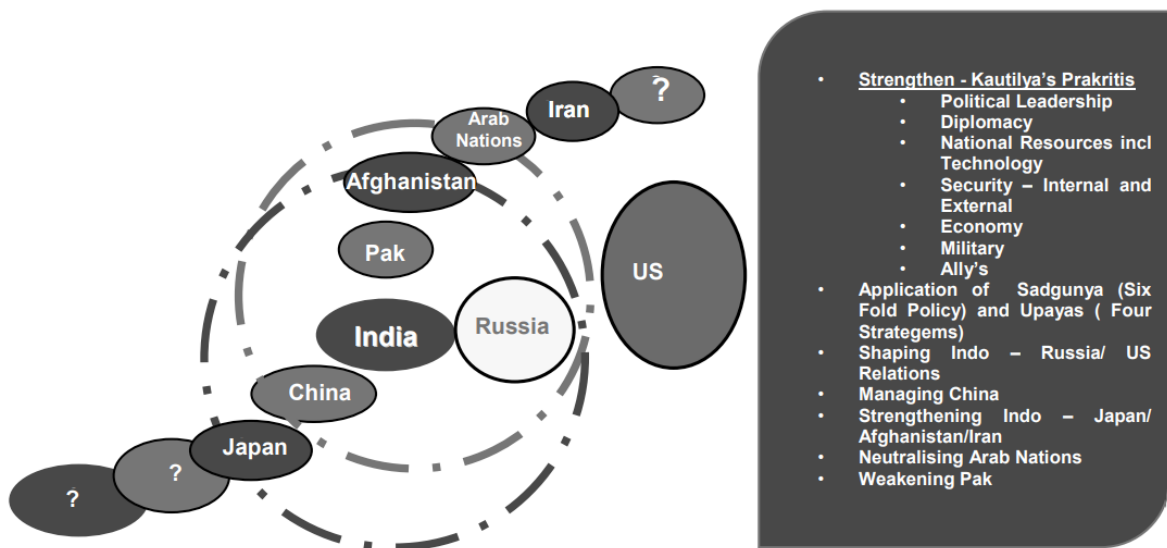
The ideological drivers of China's growth are akin to the Arthashastra's objective of continued national progress through the pursuit of national power. Although the mandala theory oversimplifies China's international relations and does not provide a cohesive picture of the international power system, China's mandala can identify potential regional alliances for promoting Chinese interests as well as strategic alliances for countering the Chinese threat. Kautilya's concepts of relative power and the six-fold policy also hold true for contemporary China. Consistent with Kautilya's concept of relative power, China designs its foreign policy based on the relative power status of other nations. China adopts a different approach for interacting with the US or Russia, as opposed to interactions with weaker nations like Vietnam or the Philippines. China's foreign policy choices are in line with Kautilya's sadgunya (six-fold) policy and his advice for a weaker state challenging a stronger state. China's policies of military modernization, peace treaties, and dual policy resemble Kautilya's six-fold policy. Kautilya's policy of Yana (Preparing for War) is similar to China's policy of military modernization. Similar to Kautilya's concept of Sandhi (peace treaties), China used peace and peace treaties for progressively developing its national power. Kautilya's concept of undeclared warfare can describe China's cyber warfare against the US. With India, China adopts Kautilya's policy of Dvaidhibhava (Dual Policy) by adopting Pakistan as an ally and maintaining confrontational relations with India.

## INDIAN CONTEXT

Applying Mandala Theory in Indian Context and assuming India as a Vijigishu, Pakistan as Ari, China as Parsanigraha (Rearward Enemy), Russia as Middle King and US as Neutral King number of options emerge for India. India is required to work on the prakritis prescribed by Kautilya. Therefore, there is a need of stable and strong political leadership, diplomacy to work



towards achieving national goals, optimum exploitation of national resources to include technology, skills and talent of the young population, secure national interests globally and protect territory against both internal subversion and external aggression, strengthen economy and emerge as economic power, maintain military to meet future challenges across the full spectrum of conflict continuum and lastly, multiply the strength by cultivating alliances and having strong allies.



**Figure 12: India as Vajigishu**

In present context, it is clearly indicative as far as foreign policy goes India needs to shape the Indo – Russia and Indo – US relations by engaging across all elements as mentioned in Kautilya's prakritis. This will enable India to strengthen its clout by having support of Middle and Neutral King in crisis. Moreover, it emerges that Parsanigraha China needs to be managed by developing military deterrence, overcoming trade imbalance and increasing counter balance by cultivating alliances. As also, the would-be friends i.e Japan, Afghanistan and Iran needs to be cultivated in favour of India by engaging prakritis of these nations. Simultaneously, there is need of neutralizing Arab nations who favour Pakistan (Ari) economically and ideologically. Lastly, its a pre-requisite to keep Pakistan in check diplomatically, intellectually, militarily, economically and ultimately weakening it vis-à-vis India.



This is simplistic application of Kautilya's Mandala theory giving out various options for India to progress as Vijigishu. But there is need to understand interplay between different prakritis, overcoming the vyasanans affecting these prakritis and working out multiple templates to arrive at Comprehensive National Strategy.

## NATIONAL PRIORITIES

Having gone through the Arthashastra, the question arises, Does India have a clear cut National Strategy? Even though various National instruments are working towards achieving common goals, this may not be enough for emerging power like India with national interests extending across the globe and global commons. Even the ally's or the nations closer to India would want her to lay down clear cut strategic guidelines in the form of White Paper or National Strategy. Comprehensive National Strategy is fundamental need

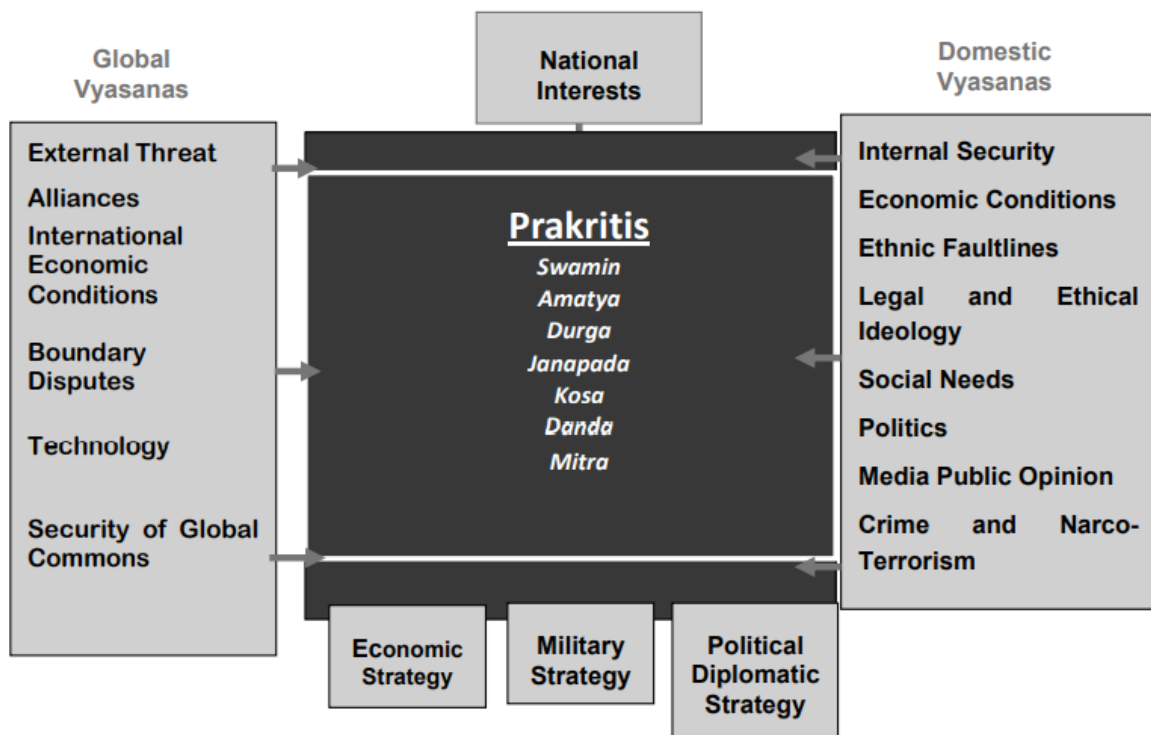


Figure 13: Factors affecting National Priorities

especially when India is facing unbalanced external environment with China, Pakistan having developed Tactical Nuclear Weapons (TNWs) for full spectrum deterrence keeping the nation at ransom with use of nuclear weapons and vitiated Internal Security situation due to sponsored terrorism. Kautilya's Arthashastra is definitely a tool to derive Nations Strategy and working out National Priorities.

Kautilya advocated overcoming vyasanans within the nation state should take priority over other threats and strengthening prakritis will enhance CNP. Hence, observing nations priorities through Kautilya's prism will aid to arrive at their inter-se importance. Firstly, overcoming vyasanans related to internal security, socio-economic and ethnic fault-lines. Secondly, overcoming immediate external two front threat posed by Pakistan and China through military modernization and developing credible deterrence capability. Thirdly, incapacitating Sino-Pak growing nexus in the immediate future by cultivating alliances in US, Russia and Japan. Fourthly, ensure security of global commons especially affecting nation's interests by developing appropriate force projection as well as soft power capability to ensure sustained economic growth. Fifthly, resolution of boundary disputes though important but waiting for opportune moment is pragmatic. Lastly, tackling issues related to janapada viz ecological balance, keeping pace with technology, crime activities and narco-terrorism especially flourishing through Golden Triangle and Golden Crescent will form the priority of nation.

## CONCLUSION

We have still the same distrust of one nation by another, the same pursuit of its own interest by every nation tempered only by considerations of expediency, the same effort to secure alliances with the same disregard of them in self interest, the same kind of intelligence service maintained by one nation in the territory of another which is found to be referred to in the Arthashastra. It is difficult to see how rivalry and the struggle for supremacy between the nations can be avoided and the teaching of the Arthashastra which is based on these basic facts rendered altogether superfluous until some sort of a one-world government or an effective supra-national authority is established. But until that happens, the teachings of this Arthashastra would in actual practice be followed by nations, though it may be unknown to them and though it may be openly condemned by those that know it. In so far as the nature of human beings remains the same and states behave as they always have done, Kautilya is

relevant. Kautilya argued that State is fragile org and the statesman does not have the moral right to risk its survival on ethical restraint, therefore national interest should override moral principles in as much the moral order depends upon the continued existence of the state.

Kautilya further qualified that well-governed state will have less to fear from subversion and revolt and will be in a better position to disrupt the domestic stability of its adversaries. It would also be able to move with greater surety towards the execution of tasks that necessitate the large-scale mobilisation of economic and military power. A state that neglects the quality of the administrative elite and institutions upon which the execution of policy depends does so at the greatest possible peril to itself. Thus, India in 21st Century and as emerging power needs a Comprehensive National Strategy with clear cut enunciated National Priorities and these are required to be derived from our ancient all-inclusive treatise of Arthashastra written 2400 years ago.

“The arrow shot by the archer may or may not kill a single person. But stratagem devised by a wise man can kill even babies in the womb”



**LT GEN  
MICHAEL MATHEWS**



## **ABOUT THE AUTHOR**

Lt Gen Michael Mathews, VSM\*\* an alumini of National Defence Academy, Khadakvasala, Pune (NDA) got commissioned into 101 Engineer Regiment Corps of Engineers, Indian Army on 19 Dec 1981 and went on to command 103 Engineer Regiment. The Offr has tenated a large number of appointments within and outside the Corps of Engineers before being appointed as the Commandant, College of Military Engineering, Pune on 01 Feb 2017.

# HOW NESCIENT ARE INDIAN MILITARY OFFICERS?

 **BY GROUP CAPT A. G. BEWOOR VM(G)**

## INTRODUCTION

1. To the general reader and certainly my military friends and their families, the word nescient is rarely used; and seldom found in the books we all read. It would be fair to first give the meaning of nescient. One definition is that nescients believe that only material phenomena can be known, understanding spiritual matters is impossible. There is more to describe them; ignorant, unlearned, untaught, unlettered, uneducated, uninstructed, unschooled, illiterate. Unsophisticated and absence of knowledge can be added. The rationality for using this word in the title is to warn readers that the subject matter is not a frivolous statement; but an allegation made to describe a very high proportion of the officers who are serving, have served and will serve in the Indian Armed Forces. And this allegation attaches itself not to not just the officer, but to all the colleges, schools and centres of learning, along with the faculty, where Fauji officers attend courses of instructions during their careers. Many would be alarmed at the accusatory direction of the story; and hunt for the trigger that actuated me write this article, understandable, so here it is. Before proceeding I trust you have read Extractors Comments, please do so to get into the groove of this story, or the starting thread remains unseen.

## The Trigger

### 2. The Wellington Report.

A Colonel Smith from the US Army released a book titled The Wellington Experience (WE), in October 2020, in which he made pretty startling deductions about the Indian Armed Forces Officers (AFO) who attend and teach during the 44 weeks course at Defence Services Staff College (DSSC). Many readers

are 'pscs' from Wellington. Smith is a 'kanjoos' in any salutary comments about our 'pscs', their spouses, their attitudes, approach, wisdom, societal behaviour, dedication, desire to learn and so on. He says that the report is a study of attitudes and values within the Indian Army. So the people Smith has written about are the Indian Army officers who studied at DSSC. Surely such a study should be invaluable to us AFOs in general and those from our Army in particular. Our Colonel Smith did not attend the staff course at Wellington. The sources for Smith's book are, as stated by Smith, the experiences of 28 officers from the US Armed Forces who attended the Staff Course at Wellington. These 28 officers were selected from batches between 1979 and 2017, a span of 38 years, and since the concentration is on the Indian Army the majority of those interviewed must be the US Army, some may be from Air Force and Navy. It is of logical relevance to note that in these 38 years at least 114 US officers, three per course, if not more, would have attended DSSC, and majority would be from US Army. Smith has interviewed under 25% of the officers who attended DSSC from 1979 up to 2017, and that itself is a major weakness in his study and naturally the deductions & conclusions. Some feel it is educative and OK. Is it?

### **3. Fauji Officers Dislike Dissent.**

The report is rather exhaustive and to read through it would be fairly wasteful and thus some of the main aspects that attract Smith's attention will be highlighted as we go along. The apparently pertinent extracts from the report have been prepared by one who I shall dub as 'extractor' and have been circulated on our Veterans e-Group where the final question made by the 'extractor', was thus, "Can our Army create the capacity to learn, unlearn and re-learn". Absolutely valid and pertinent, and needs to be answered in the very same open forthright manner. The 'extractor' who is an officer from our Army, we do not know who, has concluded that the findings of Smith will be jarring to most graduates of DSSC, especially those who have not developed the ability to accept and digest critical dissenting views. The 'extractor' also believes that many senior officers, most of whom are graduates of DSSC, will find abundant reasons to discredit the findings and move on. He then adds that if the Armed Forces wish to improve and raise the levels of Professional Military Education (PME), then the higher military leadership of India has to take note of the findings made by Smith, and create a culture of professional critique and dissent within the Armed Forces. So let us now look at some significant domains of the study whose deductions should knock out us Faujis.

#### **4. The Issues of Significance.**

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The pedagogical processes and methodology practiced at DSSC by both the teaching staff (DS) and student officers (SO) was one domain. The attitude of DS and SO towards external threats was poor and lacking in depth. The very same posture and dispositions was evident even when internal threats were considered. The deductions also found that most Indian military officers at DSSC had a biased attitude towards politicians and bureaucrats. Readers should be aware, as many must be that, these 28 American military officers, who gave inputs to Smith, were at Wellington for 44 weeks and had full opportunity for very close interaction with Indian officers and their families. Thus Smith believes their views must be true and impartial. It raises a primary question in anyone's mind; did these officers actually write these very same comments, as quoted by Smith, when they gave their official End-Of-Course debrief reports? Or were these comments drawn out and distilled by Smith when he was in the process of writing the WE? We will never know, though it is logically very relevant to ask whether the two reports; the first being the End-Of-Course reports given by US student officers; and the second being inputs they gave to Smith based on his questions, match or not? The fifth aspect that attracts Smiths attention and is supposedly gleaned from those 28 American officers is that, the attitude of the AFO and certainly the Indian Army officer, towards nuclear issues was very confusing and unclear. We all must remember that our first nuclear test was in 1974, and the next in 1998, we will factor this into our understanding of Indian military thought on nuclear matters. There are also two commentators whose views have been added by the 'extractor', though their opinions have no connection to Smiths report. The first is one Mr JTM Gibson a renowned educationist in India who was Principal of JSW at Clement Town Dehra Dun, and later Principal of Mayo College Ajmer. The second is Mr Bharat Karnad who writes and speaks extensively on matter military which he believes is strategy. We shall see what these two men have to say about Indian Armed Forces' cadets and serving officers. But before that the Quetta Report.

#### **5. The Quetta Report of 2018.**

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It is very perplexing, is it not, that an obscure colonel of the US Army should suddenly out of the blue in 2020, release a study about DSSC with its weaknesses? What made him do it? Who commissioned him? What if any instructions or suggestions did he get from Govt of India or Govt of USA to conduct such a study and with what aim? After all, the Indian Armed Forces

have been studying curriculums at all military training establishments starting from NDA all the way to NDC at regular intervals. Changes are being introduced at every level with salutary results which take time to fructify. Indeed, there are still many domains where further improvements are inescapable. Then why the study by Smith? The reason is obvious when we learn that Smith conducted a study on the Command and Staff College (CSC) at Quetta Pakistan, and released it in 2018. It was called, 'The Quetta Report' (QR). It also looked at similar aspects that emerge in the WE, because that is the specialisation of Smith. Here too he took inputs from US military officers who had attended CSC over many years. Now dear readers, we are aware of the intricate relationship between Pakistan and USA, and the extremely complex as well as affectionate connectedness, mutual dealings, kinship that flourishes between the armed forces of the two countries. They not only train together but even do battle together, and have been since 1979 when USSR invaded Afghanistan, finally ending in 2021 when USA exited Afghanistan, a span of 42 years, a long time. The Quetta Report also has similar findings as there are about DSSC Wellington. While DSSC has been uninfluenced directly by foreign military strategies and philosophies; the Pakistani military colleges have been overwhelmingly regulated and shaped by American military and bureaucratic thinking. Pakistan has been in military pacts with America, first the Baghdad Pact, then CENTO and Pakistan has relied exclusively on American military equipment with American training systems and processes. The Soviet misadventure into Afghanistan made Pakistan and USA Blood Brothers fighting a common enemy, something that had not happened before. US Armed Forces officers developed deeply intimate association with their Pakistani counterparts, and when Q R was published in 2018, there was no inkling that USA would retreat from Kabul three years later, in 2021. Thus a rather damning account of how USA viewed the intellectual and strategic capability of Pakistani military leadership emerged. Given Pakistan's proclivity to look in the mirror and see India, the solution to dilute the impact of this execrating report was to get an exactly similar one made about DSSC. By himself Smith has no determinable cause to make a study about DSSC. But if he were commissioned on payment to do it, with the sole aim of assuaging and pacifying the damage caused by The Quetta Report, then he would make the effort would he not? That alone has to be the reason for Smith to conduct his study about DSSC and reach similar conclusions. It is crucial for US officers and their military leadership to know about their Pakistani buddies, for they will do battle together. There is no need for American military officers and their leadership to study in depth about the Indian military officer. With the Wellington Report as freely accessible as



the Quetta Report, the Pakistani military establishment is satisfied that across the Radcliffe line lies a military system that is just as bad as theirs, why worry. Besides the failings in Indian pedagogy are the very same that the Pakistanis suffer from, why worry. Pakistan got what it wanted, Smith got what he wanted, and India got what it had not asked for. Yankees once again aided Pakistan by bruising India. So familiar, so what's new?

## The Principal at JSW

### 6. J T M Gibson Esqr.

A revered academic who was and is still admired by his many students. He was a House Master at Doon School and principal of Mayo College from 1954 till 1969 and is credited with bringing Mayo College into prominence on the Indian academic canvas. Gibson was Principal of JSW for a short duration when it was formed in 1949, on loan from Doon School. In the write up from the 'extractor' certain observations have been credited to Mr Gibson. One of which is that examinations at JSW focussed on assemblage of huge quantities of information including irrelevant facts which would be regurgitated by cadets. Gibson is said to have opined that at JSW analytical powers and reasoning accomplishments did not receive the desired focus. He is also reported to have observed that there was a tendency among most cadets to use unfair means during examinations unless closely supervised. It is further said that he tried to remedy these flaws but his tenure was too short to achieve that aim. Taking these extracts to be the true opinions of Principal Gibson, it would be appropriate to offer some comments from us Faujis who have travelled the NDA road and been subjected to its teaching profiles and evaluation modes. Let us see them:

**a). Assemblage of Irrelevant Information.** When JSW was formed in 1949, India was just two years old and JSW was the first of its kind in the world. Into this Wing came boys who had studied in English medium schools; created, operated, nurtured, inspected and made better by none other than the likes of Gibson. And there were many such Englishmen doing a wonderful job in creating the ambience of British Public School ethos for young boys to enter public life on the Indian scene. The cadets of 1st Course to possibly 10th Course came from an education system that taught and indeed encouraged assemblage of information, as was taught to them from Class I to Class XI as was the system those days. The cadets came with this learning philosophy,



they did not acquire this skill at JSW. The fault, if indeed it can be called that, was imbibed by the boy for nearly 10 years in his school well before he stepped into the uniform of a Cadet at JSW. I dare say that the very same custom of gathering irrelevant information existed at Doon School and Mayo College where Gibson taught. Could it have been different? Certainly this trait was universally applicable to everyone, boy or girl, who had studied in English medium schools in India, the JSW cadet was no different. To brand it as a JSW trait is grossly incorrect. The 'extractor' has got his context wrong.

**b). Analytical and Reasoning Powers.** Once again take yourselves back to the early 40s in India. What syllabus would these boys have been educated through in their schools to develop their analytical and reasoning powers? Who styled the subjects and text books for these English medium schools from where boys passed out and joined JSW? Did the 'gora' want to develop such capabilities in natives? Most British serving in India, including teachers / professors, wanted to hang onto their dear Empire, and that meant the locals cannot become analytically competent, it was a deliberate act of the Ruler against the Ruled. Had not Macaulay ensured that? And who were the teachers and instructors at JSW who were expected to reverse this trend and make the cadets proficient in analysis and reasoning? The Armed Forces officers and civilian teachers who were on the faculty at JSW is it not? These men themselves had been nurtured by an education system designed by British educators who were following Macaulay's diktat on what and how to educate natives. What Gibson observed at JSW is exactly what Gibson taught in the schools where he was a master. How could the school boy, deliberately screened from subjects that taught logic and reasoning, suddenly be different after becoming a cadet at JSW?

**c). Using Unfair Means in Examinations.** Students whether in United Kingdom or India, will make all efforts to get their answers right and earn as high marks as they can. If our English medium school student, now a Cadet at JSW, does not have the answer, he will use all means including unfair, to get it. This unique tendency is not specific to the cadets who studied under Gibson at JSW, it is universal including in the schools where Gibson taught, whether in India or UK. To single out JSW cadets with this trait is begrudging. This practice was not learnt by cadets at JSW, they came with this tendency from their schools. The cadet followed a practice he had pursued for the last five to six years in high school, would he suddenly cease because he had become a cadet? Was Gibson able to completely eradicate this from either Doon or Mayo during his long teaching tenures at those schools? I am of course presuming that Gibson did indeed make this observation as stated by the 'extractor'.

**d). Can You See the Link?** We are looking at the influences and values that were ingrained into these young boys, of JSW then and now NDA, who would become officers in the Armed Forces. These officers having acquired such bad traits, as supposedly stated, will one day attend Staff College where the 28 friends of Smith would conclude that their analytical capabilities are poor. That then is the link between Gibson and Smith as deduced by the 'extractor' who taking the WE as his bible, looks for inputs from other Saints so to speak, and buttress the inferences and implications that the WE has stated. Because without a 'native' element attached to the WE, its value would remain very pedestrian, and would be termed as aliens way of looking at Desi Military. When an Indian connection is shown, the veracity of WE gets exponentially boosted, which is why the 'extractor' has inserted Gibson into the picture. Pretty clever by far is it not? We have seen the fragile, flimsy and tenuous connections of Mr Gibson's opinions with the WE, and readers once again, I am assuming Gibson did make those observations. We should now move onto the next Saint whose notions and impressions about officers of Indian Armed Forces have been used by the 'extractor' to support Smith's WE.

## Indian Strategic Affairs Commentator and Scholar

### 7. Highly Regarded Strategists?

The 'extractor' has added a comment that boldly describes one Bharat Karnad as a 'highly regarded strategic affairs commentator and scholar'. To begin with, it is accepted that Karnad is a commentator because to be one, asks nothing more than the ability to speak or write, that is all. Karnads acidic comment about soldier-scholars being a rare commodity in the Fauj is being extremely begrudging and smacks of self aggrandisement. It is unremarkably and often said with much glee that Armed Forces seldom attract intellectually inclined men and women. Really? So where does this breed of intellectually inclined people go? If the Armed Forces across the Earth do not attract such intellect, and there must be plenty of it around, where do they get employed? Armed Forces would take them in at about 20 yrs, at which point in time their intellectual inclination or acumen is yet to be proved. There are dozens of reasons for turning down the option to join the Armed Forces; and it includes fear, physical weakness, family compulsions, inability to take on competition, dislike for disciplined environment, a laid back attitude, and indeed a desire to do something quite different. Do remember the candidate, is just 20 yrs old and

to effectively establish and prove beyond question his intellectual superiority will take another 10 years if not more. But it is fashionable and sounds chic and ingenious to make such comments about the military. If militaries across the globe were bereft of intellectually inclined men and women, they would not be the single standing pillar of any nation with any type of philosophy of governance, democratic or any other. In spite of all the strategic commentators and scholars that nations produce, of which Karnad is supposed to be one, the military establishment is always the last resort to save the nation. And the Armed Forces do it stoically without seeking any branding of intellectual superiority and unequalled strategic comprehension, but surely it is there, or the Armed Forces would falter and fail with regularity. It then begs the question, that without any soldier-scholars in their midst, how do the Armed Forces of India, resolve most crises and conduct most events successfully, without falsifying their end results? If indeed they were filled to capacity with mediocrity and just average officers, something that the Karnads like to keep broadcasting, why does the military edifice not collapse?

## **8. The Intellectual Wasteland.**

Our supercilious strategist further adds that old time militaries frown upon officers with an intellectual bent, and Indian Army is largely 'old time' in its traditions, values & practices. He is supposed to have further described the Indian Military, meaning all three Forces, as being drilled in small things and thus being at sea when faced with larger issues. The extractor adds what could be the final nail on the coffin of Indian Armed Forces, by stressing that they suffer from intellectual bankruptcy. To describe Karnad as a highly regarded strategic thinker and commentator is an affront to other scholars in this field. He is definitely not highly regarded, and his breadth of vision is so limited that it cannot be considered strategic. If the Indian Military were indeed an intellectual wasteland as maliciously stated, the colleges where strategy / tactics/ logistics/ staff work/ diplomatic-military equations/ politico-military interactions/ international relations and much more is a good part of the curriculum, should be closed and disbanded. The military officers who graduate, year after year, from many such institutions must be, according to Karnad, total pygmies in intellect, foresight, vision, management, leadership, as well as courage and perseverance. Why so? Because, these officers look only at small things and get flummoxed when the canvas is large. How many such 'military bewakoofs' would Karnad have met and interacted with to reach his earthshaking deduction is worth investigating. It is also pertinent to investigate how many such military

bewakoofs told Karnad how unintelligent and pedestrian his thoughts are? The 'takiya kalaaam', that militaries dislike officers with an intellectual bent, has been regurgitated by civilian commentators over the world, we suffer them in India too. There are many more such commentators floating around in Delhi and other metros making a nuisance of themselves. The dangerous aspect of such utterances by these pseudo-strategists is that, they frighten the public with unadulterated misinformation by anointing themselves as strategic thinkers and scholars of military systems. They use terminologies that do not make sense to explain what cannot be understood. We see and hear them on TV almost every day, along with military officers who have become super strategists with abundant 'post retirement wisdom'. Sadly TV producers / anchors love to have such atrociously ridiculous commentators, and ever so cleverly use their ill founded statements to create confusion and controversies, their sole aim being to boost their TRP ratings, and earn higher revenues. Quite normal.

### **9. The Un-Intellectual Indian Military Officer.**

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If, according to Karnad, most if not all Indian military officers are good enough only for the odd skirmish here and there, but out of their depth when larger issues present themselves, then India should have been soundly defeated at Kargil, Dapsang and Doklam. But even Karnad and his ilk will have to accept that India came out quite clearly a well entrenched victor and proved her mettle. This mettle was demonstrated not by armchair highly regarded strategists sitting in Delhi, but by the unintelligent and intellectually deficient military officers at the places of conflict. Not just that, the higher commanders, who were keeping the larger issues and wide canvas picture before them were also located very close to the points of conflict in both stand-offs. Many of them if not most would have passed thru DSSC, AWC, CAW, NDC, CDM, and possibly been instructors in these colleges. They would have been educated and tested both on paper and on ground by their superiors over a period of 20 years, and been through many promotion boards where the success rate is very low. On the other hand, what kind of education / tests / re-examination / has Karnad been thru after the last exam he gave? The Colonel is tested and graded for written / oral/practical examinations before he can move up the promotion ladder. What written/oral/practical examinations has Karnad appeared in and received a grading? If he did who were his examiners? In truth Karnad has been his own pupil, teacher, examiner and grader for decades and anointed himself as a highly regarded strategy commentator. Strange is it not? The intellectual Indian military officer, an extremely rare commodity as per

Karnad, goes through many sieves and grindstones before moving up the chain of command to study and assimilate the bigger issues. But this supposedly extremely intelligent strategic commentator has never been tested, probed, analysed, questioned on his competence; or otherwise, by anyone or a group of people to determine whether he can continue spewing misleading strategic doctrine and philosophy for India? Has he matured and bloomed? What's new about his strategic canvas? So much has changed all over the world and India since he started his strategic discourses possibly three decades back? Unlike the study of Vedas/Upanishads/Shrutis where an esoteric frame of mind and attitude is inescapable, strategy / international relations/ intellectual enquiry and so on can and is studied and understood by the average military officer. All of them will not become highly regarded strategic commentators, some surely will, and we have heard them and read them too. But unlike Karnad, the potential military strategist has to go thru the grind where others, not the officer himself will determine, define and decide whether he is capable, qualified and adequately skilled to become some sort of repository of strategic thinking and acumen. Many do not make the grade, assessed as they are by others, unlike Karnad who is his own assessor and promoter. He has been dubbed as a Domesticated Hawk Without Talons. Some have called him an armchair aggressor without any concept of what battles entail. Yet his views are germane to our 'extractor'. Amazing!

## The Source of Smiths Findings

### 10. The American Officer at Wellington.

We have absolutely no knowledge as to how a US military officer is chosen to attend Staff College in India. We know how we select our man to go to USA, how do they select theirs, and Col Smith does not say so. Thus the calibre of the US officer attending DSSC could be above average, well above average, exceptional, or just average. Another aspect is this. Has he been forced upon Wellington, missing out France, England, Australia or Germany? We have no idea, nor I suppose does Col Smith, if he does, then it is a secret. Why is this factor important? Because the frame of mind of the US officer who has been thrust into India rather than a more fancy and glamorous country, will be predisposed towards unhappiness. The discontent flowing in the spouse will also have an impact on the officer's values and feelings about DSSC. We are aware how picky, fussy and choosy people from that part of the world are and

this attitude of foreign officers especially American, has been witnessed by the writer and hundreds of other Indian military officers and their wives. I was there for 3 ½ yrs and interacted with four courses which always included Americans. It is well known that most American officers and their families come to India with a lot of apprehensions about cleanliness, sanitation, diseases, hygiene, availability of good food, vegetables and so on. Many bring large quantities of canned food. I know that one RAF officer took his American course mate and wife into Coonoor bazaar and showed him how abundant was the choice of almost anything under the Sun, even if it was an Indian Sun, in the Nilgiris. I heard they got rid of all their tinned stuff overnight. I always found the US officers to be fine persons. They mixed well in the system, participated as much as they wished to, language was never a barrier; and not once during my 38 months at DSSC, can I recall having any complaint or dissatisfaction about any American officer. Of course my students were all from USAF. Little pinpricks would erupt and they were never anything more than that. Smoothed over among the students. Given the Indian proclivity to calm turbulent waters, it was the very normal at DSSC.

### Some Stinging Observations.

11. The WE extract has a few important issues that need to be addressed. Let's see how it falls into place:

>>>. Learning Outcomes at DSSC were Negligible.

<<<. Astounding statements from those 28 officers followed by awesome opinion by Smith. In all those 38 years from 1979 to 2017 the US Army officers took back nothing of value from DSSC? And yet the US Army keeps sending their officers to DSSC to attend the Staff Course where learning outcomes are negligible? What a self defeating exercise. Like their invasion of Afghanistan and Iraq. It is inconceivable that when so many officers report that Indian Staff Course at Wellington is wasteful; the Pentagon, Deptt of Army, the Director General of Training of the US Army, will persist in sending their young officers to undergo a useless course of instruction in India. Is that what American intellectual quotient is all about? Or has Smith done it all to balance out the Quetta Report? It does cost the US Treasury a sizable sum to get an officer across of Wellington for 12 months and back, they seem to be squandering public money year after year and that too after getting invaluable inputs from one Colonel Smith. Needs investigation, is this a scam?

>>>. At DSSC there is no incentive for original views, dissent is acceptable.



<<<. DSSC is a Staff College where training is imparted for Grade II and Grade I staff officers. The aim is to inculcate the value of Staff Duties, processes, procedures, SOP, in both war and peace, as also during situations other than war and disaster management. Tactical scenarios using Sand Models, War Games, Deployment of Troops, Defences, Offensive Ops, Offensive Air Ops, Naval flotilla moves are used to highlight the complexity of such scenarios. The importance of even the smallest and insignificant item / person/ equipment/ stores/rations/fuel/vehicles/weapons, must emerge as a lesson. How to proceed with Staff Work without missing out even one detail is what Staff Colleges teach. It then begs the question; how much dissent and original ideas can emerge in teaching and discussing Staff matters? One of the biggest flaws in a military institute that teaches staff duties is to let the exercise drift and degenerate into tactics. Something many students and teachers love to do, because it pits ones wits against the other. But that is exactly what must be guarded against. It is a cardinal rule for Directing Staff, (DS) and cannot be violated; it is overseen by Senior and Chief Instructors at DSSC. The crib and angst about dissent being curbed is universal in all colleges that teach staff duties. The system has to be rigid and has to adhere to laid down time tested secure procedures; that have been honed after bitter experiences, in battles and wars. Staff failure results in horrendous tragedies for field formations. Notwithstanding all this, without doubt dissent is encouraged, and I have seen and heard it and participated in dissent, both as a student in 1977 as a DS from 1990 to 1992.

>>>. There is a clamour for what is termed as College Solutions.

<<<. It is well known that the College Solution is “A Suggested Solution”. It is never called the solution, because it cannot be so. After all, the College Solution is made by DS who themselves have been students at the DSSC. Most certainly students, including American students, will find some aspects of the ‘Suggested Solution’ inadequate, out of tune, impractical, even unacceptable and such dissent is welcome and argued in the classroom. But there has to be a Standard or Datum against which the students written staff work must be compared for assessment. This is a Staff College, not a War College. Staff work is done for war plans. Without a war plan how can staff work commence. The DS do not assess students by comparing word for word the Students’ Solutions with the College Solution. It is the method, sequence, priorities, and such matters that the DS seek. In every academic institute, all work produced by students, all the way to getting a Masters Degree has to be assessed against a predetermined standard. It cannot be arbitrary and subject to sudden changes like a weather vane. That is what the College Solution at DSSC is, a guide, standard, advisory. Without doubt and I should know, the College Solutions

undergo changes after every exercise because of inputs obtained from DS and students. The DS from Training and Teaching Teams hold debriefs after every exercise. Many Indian students are unaware of this, then why should not US military officers also be equally unaware. Are there not college solutions in American staff colleges? Why could Smith not have interviewed Indian students on issues like this one? But that would have deviated from his pre-determined end result, would it not?

>>>. Smiths conclusions as gleaned from the 28 officers who very frighteningly claim that only about 20% of the Indian Armed Forces officers, who are in any case 'smart' boys, will overcome the damaging impact of the systems at DSSC. The balance 80% will suffer permanent irretrievable damage with deleterious impact on Indian Armed Forces' performance.

<<<. In these 38 years, 1979 till 2017, the DSSC has produced Grade II Staff officers to the tune of at least 12,000 if not more. Of these the Indian Army's share would be at least 9,000. Thus 80% or 7000 stupid, permanently damaged, incompetent, useless officers have been released from DSSC to create turmoil in the functioning of our Army. Many of them have risen to very high ranks and led the Army through extreme challenges in both Staff and Command appointments. But to the dismay of our 'extractor' and those who subscribe to Smiths deductions, these 7000 odd diminished and irretrievably damaged officers from DSSC, have failed to do what Smith hoped they would do, tear the Indian Army apart into smithereens because they only wanted College Solutions and never expressed nor accepted dissent. On the contrary dear readers, it is these very 7000 courageous and innovative products of DSSC who have made our Army the fighting machine it is today. Imperfect certainly, but incompetent and flimsy with poor leadership and bad staff work, definitely not. Once again I assert, did these US officers write exactly these words in their End Of Course Debrief Reports to the Pentagon? Unlikely, because if so many US Army officers found DSSC a cesspool of poor education, full of yes men where learning was insignificant with nothing to take back, why does the USA keep sending their officers for training to DSSC, even till 2022? The mismatch is outrageous, is it not?

>>>. The attitude of Indian officers, the DS and indeed the whole set up including the Commandant; towards Internal & External Threats, is very flimsy and unrealistic. Naturally the comparison is with how the students and DS in American staff colleges look at these two threats.

<<<. By 2017 India had fought four wars with Pakistan and the Kashmir insurgency really took off in the 90s. Attacks on Parliament, Taj Hotel and other targets inside the country have been rare; insurgency in the NE had become



a part of our life by 1979. The stand offs against Chinese have been few and rare. DSSC is a College where the students have between 10 yrs to 14 yrs of service. They have mostly come from field units where getting closely enmeshed with their troops and blending into a cohesive fighting machine is the primary aim, and these DSSC students had achieved that. Indians do not suffer from the paranoia of a Soviet nuclear threat something that all US military officers grow up to believe. In fact the whole population of USA are reared in the firm belief that Communism emanating from Soviet Union will annihilate them and therefore the curriculum is designed with this overwhelming factor in their Staff and War Colleges. Americans suffer from very limited internal threats. Their thinking on the subject of Internal Threats has to be very weak. They have no insurgency, no formal domestic terrorism, no outside groups fomenting violence inside America, and they do not have hostile cussed neighbours to contend with. As so succinctly said, USA has benign neighbours to the North and South, and only Fish to the East and West. But one significant issue does raise its pertinent head. How much time and attention should a Staff Duties college like DSSC, spend on Internal & External Threats? There are many other military colleges in India where External & Internal threats are studied in depth, and most students in those colleges would be graduates from DSSC who have first learnt staff duties. With tongue-in-cheek I would add in all humility, what has been the performance of the US Army on External Threats in the conflicts and wars they indulged in, from 1979, after Vietnam exit, and 2017, just four years before Afghanistan exit? There is more on this later. The middle order Indian military officers have a fairly substantial idea of India's Internal threats, most have encountered that threat and fought it successfully. Most of our senior officers in both Staff and Command positions have a reasonable awareness in External threats with specialists very deeply involved in studying and countering those threats, along with other government agencies. The Indian Army officers are not a bunch of 'lallus' that Smith and those 28 US officers would like people to believe. It would be very germane to ask what inputs American Army officers gave to the Biden administration on Ukraine. How did the US Army assess the external threat posed by Afghanistan when the decision to invade was being deliberated 20 years earlier?

>>>. There is allusion to the attitude of Indian military officers towards politicians and bureaucrats.

<<<. It is unimaginable that the military officer corps, anywhere on this planet, will not have a Love-Hate association with both Netas and Babus. This writer has no idea what this equation is in USA, but from whatever one reads in articles by American military authors; and has heard from American officers

at DSSC, there is the ever present abrasive relationship, just like it is here in India. In fact, it tells us that the Civil-Military equation remains tenuous and fragile, with little love lost on both sides, right here in India as well as in America. Terrific is it not. This matter is so unimaginative that for any American military officer to make comments and for Smith to add it in the report is footling. All Faujis of India have opinions about what Netas and Babus should do, and how they should interact and integrate with military systems and personnel. Is that wrong? Being democracies, the intense desire for civilian leaders in USA & India to demonstrate the constitutional safeguard of civilian control over the military, remains paramount. Banal is it not? But do look at another truth. In 1979 US was 203 yrs old and today is 244 yrs. India was just 32 yrs old in 1979 and is only 75 yrs in 2022. Equations with babus as existing in US cannot be compared with that obtaining in India. Books about US tell us how lawless and uncontrolled it was for more than 150 yrs till the Great Depression hit USA.

>>>. The comments on Nuclear dilemma naturally alludes to how the Indian military officers and planners discuss and debate nuclear matters from the Indian perspective.

<<<. India carried out her first nuclear test in 1974 and the second one in 1998 even though we have had a nuclear adversary since 1964 to our North. Soviet nuclear arsenal grew along with British, American, French arsenals and Indians watched it knowing they could do precious little about it. The Cold War raged from 1945 till 1991. For 45 years the fear of a nuclear Armageddon was presented in movies, books, cartoons and India was, like many other nations, a simple bystander watching from the sidelines. The US military officers who fed their views to Smith, were reared and trained under the influence of the possibility of a nuclear war. They and their families accepted the infamous impasse called Mutually Assured Destruction. We in India did not rear our children with this fearsome threat looming over us. We did not have underground bunkers to hide in for months. Indian Air Force bombers did not fly to the borders of China or Pakistan with nuclear weapons as standard drills; as did the B-52 and B-1 bombers of the US Strategic Air Command. The Indian officers about whom Smith writes, did not mature under constant nuclear threats; our conversations at family dinners and informal social gatherings of military colleagues and families, never ever included nuclear annihilation. How then can any American military man expect to hear and see verbiage and reactions on nuclear matters they are familiar with? Indian outlook and strategy on nuclear issues are as we see the problem existing here in our neighbourhood. We will not extend the European scenario onto our sub-continent, much as USA would like us to. It would be misleading and create a false paranoia among our civilian

population and our military thinking would get skewed in an incorrect direction. Mercifully, American nuclear issues have not influenced our military and civilian leadership. And the reason for that is in no small measure due to the harvest of emotionally balanced and pragmatic military leadership that graduates every year out of DSSC Wellington. All for the better, despite what Smith writes.

## Let Us Look At It From The Other Side, Shall We?

**12.** Sad as it is, tragic would be more suitable, that the US Armed Forces have had to walk into wars they should never have got into. Vietnam ended in 1973 and all the US Armed Forces got out of it was an 8000 Sq Metre Memorial with 58000 names. No Victory. What did the US military learn from the Vietnam debacle, the two Iraq wars and the embarrassing drubbing they got from the Taliban? Shall we relate it to the WE and those stinging observations in para 11?

**a). Learning Outcomes.** The US military was in Vietnam from 1954 till 1973, and hundreds if not thousands of US Army officers must have attended war or staff colleges before 1954 and during those 20 years. So what learning outcomes did they bring with them that could not fetch them even a small victory in Vietnam? If DSSC is bereft of worthwhile 'learning outcomes' as supposedly said by US Army officers to Smith, then surely the honourable men who studied in US staff & war colleges got wholesome knowledge that they used to manage, control, supervise and fight the war in Vietnam. Yet they lost? In that 20 year span 1954 to 1973, Indian armed forces fought three wars, all of them on our own borders and soil not in a far away land. Learning outcomes from DSSC Wellington fetched us defeat in 1962, a stalemate in 1965 and a stunning victory in 1971. Thereafter from 1979 till 2017, Indian armed forces have fought and defeated most insurgencies, won Kargil, check-mated China got bloodied in Sri Lanka and defeated a coup in Maldives. All this while using poor and useless Learning Outcomes, from DSSC Wellington? Compare the learning outcomes use by Indians and Americans.

**b). Original Views & Dissent.** How original have been the inputs and solutions proffered by US Army officers, who attended all other staff & war colleges except DSSC? From all that is known and written, there has been a painfully similar originality from entry into Vietnam in 1954 till the expulsion from Afghanistan in 2021. That being so, dissent has not been able to raise its head in the US Army, has it? Because surely some US Army officers, some of whom may have attended DSSC, did have a different view on what USA should

do after exiting Vietnam. But as Iraq & Afghanistan prove, the philosophy of the 50s that made US lose the Korean conflict, and get clobbered in Vietnam has remained the template all the way till the “I Am Getting Out of Afghanistan” syndrome. There has been zero originality and dissent has been smothered totally. Is this not a classic case of seeking and following “the College Solution”? This writer cannot believe that US Army officers, be they graduates from DSSC or other institutes, did not conjure up beautiful workable alternate options for every war USA entered, but who listened to them, was innovation and dissent accepted? Technology is no substitute for military planning and originality where dissonance and different opinions can be freely projected. New technology is a product of the awesome colossus called the Military – Industrial Complex. On the other hand, the home grown Wellington educated Indian staff officers from 1979 till 2017 have demonstrated abundant originality with many dissenting views that have been accepted and implemented with massive successes. A classic case being the tying of a terrorist on the top of a military vehicle to prevent stone pelting and a clash that which would have ended in a gruesome bloodbath.

**c). The Irretrievably Damaged 80%.** The writer abhors making odious comparisons between US and Indian armed forces officers. Some of the finest military men are from the US Armed Forces. But in the WE, deductions by Smith along with extracts and selected comments of a late illustrious educationist and home grown inexperienced strategist to boot cannot be allowed free passage without a rebuttal. To do that would be to accept what has been written in WE as an eternal inviolable truth, which it is not. This refutation is not erecting a wall to hide behind and let mediocrity flourish, or to deny deficiencies in all activities of the Indian Armed Forces especially their training and philosophy. To accept that 80% of graduates from DSSC have been maimed by the training patterns and regressive methods would be a sacrilege would it not? If at least 80% of the output from DSSC, starting 1979 all the way to 2017, were mentally and intellectually dwarfed into ‘yes men’, then by now there should have been massive cases of administrative and operational blunders on the canvas of the Army, Air Force & Navy. Mistakes have happened, failures took place, administrative dissonance erupted, tragic and avoidable events occurred. But the Military Edifice of India stands strong, virile, undefeatable, valiant, disciplined and operationally capable. Those 80% supposed crippled staff officers became efficient, dedicated, innovative leaders who have nurtured our Services with courage and affection. The foray into Sri Lanka did see much dissent, this fact is well know and irrefutable, and Smith knows that IPKF was conducted without violating any norms, customs or rules of combat. The ugly misconduct

by US Army officers in Vietnam, Iraq, Afghanistan, well documented and widely broadcast, has never ever been admired nor imitated by any Indian Army officer or Other Ranks. The Indian Armed Forces personnel never look down upon an enemy, something the US Army has been guilty of everywhere they went to do battle. It then begs the question, which 80% officers are irretrievably damaged, those Indians from Wellington or those Americans who pass out from their very own Staff / War colleges? I am constrained to make such a comparison, reluctantly though.

**d). Threat Perceptions and Nuclear Issues.** For Americans a threat is perceived when Communism is the dominant system in any country, be it on the other side of the Earth. Nearly five generations of Americans, which sadly included military officers, grew up from the 1950s believing that Communism would engulf and swallow American capitalism and way of life. But they called it the swallowing and engulfing freedom, democracy, liberty, progress and such like adjectives. In truth they wanted their businesses to flourish, their products to be bought across the world and far more important the American way of life and thoughts should prevail everywhere. Quite similar to what the Communists were trying to achieve. The US Army officer, educated and exposed to this philosophy during school and college, accepted this belief into which he had been skilfully indoctrinated. So when such a US Army officer heard and saw different and contradictory theories, at DSSC for example, he became defensive and resisted with all his might, both in thought and action, because he had been fed and nurtured in a completely contradictory doctrine. That Communism existed anywhere on Earth was a threat for any American. That in India, Communists had been elected and defeated democratically through elections along with Capitalist and Socialist systems amazed them. For the 'intellectually crippled' Indian staff officer from DSSC, threat meant something that hurt Indians and India, right here. What kind of political and economic policies governed Nepal, Bhutan, Sri Lanka, Pakistan, Burma, Fiji, Nigeria, Zimbabwe, Morocco, Argentina, Nicaragua, USA, Sweden, Bulgaria, USSR, China, Australia was never a threat to India. How then could the US Army officers who spoke to Smith, have even begun to comprehend how Indian military officers assess threats to India? The very same principle and reasoning applies to nuclear matters. I cannot but refer to the Second Amendment in the US Constitution wherein the Right to bear Arms is a part of the Bill of Rights since 15 Dec 1791, 231 years back. The mayhem and crazy massacres that have been perpetrated by non-military and military citizens of USA, upon other citizens of USA, including children is unimaginable and tragic. The internal threats as existed in 1791 have evaporated in 2022. But Americans, young or

old, man or woman, educated or not, rich or poor, military or civilian, have been unable to amend this law. And Smith has the gall to say that Indians do not understand what a threat is?

**e). What Did The US Army Really Do In Afghanistan?** The US Army did not fight a long tiresome 20-year war in Afghanistan, far from it. They fumbled year after year and engaged in a struggle, one year at a time waging a futile meaningless war. There appeared to be complete absence of any sense of direction with a well thought out aim that could be maintained. As articulated by Smith, the men who took the US Army into Afghanistan had a very robust understanding of External Threats, they were innovative and welcomed dissent so that the Best Course of Action would emerge. These were officers who were not tied and bound to College Solutions as were Indians at Wellington. Yet for 20 long years, resulting in more than 2400 deaths, this US military leadership which looked down upon Indian military capability could not change their processes? Should the sad deduction be that, the U.S. military should be blamed for the collapse of security forces in Afghanistan? Such are the writings one has read ever since August 2021. I am neither competent nor qualified to pass judgment on the USA or her Armed Forces on what they did anywhere in the world, there are analysts with far superior faculties to do that. However, since Smith writes that so many US Army officers gave the inputs he has placed in his WE, it needs to be asked; how come the incompetent permanently damaged Indian Army officers who graduated from DSSC, have failed to bring disaster to the Indian Army? Something the US Army officers have achieved so successfully in both Iraq & Afghanistan nearly 20 years apart? My quarrel is not with what the US Army achieves or fails to achieve, it is with the aspersions cast upon the Indian Armed Forces officer corps which has graduated from DSSC Wellington; by the US Armed Forces officers who have also graduated from DSSC. An unbiased comparison of the Indian Group and the American Group, from 1980 to 2018, within their respective arenas of operations, proves that Smiths deductions are bunk. Why the US Army officers failed, is not my business, let Smith delve into that. One day he will write A Report on the Afghanistan Experience. Or will he?

## Conclusion

**13.** Indian officers attend many war / staff course in USA and will continue to do so. Not one Indian officer has found it appropriate to pass judgment on the ability and integrity of US Armed Forces officers. As written earlier, the WE



appears to have been commissioned to mellow the adverse impact created by the Quetta Report. There cannot be a reason other than this for any American analyst to create a report about DSSC Wellington. The 'extractor' who has married the WE with Gibson and Karnad shows a predisposition to his belief that Professional Military Education PME in India is rather poor. In today's digital environment with instant global reach and where anonymity is a powerful 'kavach', it is fashionable to denigrate Indian systems including the Armed Forces. Those Fauji veterans who do so today, themselves sat on powerful positions, but did not initiate the changes they so vociferously espouse today behind the fence of retirement. This is called "post retirement wisdom and courage". As often remarked, from pencil warriors they have become keyboard commandos. All 'honourable men' but each one wishing to stab Caesar at least once. Ek baar hamla to banta hai na?

14. One thing is true, no Indian military officer from DSSC Wellington; lied in the UN accusing another country of possessing Weapons of Mass Destruction, when he knew it was false and deliberately deceptive.



**GROUP CAPT  
A G BEWOOR**



## ABOUT THE AUTHOR

Group Capt A G Bewoor studied at RIMC and NDA and was commissioned in Oct 1965 into the Transport Stream of the IAF. He has flown more than 5000 hours on 11 types of aircraft. After a two year deputation to Iraqi Air Force, Bewoor was an Air Force Examiner and also a Senior Instructor Air Wing at DSSC. Trained on the IL-76 in USSR, he commanded 44 Sqn with IL-76s and led the airborne assault into Maldives in Nov 1988. He took premature release in 1993 and served with Onward Technologies in Pune for 22 years. Anant Bewoor writes for many journals / magazines on Defence and other subjects. His email is : [bewoor45@gmail.com](mailto:bewoor45@gmail.com)

# HISTORICAL DIMENSIONS TO DEFENCE TECHNOLOGY DEVELOPMENT

## NEED FOR A TRANSFORMATIONAL STRATEGY

 BY DR. V.K. SARASWAT

### Historical Background

It is a bitter fact that India missed the Industrial Revolution of the 19th Century and remained largely an agrarian economy till independence. As such, at the time of independence, our country had practically no industrial base. The situation in the defence technology sector was characterized by the presence of a few ordnance factories producing goods based on British technology and a few inspection centres assisting them for limited indigenization and product support for the armed forces.

Our first Prime Minister Pt Jawaharal Nehru, a visionary realized this situation on the technology front and said post-independence that:

“Science alone can solve the problems of hunger, poverty and security.”

Pt. Nehru combined his vision of science and technology with the concept of planned development to achieve a socialistic pattern of society. As part of this vision, Independent India embarked on setting up large Public Sector Undertakings (PSUs) in the areas of steel manufacturing, thermal power plants, mineral exploration, oil exploration, defence equipment manufacturing, drugs manufacturing, aviation, shipping, mining and other strategic technology areas in collaboration with friendly countries like Russia. In parallel, the private sector also initiated technology collaboration with foreign companies in different areas like textiles, consumer goods, automobiles, drugs and pharmaceuticals, plants and equipment for chemical industries, cement plants, mining equipment, etc. The country was in a hurry to catch up with the developed world technologically to meet ever growing domestic requirements. There was no investment in



the defence technology sector by private industries. The Ministry of Defence set up new ordnance factories and defence PSU's to meet the requirements of the armed forces in collaboration, as part of the equipment acquisition programme.

By and large all defence PSU's including HAL, BDL, BEL, BEML and the ordnance factories acquired technology know-how as part of licensed production. This situation was not only in the defence sector but also prevailed in energy, aviation, oil and chemicals, mining, etc., Our planners had assumed that these PSU's will turn into centres of technology excellence and will start innovating new products and technologies. This did not happen, because we were completely dependent on collaboration, for strategic technology inputs like materials, forgings, castings, special manufacturing processes and even critical machines and test equipment. No design know-why was ever given by any collaborator. While this developed the capability to manufacture defence equipment like guns, ships, aircraft, missiles, radars, etc., but did not give us the capability of designing and developing and innovating any new equipment indigenously.

As a result, both in the public and private sectors, we continued to look for foreign technology for every new product. While India today has vast manufacturing infrastructure for specific products, it lacks a basic technology base in contemporary materials, sensors, electronics, composites, machine tools, functional materials, avionics, propulsion systems, micro electronics, micro machining, automated manufacturing, software development and now the emerging areas of nano technology, photonics and digital manufacturing. The list is fairly large and ever increasing. Certainly, we have acquired few benefits by licensed production, but remained a technology follower.

In parallel, when the PSU/OF built up was on, the vision of Pt Nehru also gave birth to three strategic departments, viz., Atomic Energy, Space and Defence R&D under the leadership of Homi Bhabha, Vikram Sarabhai and Dr. Kothari respectively. CSIR was also set up under the leadership of Dr. S.S. Bhatnagar. With a humble beginning of 10 labs in 1958, DRDO started working on the development of various technologies for our armed forces, and today have grown into an organization with over 50 labs engaged in a wide variety of technology disciplines ranging from Historical Dimensions to Defence Technology Development 25 aeronautics and naval systems to materials and life sciences, as also from soldier selection and protection to sophisticated ballistic missile defence, strategic missiles and armaments.

## Defence Research and Development

The first two decades, i.e. the 60s and 70s saw the development of defence technologies for various sub-systems and components. Focus shifted to the development of major systems/platforms like missiles, aircrafts tanks, electronic warfare systems and sonars in the 80s and 90s in mission mode with concurrent engineering and concurrency of development and production. These programmes helped in the development of critical technologies for solid propulsion, liquid propulsion, inertial navigation, electro-hydraulic control systems, embedded on-board computers, strategic materials like maraging steel, titanium, carbon composites, Ni-based super alloys, magnesium alloys, IR seekers, command guidance system, ramjet propulsion, phased array radars, ceramic/composite radomes, armoured materials, high energy propellants, explosives, conventional warheads, mobile launchers, under-water launch capabilities, EW systems, sonars, etc.

In the last 50 years of its existence, DRDO has developed the following major systems.

### Missiles

PRITHVI, DHANUSH, AKASH, AGNI-1, AGNI-2, AGNI-3, AGNI4, AGNI-5, B05, PRAHAR, BMD Systems.

### Aeronautics

The development of the Light Combat Aircraft for the Airforce and Navy is in an advanced stage of induction and production at HAL. Development and production of unmanned aerial vehicles, viz., Nishant, Lakshya, Rustom-I, Mini UAVs have been carried out.

### Armoured Vehicles and Engineering Equipment

Development and production of the MBT Arjun is a major technology breakthrough leading now to the development of MBT Mk-II and later FMBT. It may be noted that MBT Arjun is superior to the T-90, a Russian tank presently with the Indian Army, in many aspects. Bridging equipment, viz., sarvatra and dossers, anti-mining equipment have been developed and delivered.

The list is fairly long which includes NBC equipment, naval systems like torpedoes, life support systems, warheads, grenades, armoured materials, special steels for ships, carbon composites for missiles, parachutes, aerostats,

laser dazzlers, chemical detection sensors, NBC protection gear, camouflage nets, etc.

## **Radars**

Indra, Rajendra, Weapon Locating Radars, 3D-Surveillance Radars, Rohini, Revathi, Long Range Tracking Radar (LRTR), Multi-Functional Radar (MFCR), Battlefield Surveillance Radar (BFSR) have been developed and are being produced by BEL. In this area, DRDO turned a corner technologically by developing Electronically Scanning Active Phased Array Radars. The degree of self-sufficiency is evident both in DRDO and BEL – a close partner in the development and production of radars. Major programmes are underway to develop missile guidance radars for LRSAM/MRSAM and multimode radars for LCA, and maritime patrol airborne radar.

## **Electronic Warfare**

Major programmes like Samyukta, Sangraha, Divyadrishti have enabled technology and product development in all segments of EW mainly commint, elint, ESM. Covering ECM and ECCM features airborne and shipborne systems have been developed by DRDO and produced by BEL to meet significant requirements of the Airforce and Navy. Migration increasingly to the digital domain and better accuracy of direction finding and radar fingerprinting is in progress.

## **Sonars**

Major technologies and products developed and delivered in this area are hull mounted sonars, towed array sonars, dunking sonars, anti-torpedo systems. The list is quite impressive, particularly keeping in mind that the country did not possess any industrial base. As part of the programme's concurrency approach, the production infrastructure at BDL, BEL, HAL, BEML and many ordnance factories was augmented. In fact, in collaboration with ISRO, the DRDO setup an aerospace division at HAL Bengaluru for production of PRITHVI airframe and engine and PSLV. The production technology was upgraded to include CNC machines, automatic welding, magnesium casting, Historical Dimensions to Defence Technology Development 27 vaccum brazing, HIP, CIP, flow forming, investment casting and powder metallurgy products in special heavy alloys like Tungsten. Special emphasis was placed on involving private industries in the development and production with a policy decision that all development partners would have a major share of production

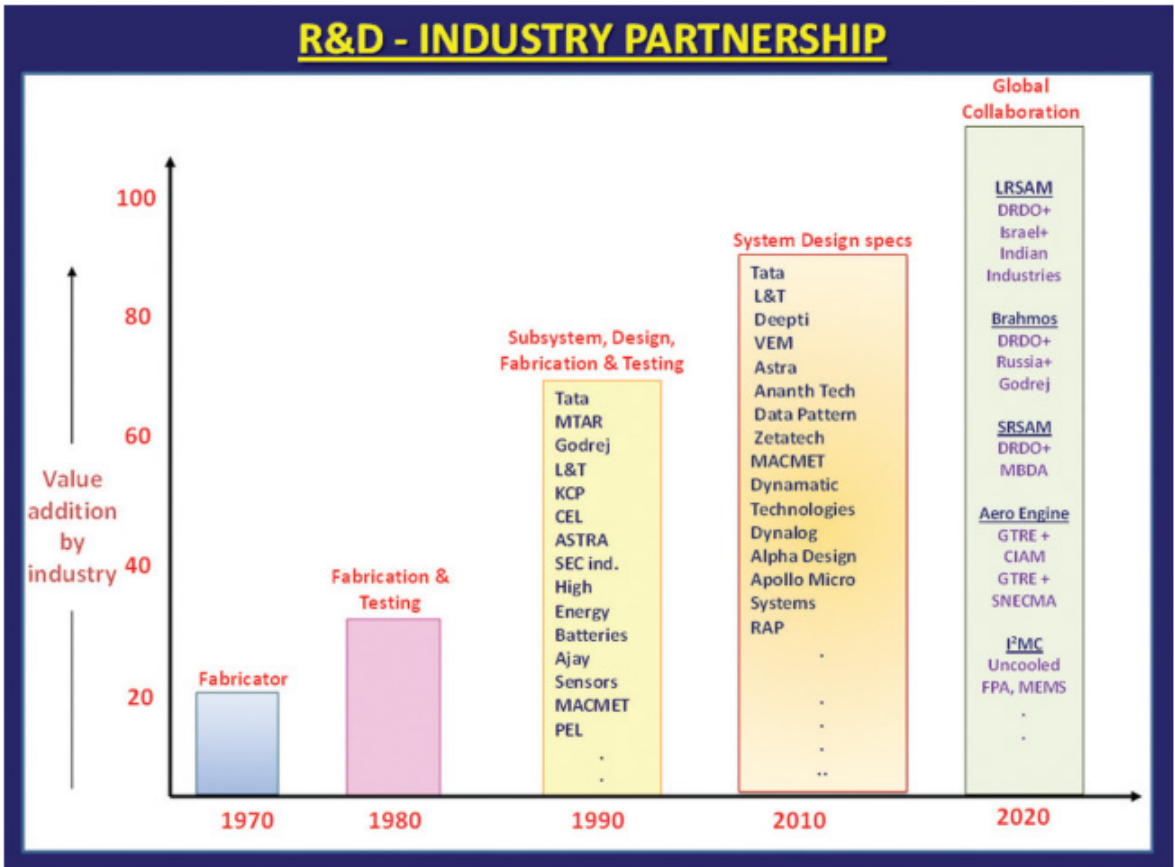


Figure 1

orders on a preferential basis with cost control exercised and monitored by a government appointed Expert Committee. This resulted in the growth of more than 40-50 industries across the country by eventually developing into B2P (Built to Print)/B2D (Built to Design) partners for future defence programmes (refer Figure 1).

The biggest gain of these programmes has been the development of the country's capability to combat Missile Technology Control Regimes (MTCR) imposed by the developed countries in the late 80s and reinforced in 1998 after the second nuclear test. With the participation of Indian academia, industries and public and private and national laboratories including CSIR labs, the country could develop and produce servo valves, actuators, dry tuned gyros, accelerometers, magnesium castings including alloys, precision sensors and

military certified electronics systems. In fact, while the impact of MTCR was felt in the form of delays in programmes, but the ultimate gain was in terms of self-reliance in some of the critical technologies.

The total value of DRDO products under production at Defence PSUs, ordnance factories in the last 5-7 years is more than ` 1,65,000 crores – a significant value.

### **What is the Problem then?**

Despite these types of gains in the last 50 years and bringing the SelfReliance Index to more than 45 percent, the fact remains that India is importing most of the equipment, weapons and critical technologies to meet its defence needs. What is the reason? Many experts have tried to analyse the problem and generally blamed the DRDO for taking too much time in development and also working in isolation of the armed forces. To understand the issue in a correct perspective, the historical dimension discussed earlier is the key factor for our slow progress as a nation. Developing missiles of different types, light combat aircraft, MBT Arjun, EW system, sonars, Kaveri engine, aerostat, radars, torpedoes, special materials, NBC equipment, engineering Equipment, etc., in 25 years with a limited infrastructure industrial base, little support from academia, no development culture in industry, limited funding and of course varying requirements of users and the kind of disconnect between DRDO and production agencies, technology control regimes and competition with multinational companies supplying weapons/ equipment to armed forces compares well with the development time of 17-20 years taken by the US in developing joint strike aircraft, BMD system and many other equipments, inspite of having a well developed industrial and R&D base in the country and the definitive policy of the US Govt to not import weapons/equipment for defence. However, there are weaknesses in the system as described in the following section:

### **Valley of Death Syndrome**

Many of our programmes have suffered from the Valley of Death Syndrome where basic research has not lead to applied research/innovation and proto-type development has not reached the market due to:

- (i) Disconnect between universities/academic institutions and national labs/ industries Historical Dimensions to Defence Technology Development 29
- (ii) Disconnect between national labs developing sub-systems/systems/ platforms and the production agencies/industries

(iii) Time and financial resources not factored in the project/ programme plans  
This problem of transition has been identified by the US Congressman Ehler as the Valley of Death. The main reason in the Indian context is the lack of productionisation capability in industry because it has been trained for years for licensed production. Concepts like design for production, value engineering, digital manufacturing and system engineering are not followed judiciously by designers, and industries have no experience of introducing them resulting in poor quality and not very cost effective products produced at very low prices of production thereby not meeting the requirements of the market. In our transformation strategy we need to factor in these aspects.

### **Design Capability – An Achilles Heal**

It has been acknowledged by all that our country does not possess “DESIGN” capabilities in practically all spheres, mainly because of the environment of licensed production in the private and public industries. In addition, the university/academic curriculum also has not paid enough attention on building design know-how and know-why among our engineers. This deficiency is evident during development of practically all platforms, viz., ships, submarines, aircraft, armoured vehicles and many armament and electronic systems, auxiliary systems like propulsion systems, machine tools, test equipment, measurement systems, etc.

In addition, there are basic technology problems in the area of materials, sensors, electronic components, functional materials, etc., acting as major stumbling blocks in the development of indigenous systems.

## **TRANSFORMATION STRATEGY**

### **Special Features of Defence Systems**

In order to work out a strategy for future technology development, it is essential to understand the peculiarities of defence systems. Aerospace and defence systems are characterized by:

- Complex designs and long project cycles
- Large R&D investments
- Large investments in manufacturing and test equipment
- Special materials of unique specifications

- Requires advanced manufacturing techniques
- Physical sizes ranging from micro meters to meters
- Small batch size for production – in many cases like ships, etc., one off
- Quick technology obsolescence
- Diverse multi-disciplinary technologies
- Intensive technical, quality and safety requirements
- Stringent regulatory environment
- Poor supply chain management
- Poor linkage of R&D and production especially in the Indian context
- High emphasis on long product life requiring very efficient product support systems.

### **Emerging Eco-System**

Over the last twenty years there has been a significant change in the ecosystem of our country to take on ambitious large size highly technology intensive programmes. The emerging echo system is characterized by:

- India has gained extensively through various projects
- Core technology base has been established within the country
- Enhanced industrial capability
- Increased role of industry
- Increased awareness and exposure to modern technologies of new scientists
- Vibrant industrial growth
- Changed perspective of government in terms of priority
- Buy and make Indian plus presence of off-set clause as opportunity
- Technology denial regimes becoming irrelevant
- New strategic relationships are emerging globally
- Focus on greater accountability
- Higher expectation and confidence of users
- Globalisation and global markets
- Indigeneous R&D developing high performance, cost-effective products with efficient product life cycle support and technology obsolescence management
- Indian industry getting not only know-how, but know-why due to indigenous R&D and also change in philosophies from licensed production to joint



ventures like Brahmos, LRSAM, FGFA, etc.

These characteristics also need to be factored in while evolving strategies.

### **Changing Face of Indian Aerospace and Defence**

India is present in all segments of the aerospace and defence value chain which is:

- Research and development
- Engineering design
- Manufacturing
- Assembly
- MRO design

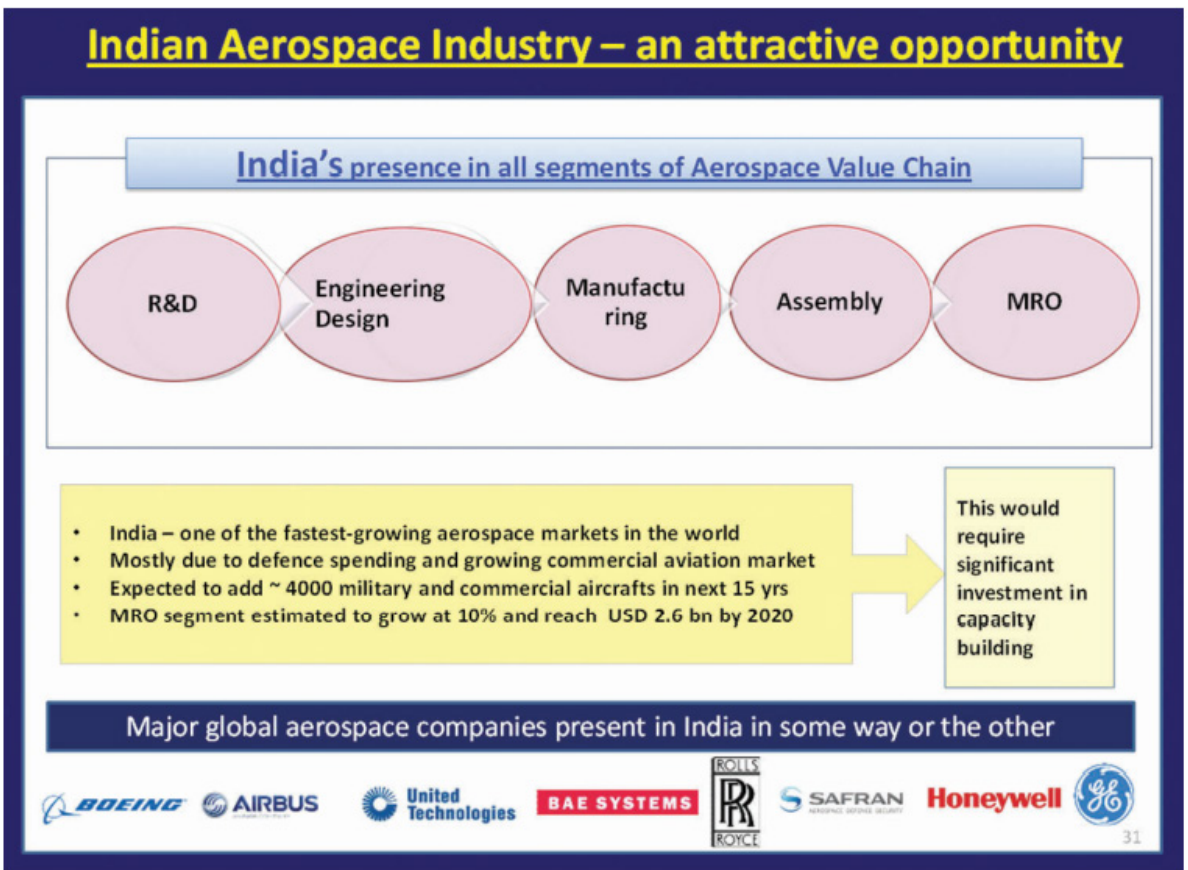


Figure 2

India is one of the fastest growing aerospace markets in the world mostly due to high defence spending and a growing aviation market. It is expected that approximately 4,000 military and civil aircraft will be inducted in the next 15 years. This would require significant investments in capacity building. We also have presence of global aerospace and defence companies, viz., Boeing, Airbus, BAE Systems, Safran, Honeywell, GE, Raytheon, Rolls Royce, etc.

India has major development and production programmes in aeronautics, armaments, combat vehicles, electronics, missiles, materials and some of the sanctioned programmes are medium multi-role combat aircraft MMRCA, fifth generation fighter aircraft FGFA, multi-role transport aircraft MT, medium lift helicopters, light utility helicopters, LCA, LCA (Navy), 155 × 52 calibre guns, BMD systems, airborne EW systems, radars, FMBT, long span bridging equipment, satellite based EW and communication, strategic submarines and other naval platforms, NBC equipment, LRSAM, MRSAM, ATM, etc.

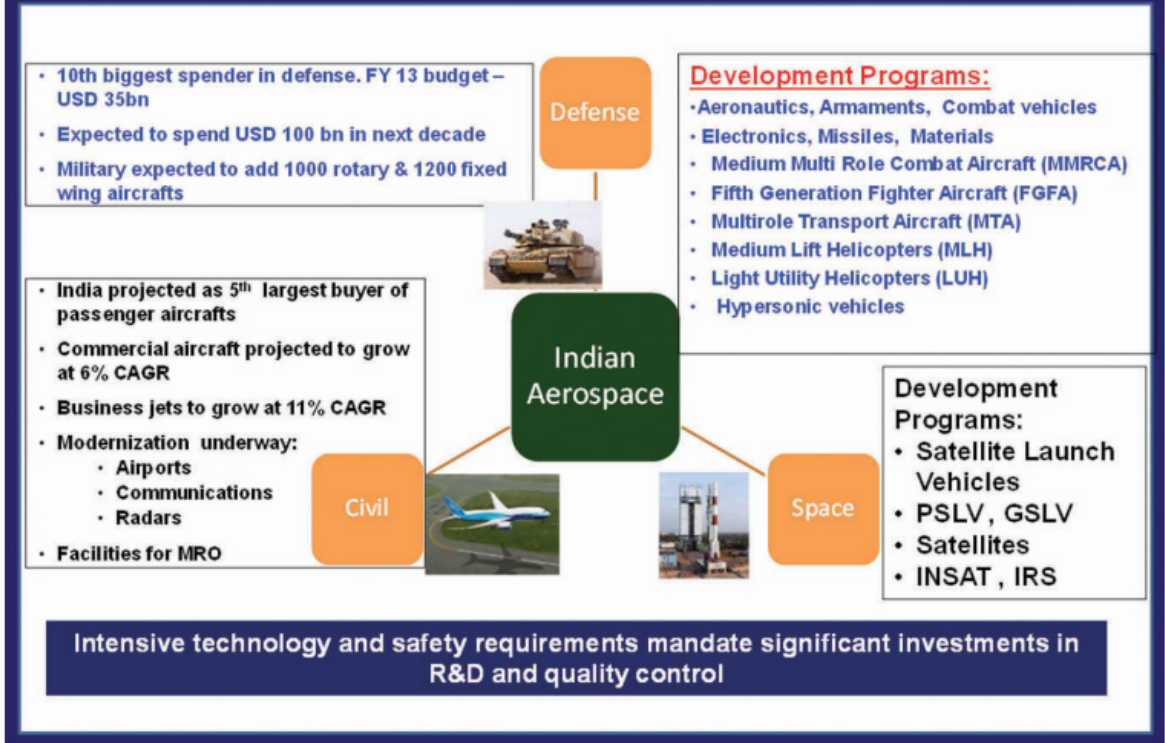
With these programmes, India is expected to be the third largest Aerospace and Defence Market after US and China by 2020/2025.

## Proposed Strategy

In the light of the changing face of the Indian aerospace and defence segment, alongwith the unique technological and market features of defence equipment, a multi-layered strategy is proposed to meet immediate requirements of the user/market and to build a strong technology base.

Procure, import and acquire weapons and equipment required by our services for immediate use (within the next seven years) with certain modified procurement policies and provisions of off-sets. The off-set obligations to be identified from core technology areas. If there is a requirement to manufacture the item in India, then the same to be organized/contracted with adequate provisions of production of more than 50 per cent of Class “A” items and total system integration to be carried out by Indian industry. It should be ensured that the country should have the IP to produce the required numbers without any reference to OEM and carryout modifications to cater for technology obsolescence and user driven operational requirements. R&D institutions of the country should be involved in this process to ensure absorption of know-how and knowwhy alongwith the identified production agencies presenting a unified approach to the foreign collaborator. A joint venture arrangement should be preferred over lopsided licensed production arrangements. The offset clause should be leveraged upfront to get the required technologies, production and testing infrastructure and even training in high end

## India is expected to be the third largest aerospace market after U.S. and China by 2020



**Figure 3**

design and manufacturing processes.

Today, it is a global market with fluctuating world economies. Also Asia is the only geographical segment with high growth of the defence market. Since domestic consumption of defence equipment in Europe is limited and the US/Russia largely meet their requirements from domestic R&D and production, large numbers of established defence and aerospace companies are facing a severe market crunch leading to near closure of these industries. It's an opportunity for our country. The way our industry giants like TATA's/Mittal's/Mahindra's, etc., have acquired companies in coal, energy, steel and oil sector the same approach should be encouraged in defence and aerospace. Our country should mount a strong programme in collaboration with Indian industry giants, or otherwise, to acquire lock stock and barrel (design, development, manufacturing and testing facilities including captive trained manpower) from these firms and accelerate the process of bridging the ever increasing

technology gap.

We need to evolve a policy frame work in this regard to incentivize and facilitate the acquisition process. This is the requirement demanding all out efforts to develop indigenous technologies and produce state-of-art weapon systems and equipment leveraging the gains of Level 1 and 2 and working with all stake holders in the country. Towards this one has to –

“Establish, build, evolve, inter-connect and integrate multiple institutions as national base for development of advanced technologies. It will be a dynamic and vibrant process spread across the entire nation encompassing academic institutions, universities, R&D organisations, national laboratories, industries both in the public and private sectors and govt departments, defence services spin-off and dual use commodity markets.”

This layer needs detailing. The implementation strategy would involve the following steps:

- Build and develop requisite infrastructure to support and sustain new technology development processes, viz., setting up foundries for  $\mu$ -electronics, photonics, FPA, high power microwave systems, test and evaluation infrastructure for aero-engines and its subsystems, tank engines, propulsion for ships and submarines, advanced manufacturing centres for lean, mean and green manufacturing, composite and ceramic manufacturing, etc.
- Develop new policy framework to link and connect multiple agencies in a seamless manner and cater for failures in the development process.
- Build systems/organizations to develop and produce products with lower time cycles utilizing the funds effectively.

## Implementation Strategy

### Eco-System

The first step for implementation would be to create an eco-system to facilitate accelerated growth of technologies in a synergistic manner. The eco-system should have the following features:

- Favourable and fair rules of the game establisher
- Funds and incentives to industries for R&D strategies

- A climate that rewards risk taking and tolerates failures
- An open business environment
- A decent quality of life
- A specialist business infrastructure that understands and is supportive of entrepreneurship
- Universities and R&D institutions that are incentivized and want to interact systematically with business.

### **Global Trends in Advanced Manufacturing of Aerospace and Defence Systems**

Over the years, the framework for development and manufacturing has undergone drastic changes due to growth in technologies, particularly the convergence of bio-nano and IT technologies and ICT forming the binding layer for efficient design to the manufacturing cycle including future requirements of sustainability and sustainable engineering. Obviously this change will have to be factored in our strategy for future development and manufacturing (refer Figure 4).

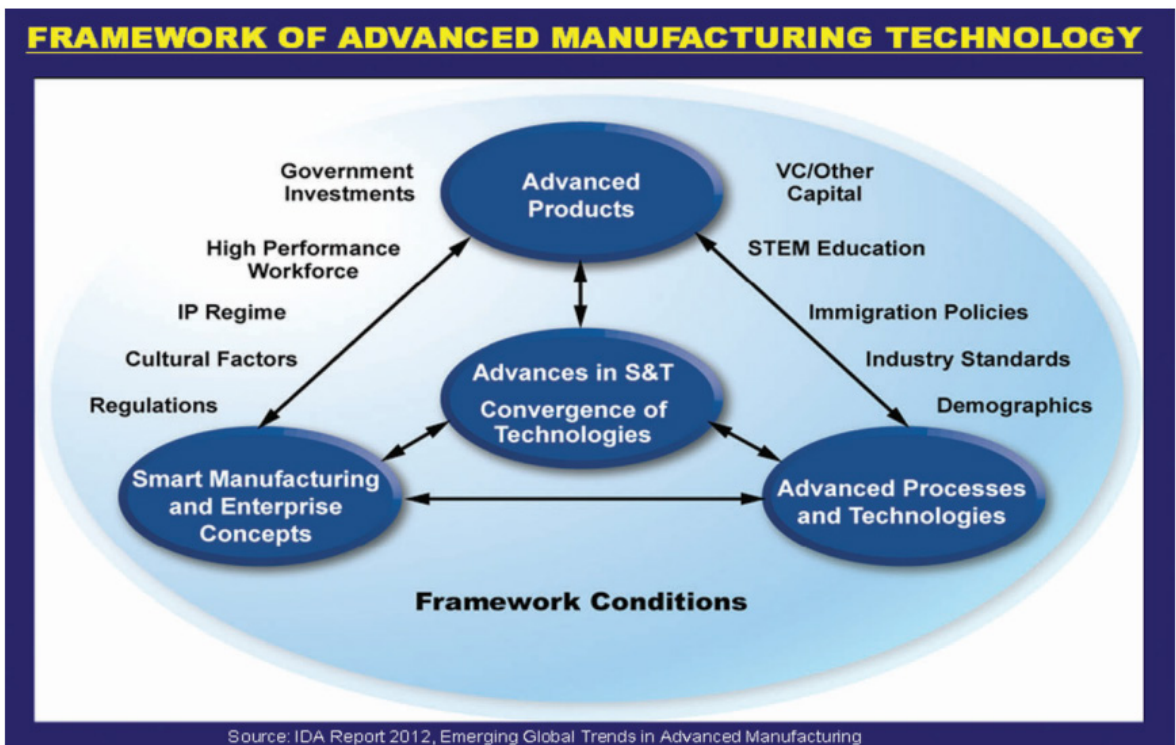


Figure 4

As discussed earlier, advanced products are characterized by complex technologies, use of new materials and sophisticated and innovative designs. Advanced manufacturing consists of know-how and know-why of production with focus on advanced processes and technologies. Smart manufacturing enterprise goes beyond the factory floor. Paradigms of “Manufacturing as Eco-System” have emerged. Smart enterprise create and use data and information throughout the product life cycle. It creates flexible manufacturing processes to cater to the changes in demand at low cost without damage to the environment. Products are designed to facilitate efficient production and recyclability. All this is done with a strong R&D base in physics, chemistry, materials science and biology and their convergence associated with excellent capability in modeling and prediction with state-of-art computing power.

## **Upgradation of Production/Manufacturing Technologies**

### **in Indian Industry (Public/Private)**

In order to compete globally in terms of quality and cost, it is essential to upgrade the manufacturing technologies of our industries. If we take a dispassionate view of our manufacturing base, it will be seen that we have not kept pace in this field also due to the licensed production culture prevailing in industry by bringing in obsolete technology, machines and manufacturing processes. In fact, this fact surfaced quite clearly during the production of the LCA at HAL. Even in the area of machine tools the technology has to be imported because as of today after the closure of the HMT machine tools factory, other than CMTI, there is no institution engaged in development of new machines for future production frame work in line with global trends. India needs to induct the following manufacturing technologies/machines in the next decade at a very fast pace to meet the requirements of aerospace and defence programmes at hand.

### **List of Machines**

- Water jet machining
- Hexapod machining
- Multi tasking machines
- Role extrusion for missile cases
- Single crystal based super alloys for gas turbines engines (BLISK)
- Integral fuselage design and manufacture (welded structures) – extrusions, laser beam welding, friction stir welding



- Near net shape manufacturing
  - Advanced aluminum alloys and fabrication technologies for space transportation systems – near net extrusion
  - Roll forging
  - Shear forging
  - Spin forming
  - Friction stir welding
  - High voltage electron beam welding
    - Reactive material Ti-6Al-4V alloy
    - Multiple tier welding, multi-thickness welding
  - Friction stir welding
  - Laser consolidation processing
  - Laser engineered net shaping
  - Vacuum plasma sprays
  - Photo chemical machining
- } for cryogenic tanks  
adaptor rings  
tank domes  
internally stiffened extrusions

## Future Technology Roadmap

With the emerging threat perceptions of conventional and asymmetric warfare and galloping technology growth influencing the Revolution in Military Affairs (RMA) and changing doctrines, it is essential that India should look at its plans and practices for development of future technologies, weapon systems and equipment.

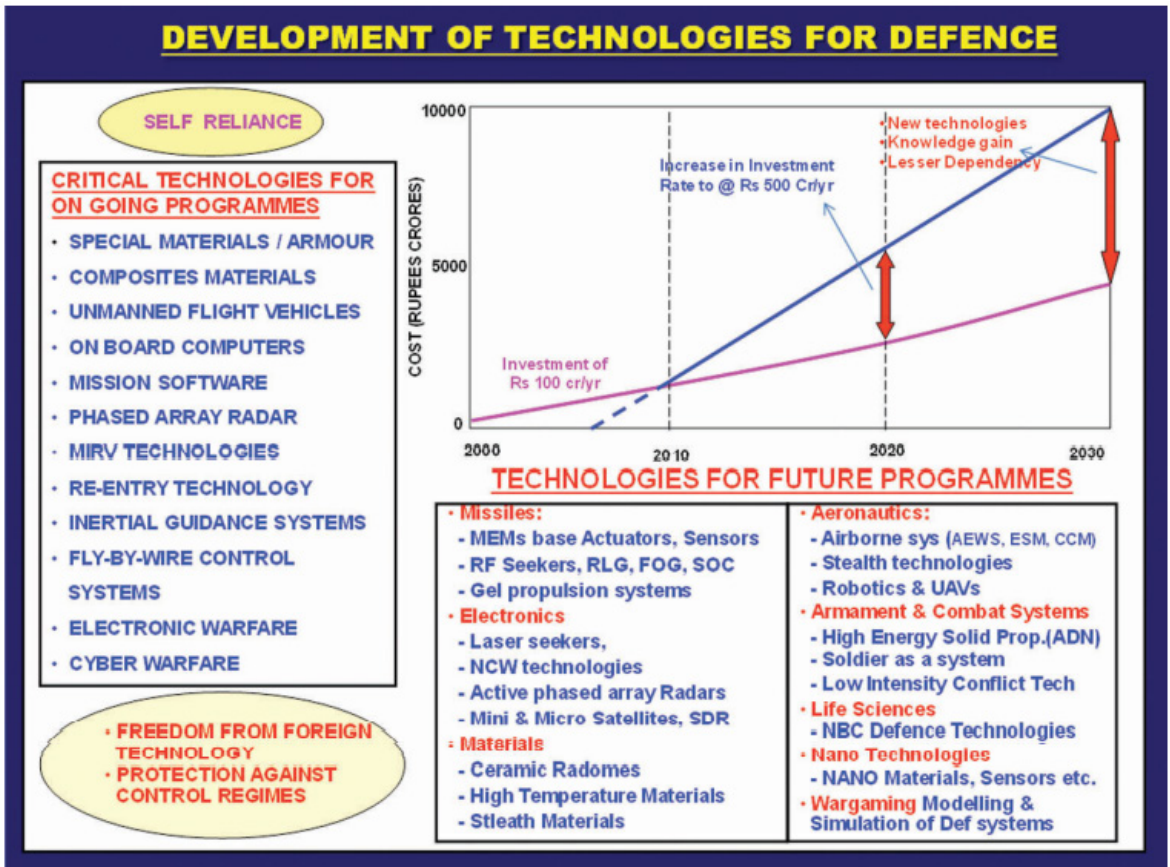
India has to adopt a two pronged strategy as there are two dimensions to Science & Technology – one basic science and scientific research and the other is futuristic technology development. We need to have continued growth in both these fields. The broad areas of focus should be:

- Unmanned technologies for air, land and water – including autonomous navigation, intelligent decision making capability.
- Stealth and anti-stealth technologies including multi-spectral materials and multi-static radars to combat stealth.
- Under-water communication for naval application, blue green laser for communication, VLF, ELF, software defined radios, cognitive radios with security layers.



- Hypersonic technologies including materials, aerodynamics and propulsion.
- New computing technologies, viz., quantum computing, photonic and simolecular computing which is likely to change the shape of computing in future.
- Special functional materials like gallium nitride, indium phosphide, silicon carbide, germanium vanadium oxide, etc.
- High power microwave devices.
- Advance mathematics, statistics and computing technologies for cyber security, viz., cryptography and cryptanalysis, automatic target recognition, decision support systems, artificial intelligence speech recognition and multi-spectral image processing.
- Network centric operation technologies and adaptive networks.
- Special Materials and manufacturing processes like single crystal blades with super alloys/inter-metallic compounds, cooled blades, functionally graded composites, carbon-metal composites, carbon-carbon carbon-Si composites for rocket engines, gas turbine engines and scramjet engines.
- Directed energy weapon technologies with focus on high power lasers, high power microwaves with attendant technologies which calls for high tech electronics including adaptive optics and beam steering, etc.
- Space based systems: Space security is going to be the main concern in the future. Hence, it is essential to build competence in critical technologies, viz., reusable entry vehicle technology, space based ELINT, satellite based EW technologies, space denial technologies, low cost satellite launch systems, anti-satellite systems, etc.
- Cyber security: Technology for cyber forensic network hardware with secured layers, robust and trusted computing platforms, communication elements like routers, switches, critical criteria testing systems, crypt analysis tools, next generation encryption algorithms development, malware detection and mitigation.

This would require a technology development strategy with active participation of academic institutions, industries, national laboratories and enhanced funding by government for setting up critical infrastructure for development. Investments to the tune of ` 500 cr/year would be needed in a focused manner for technology development. One time investments in setting up foundries for nano technology, photonics and next generation of micro-electronics, focal plume arrays, quantum well detectors, etc., It may be noted that without adequate investments and synergy among all stake



**Figure 5**

holders, developing these technologies would remain wishful thinking and the technology gap will continue to increase (refer Figure 5).

All technology development programmes should bring the technology to a maturity level of TRL 3-4 so that product development can take off without any hiccups. This would require an effective mentoring and review mechanism at different layers of development, to ensure directed basic research and development without losing focus and avoiding operation in silos which have been a major negative factor in the past.

### Research and Development as a Centre for Enhancing Industry Base

As brought out in earlier paragraphs advancement of indigenous technologies in missiles, radars, EW systems, UAVs, electronics, space, strategic systems and engineering equipment and associate growth of the industry base in both

the private and public sectors have taken place due to directed and focused mission mode programmes taken up by our country. It is strongly felt that R&D should continue to take leadership in this area and incorporate the following features for higher rates of progress and improved R&D culture and investments by industry.

- (i) Projects and programmes should involve industry during technology and product development for
  - Built to Print (B2P)
  - Built to Development (B2D)
  - Built to Requirement (B2R)
  - System Integration

Choices in this respect have to be based on capability and capacity of industry. Efforts should be made to continuously upgrade industry partners from component manufacturers to system integrators through strong hand holding during the process of development.

The relationship should transform from vendor to project partner wherein success and failures are jointly shared and accounted for. This would require transformed contracting procedures with empowered committees/teams for review and mentoring the process of shared development and also maintaining the required level of accountability.

- (ii) R&D should plan strong technology transfers in concurrent mode ensuring that know-how and know-why are transferred and absorbed by production partners. ICT should be extensively used alongwith modern tools for managing design, development, production and product support using ERP, PLM, etc.
- (iii) R&D should earmark certain funds for investing in production centres for upgrading the production processes and support productionisation including risk management and redundancies due to concurrency of development and production.
- (iv) R&D should be allowed to invest in production infrastructure in private industries also. It is essential that a policy and investment mode, taking into account transparency, accountability and continued support by industry throughout the life cycle of the product and maintaining the quality of the product at mutually and scientifically arrived costs should be evolved
- (v) Defence and aerospace systems require extremely complex and costly test and certification infrastructure. Loading this investment on industry partners would not be a cost effective solution. To overcome this problem,

a cluster of industries should float a holding company with share holding of each partner and this holding company should set up common facilities for usage by all, on payment basis. Alternatively, facilities available in R&D centres, defence public sector units/OFs be made available to all industry partners.

- (vi) For long term association, it is proposed that R&D and industry should set up joint ventures to promote technology development, product development and production. JV partners to be chosen based on technology capability, financial strength, long term aims, objectives and business plans of the industry partners. Issues of IP and other legal aspects should be addressed by professionals on a mutually agreed basis, with the sole aim of enhancing the technology strength of the nation for global competition and growth of the economy.

### **Synergy between Innovation and Design**

In order to overcome the problem of design capability, we have to follow the 21st century, innovation paradigm enunciated by MIT, US. This would require universities/academic institutions to be research intensive, utilizing technology and design centric pedagogy in their educational approach.

Since, the paradigm shift in the university scenario is a long term solution, it is proposed that the country should establish national design houses in the areas of:

- Aeronautics including general systems of aircraft (manned/ unmanned)
- Propulsion (rockets, gas turbines, ramjet/scramjet, PDE, airindependent propulsion, IC engines for automobiles, electric propulsion, etc.)
- Advanced materials and composites
- Long range radars, avionics and control elements Also to promote the growth of the next generation of manufacturing processes linked with the design of future generation of systems, we need to establish national centres of excellence in the following disciplines:
  - Advanced manufacturing research centre
  - National composite centre
  - Nano-technology centre with emphasis on convergence of nanobio-ICT – photonics

The vision of these centres should be to develop next generation technologies and automated machine tools for digital manufacturing and sustainable engineering. These centres should feed industry, small and medium, with the

design of new machines and manufacturing processes.

## **Constitution of DARPA Type Institute in INDIA**

Acquisition of advanced technologies which are revolutionary in nature, with high potential to give strategic advantage and with high risk in their development may not be taken up under normal methods of development. It is necessary to create an organization with special powers to undertake development of such breakthrough technologies by engagement and promotion of multiple sources. DARPA like organization will conceptualize such technologies and leverage the available capabilities in the country, or create the same through innovative approaches for their full scale development. This approach will accelerate the process of bridging the technology gap.

## **Management of Defence and Aerospace Equipment Development Programmes**

Experience has shown that many of our programmes do not yield good results due to poor planning and execution. While it is an extremely complex topic involving many facets of programme management, a few important steps are proposed for incorporation in the programme planning process. All programmes to have:

- Integrated design and manufacturing
- System engineering approach
- Ultra low cost tooling, reconfigurable and adaptive
- Focus on processing of advanced materials (ceramics/composites)
- Through life digital engineering
  - Design for X (manufacture sustainability cost and reliability)
  - Supply chain planning and execution
  - Strong simulation and modeling
  - Metrology
  - Product life cycle evaluation
  - Computer aided manufacturing

## Defence Production Policy (DPP)

### Off-Set Policies

Government policies in awarding weapon system acquisition contracts go with offset policies. As Indian industry starts working in globally competing markets, suitable policies may be formulated to get technology based offsets rather than on generic fabrication based offsets. This way there is the possibility of acquiring “high end” technologies through the offset policy. In some cases, policies should be modified to accept vendors at L2 or L3 costs, if the vendors are willing to deliver advanced technologies along with products. Technology experts should be involved in a big-way in finalizing the off-sets.

### Investments by Industry in R&D and PPP Working

Post 1991 liberalization policies, Indian industry is in direct contact with global markets and competitive conditions. Industry is expected to compete to survive. This requirement can be met only through inhouse R&D, innovating advancements of technologies, new products, new processes and new ways of formulating complex systems. Industries should make investments in R&D to progress technology-wise and product-wise developments in order to compete and supply advanced systems to defence. Indian industry is capable of evolving R&D processes and the government can provide the necessary incentives for the same through tax concessions, etc.

Government to formulate policy guidelines for –

- (a) Classification of industry based on technology or discipline
- (b) Formation of PPPs for performance to deliver systems

### Models for PPP

It is proposed that the following approaches may be tried out:

- Royalty model (outright sell off of mature technologies)
- Total risk-revenue partnership sharing model (partnership from the stage of conceptualization)
- Partial risk-revenue sharing partnership model (partnership from certain level of maturity)

## **Government Owned Corporate Operated (GOCO) Model**

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As discussed in earlier paragraphs, defence equipment is low volume – high tech and high cost items. As such, industries do not find it a profitable venture to start development and production. Investments for setting up such a production system are high, returns are not assured and low. In such cases, it is proposed that government/R&D labs should set up facilities for production of such systems and ask industry to operate them. This approach has the following benefits:

- Minimizes additional investments (a major concern of the corporate sector for fluctuating loads)
- Efficient management of facilities and increased productivity
- Enhanced assets performance

## **Micro Financing in Industry**

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Another approach to tackle this problem would be to promote micro finance in sensitive and strategic areas, particularly in industries which have basic infrastructure and the same requires upgradation technologically and augmentation for increased rates of production. This approach is essential to achieve sustainability in supplies to the armed forces. Modes of micro financing to private industry could be:

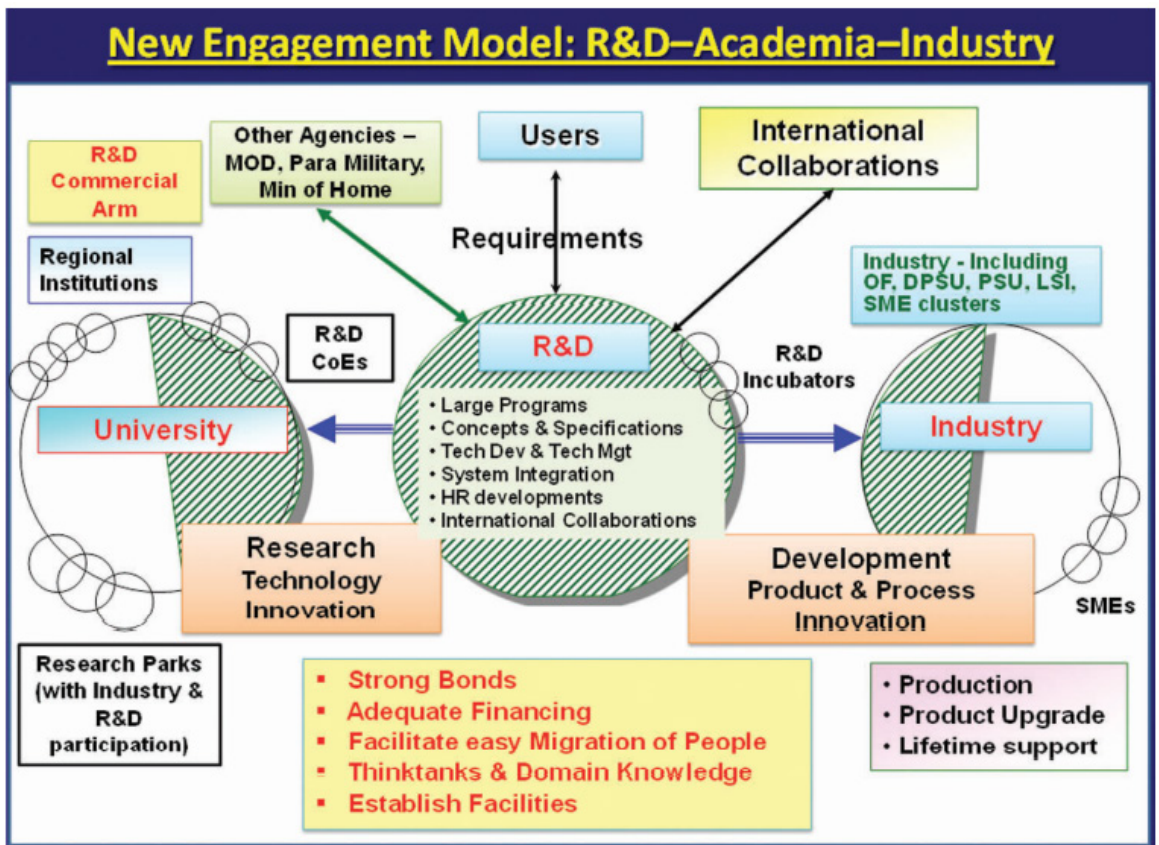
- Micro financing by government
- Micro financing by private institutions
- Availability of subsidized loans
- Operation of facilities on GOCO basis

## **New Engagement Model: R&D–Academia–Industry**

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Figure 6 provides a model for engaging industries and academic institutions in development of technologies from TRL-1 to 9. However, a cluster approach is proposed, wherein around major regional universities/ academic institutions one needs to create clusters of SMEs or research parks with participation of industry and R&D. This initiative has recently been taken by DRDO at IIT (Chennai) Research Park to facilitate R&D and technology development with participation of regional industries (SMEs generally) and regional academic institutions. While R&D labs will have major stake holding in this venture, the collaboration with SMEs will be extremely useful to annul the stigma that “universities can develop but they do no deliver”. This approach will also be used to set up centres of excellence with focus on research and technology





**Figure 6**

innovation. It is expected that technologies upto TRL-4 may be attempted through this arrangement.

R&D centres will collaborate with medium and large industry partners for incubation of R&D culture in such industries through development programmes requiring product development and process innovation. The industry canvass will cover public, private and ordnance factories and SME clusters, all part of a level playing field based on technological capabilities rather than merely on the cost factor. R&D will encourage international collaboration to bridge the technology gap and also facilitate international collaboration in a tripartite mode with Indian industry partners.

Users which includes armed forces, para-military forces, home-land security forces, etc., would interact with R&D centres for coordinating technology development based on their requirements. This does not mean that users may not directly interact with industry. However, this direct interaction would require

a strong technology, knowledge base and programme management to oversee these interactions at service headquarters. Even the R&D centres would have to enlarge their interaction mechanisms manifold, to handle the ever growing demand from users. Many R&D centres should set up commercial arms to handle the productionisation, marketing and product support, the tail end activities of product life cycle management. Users will have to accept the spiral development philosophy to facilitate growth of indigenous technologies and increase self-reliance. R&D and industry, then, will have the motivation to deliver Mk-I in the required time frame and develop Mk-II without waiting for repeated discussions and contracting delays. The world over spiral development in high technology areas has been practiced with excellent results.

Finally, this model would require strong bonds among the three stake holders through share of funding in an appropriate manner. Shared funding would ensure commitment to indigenous development. Together they should rise or fall. This approach also demands easy and purposeful migration of scientists, service officers, engineers, technicians, professors and students from one centre to the other. This will harmonise the process of development and the impermeable walls existing between institutions would become porous for easy flow of knowledge and ideas, and efficient utilization of costly facilities.

Engineers/scientists/technicians from R&D labs and industry should be deputed to operational units, workshops, repair centres of services for understanding the nuances of technology solutions and features required by services for user and environment friendly and maintenance free equipment for effectively performing the task at hand.

This proposal should be backed by resolution of all issues concerning IP, contracting risk/redundancy management and cost sharing upfront, to reduce delays in implementation in an autonomous manner.

## **Measures to be Taken by All Stakeholders Including Government**

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### **to Improve the Eco-System**

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Figure 7 provides the steps to be taken for improving the eco-system for building capability and capacity building for the growth of the aerospace and defence industry in the country.

Government should facilitate industry initiatives rather than controlling them. Industries should function in an autonomous mode. It should support R&D initiatives in all R&D centres whether they are in the public domain or private sector with the bottom line that failures are part of the development process and these should be accepted as much as successes.

## Measures to be taken for Capability & Capacity building for Growth of Industry

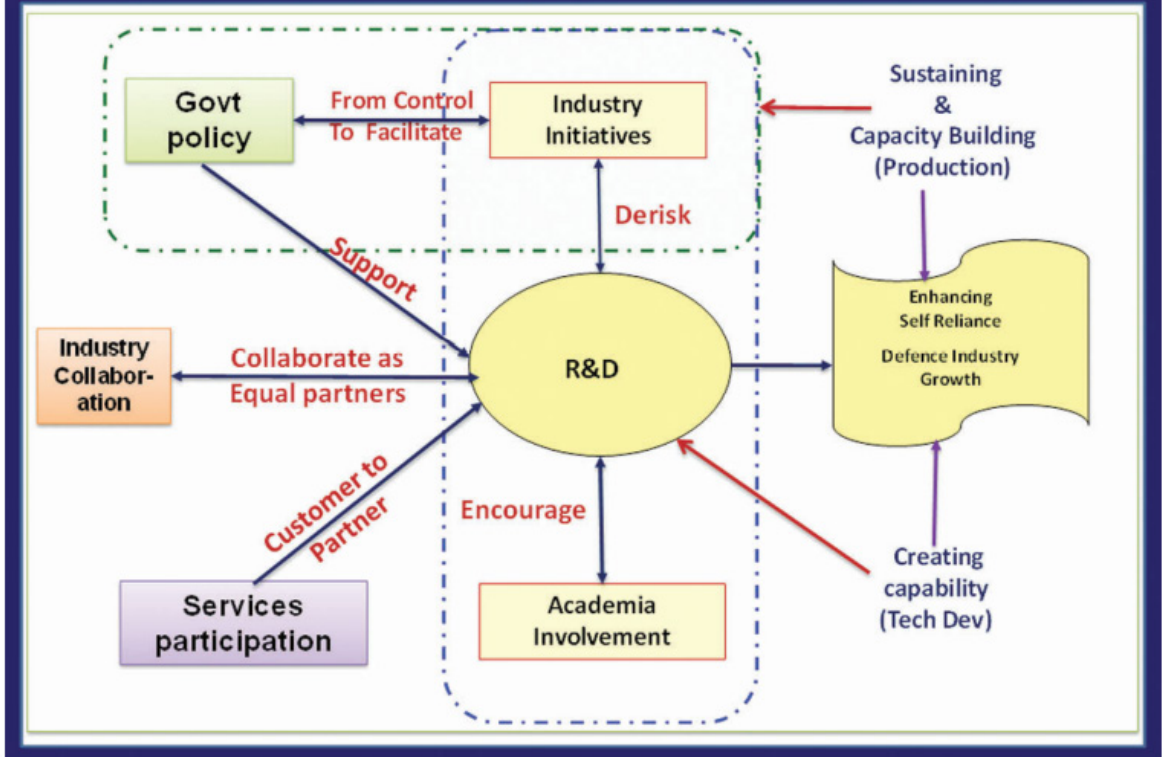


Figure 7

Large R&D centres should do handholding of industry as collaborators and derisk their efforts through technology backups, mentoring, analysis of failures, review of designs/development programmes, making costly test facilities available to industry and finally entering into contracts on a cost-plus basis for development. However, this would require that the accounting/costing system of all industries be made transparent and a committee with the participation of CAG appointed auditor/IFA/addl.FA should oversee the details of man-hour costs, logging system in industry and profit margins, etc. This would go a long way in solving the problem of enormous delays in contracting and one can follow, L1, T1 route rather than L1 alone.

R&D centres should encourage academic involvement and be equal partners in research programmes, rather than reviewing them once in a while and waiting for results without any commitment. User services should

be considered as partners rather than customers. Commitment of the user for the success of the programme should be unhindered and without any conditions. It should be kept in mind that self-reliance in defence equipment is the joint responsibility of all stakeholders and not of R&D alone. Industry should set up design and research centres for technology development, technology absorption, technology collaboration and for carrying out the task of productionisation, process innovation, product support and take measures for technology obsolescence without going back to original R&D centres, collaborators or technology providers.

Cross movement of professionals from R&D and universities to industry and vice-versa would catalyse the process of creating R&D capability in industry.

### **National Aerospace and Defence Commission**

Sixty years of efforts by our country in building indigenous technologies and bringing self-reliance in the crucial area of aerospace and defence, have paid rich dividends in terms of excellent industrial growth, excellent academic institutions and excellent R&D centres. However, since technology is continuously growing, the gap also widens despite our best efforts. The need of the hour is to consolidate the disjointed efforts, remove disconnects among stakeholders by laying down a strong policy frame work and creating the right/effective eco-system for accelerated growth of this sector.

It is proposed that India should set up a National Aerospace & Defence Technology Commission to coordinate, review, prioritize and take decisions on investments, collaborations, joint ventures and acquisitions, export and give directions to aerospace and defence production for improving the country's self-reliance, and GDP to find the rightful place as a developed nation in this sector against global competition.

## **Conclusion**

Despite missing the Industrial Revolution of the 19th Century, no industrial base existed in pre-independence and very slow industrial growth post-independence till 1970-80, yet defence research and development activity has done exceeding well in developing technologies in the area of missiles, radars, EW systems, sonars, armoured vehicles like MBT, life sciences, unmanned aerosystems, propellants, explosives and strategic systems, materials and electronics, to the extent that the production value of indigenously developed

product has reached more than ` 1,65,000 Cr in the last 5-8 years and the Self-Reliance Index has shot up from 30 percent to close to 45 percent and more. This is no mean achievement.

However, there are still technology gaps in many areas and the urgent need is to bridge the same in an accelerated mode to ensure that India does not remain a follower of technology and our import of defence equipment comes down drastically. This requires identification and acceptance of facts that India still has:

- Inadequate design capability in critical areas like aircraft, gas turbine engines, long range electronic scanning radars, robust cyber proof computing and communication systems, robotics and unmanned systems (air, water and land).
- Disconnect between R&D and production.
- Level playing field between private enterprises and public funded institutions does not exist in practice despite many efforts by the government of India.
- Impact of Valley of Death syndrome in terms of conceptual design/innovation not reaching technology maturity levels and products developed by R&D centres not reaching the market.
- University/academia teaching and research portfolio is not focused on being design centric and innovation intensive features which are essential for development of technology and human resources.
- The eco-system does not support industrial growth, and R&D in industry, low volume – high input cost of production, synergy among academia, industry, national labs and user agencies like the armed forces.
- Very low investments in defence research and setting up critical infrastructure for development, testing and manufacture of defence systems (aero, electronics/micro electronics, materials, automation and robotics, etc.).
- Not leveraged the “off-set” provisions to acquire high end technologies for bridging the gap.

Unless we take strong policy and implementation decisions in all these areas, create new models for shared responsibility for development of defence equipments among stakeholders, create the right eco-system, and make investments and collaboration decisions immediately, it is felt that the technology gap will continue to widen, and we will remain the largest importers of weapons and equipment in the world. There is an urgent need for re-engineering academia, industries and research laboratories and transforming

users from a customer to partner with preference for indigenous products and adopting the strategies discussed in this article for accelerated growth of defence technologies.

To give a concrete shape in terms of policies and plans, it is further felt that a National Commission for Defence and Aerospace should be set up to laydown policies, coordinate development and production, laydown priorities, make decisions on investments, collaboration, acquisition of foreign technology centres and exports, create a strong industry base for defence equipment in the country and finally guide this great country to compete globally and find its rightful place as a technology leader among the developed countries in the world. Future is bright. Let us work together to make India a super power in the strategic defence sector.



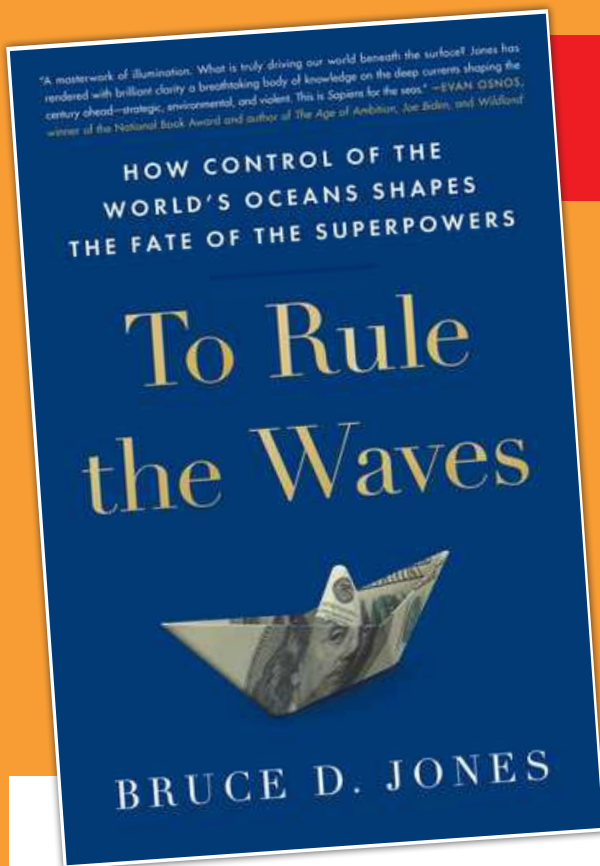
**DR. V. K. SARASWAT**



## ABOUT THE AUTHOR

Dr. Vijay Kumar Saraswat, a renowned scientist, has more than four decades of experience spanning over several fields and areas in both basic and applied sciences of defence research. Apart from being a scientist, he is a rare combination of an innovator, technologist and a visionary. During his illustrious career, from Scientist to Scientific Adviser to the Defence Minister, Director to Director General DRDO and Secretary to Dept of Defence R&D, Dr. Saraswat has been credited with development of Liquid Propulsion Rocket Engines and missiles namely PRITHVI, DHANUSH,





## Book Review



# To Rule the Waves

(How Control of the World's Oceans Shapes the Fate of the Superpowers)

Author: Bruce Jones

ISBN: 9781982127251

BY MILIND R. PARANJPE

This book is about the old adage 'who rules the oceans rules the world'. The author begins with Olavsvern, a base deep in Norway's fjords in the extreme north for NATO submarines. But the book is crammed with information like - Dynamics of international security are bound up in command of the oceans - US tanks were carried on board Norwegian Wilhelmson's ro-ro ships via Pakistan to Afghanistan; Transatlantic undersea cables were first laid in 1858 few in the world know that internet data that we use so easily today flows through these undersea cables. Maritime security is so important to the US economy that the ports of New York and New Jersey manage it with the 'Area Maritime Security Committee' that includes a Wall Street representative ! Author mentions 'NotPetya', the most devastating cyberattack in history introduced by Russian hackers that crippled many big businesses in over 60 countries.



Jones has repeated what historians have always agreed. Though the empires that Portuguese and other Europeans fought in Asia were more powerful than their European competitors, Europe's command of the high seas gave its adventurers a formidable advantage. He mentions the role of Maersk family's and that of CY Tung and his son CH Tung's role in shipping. From the 1970s to 90s Tung's OOCL ships formed the backbone of Hongkong's economy. HK applied for membership of the 'General Agreement on Tariff and Trade' (now WTO) in 1986. (India, a member since 1948) 'When Hongkong reverted to China, it brought an economic powerhouse to China'. In 2018 Yangshan (near Shanghai) was not merely the largest port, it was four times larger than its US competitors. 'Giant ships are juggernauts of modern commerce and cathedrals of globalization'.

The US Naval War College at Narragansett Bay, Rhode Island conference of 2019 discussed the subject of the intentions of the Chinese PLA Navy in great detail - 'As China has developed into a global commercial power, with a network of commercial bases will China follow a blue water navy and challenge US supremacy' ? Absolutely Yes was the final conclusion of the conference. To follow the Crowe Memorandum (of WWI British Foreign Office), ' This is a matter in which the US cannot safely run risks'.

The role of China in counter piracy in Malacca Strait and off Somalia began to be seen in a different light - 'Is China developing naval capacity as part of a wider effort to project power - contemplating in fact a more forceful return to the seas ?' China was using it to train its navy extensively in warfare practice at distant seas from its coastline as Admiral Wu Shengli openly stated. As China's maritime trade grew, Captain Alfred T. Mahan's thinking about the relationship between growth and naval power began to shape China's naval strategy. Author calls China's expansive claims in the South China Sea 'Cow's Tongue'. China has developed shoals in these international waters into islands with airstrips backing them with frigates, destroyers and cruisers. About China's dispute with its old enemy over the Senkaku Islands, the author says that Japan's ability to defend itself against Beijing is substantial. In 'Flashpoint Formosa' he considers American prestige at stake. Taiwan is a democracy and therefore, ideologically different from China. Taiwan is a defense partner who also was the first country to supply protective clothing to the US when covid started. If China contemplates military action, it will have to confront the US, and that will not be an easy task.

In the footnote it is mentioned 'in April 2021 USS John Paul Jones conducted 'freedom of navigation operation' in Indian waters to howls of protest from the Indian media. (United Nations Convention on the Law of the Seas gives

freedom of the seas for innocent passage even in the territorial waters of a state). Nine pages are used to describe the weaponry of the John Paul Jones, the modern American destroyer of +30 knots in great technical detail. Combat Information Center (CIC) located under-deck of a warship now replaces the bridge as far as warfare is concerned. American planners call Dynamics of Informatized war “systems war”. Ballistic missile defense is described in two pages. Battle of Networks: In Air Sea Battle vs. A2/AD (anti access/area denial) author concludes ‘shooting down Chinese missiles in flight is a hugely preferable option if it can be done reliably’. There are at least 60 ports with Chinese operating leases. Chinese ships can use them for “dual purpose” at strategic strong points like Djibouti; ‘China tried but ultimately failed to get Sri Lanka to host a port call in Colombo’. Notes at end quote Zackary Keck: “India has reason to fear Chinese submarines in the Indian Ocean”. On possible blockade of Chinese ports, Rear Admiral Luo Yuan has threatened to respond by sinking a US aircraft carrier. In extensive details Author has narrated China trying to copy very advanced technology for nuclear submarine detection. Sanjaya Swain’s (and others) article on “non acoustic detection of moving submerged bodies in oceans” in ‘International Journal of Innovative research and development’ of Dec. 2012 is very informative and significant. Bottomline -US submarine fleet remains indestructible.

In section ‘The India Question’ he says “it has developed far reaching foreign policy interests to match its economic status -though not yet the capacity to match” but concedes “At the very least, its new, growing navy is playing a role that looks set to complicate China’s maritime life”. 70% of China’s trade flows through the choke point of Malacca Strait. This “Malacca Dilemma” has spurred it to develop naval capacity to defend the Near Seas and then Western Pacific resulting in an arms race with the US “pulling the two nations toward war”.

Project Azorian consisted of finding and recovering the lost Soviet nuclear submarine K29 from over 16000 feet of water NW of Hawaii. As per author, drilling deep is a by-product of the cold war. The reader also learns that the Dynamic Positioning System was developed in project Mohol.

“We have long measured the Arctic ice - in part because the Arctic ice sheet was where the Soviet fleet would park their submarines, to try to avoid detection from the US navy. Tracking the Soviets became the most complex and dangerous part of the Cold War and involved the US navy measuring the changing levels of surface and subsea ice. Much of this science was released to the public in the 1980s, in part as an effort to spur more serious attention to

climate change. But even more important is the interplay between the oceans and the glaciers in the south”.

Section ‘Adaptation, Engineering and Competition’ explains how sea water absorbs CO<sub>2</sub> and temp. rises; East and south China sea is the source of protein to millions living from Korea to Indonesia; it faces warming and declining fish stocks; therefore competition is intense (for fishing).

A great deal of advanced engineering will be needed to deal with sea level rise and the US and China are the only two countries equipped to supply it at scale. ‘India is a potential powerhouse in every domain, but its power is yet realized in none’. In the list of top twenty five ports of the world, there is not a single Indian entry is an indication that India has not genuinely opened its economy to the world. ‘If New Delhi continues its naval cooperation with the west, the Indian navy will be a major obstacle in China’s putative search for a global blue water navy’.

Closing Part IV ‘The Power of the Seas’ is devoted to science of the seas. ‘Energy and climate are not always viewed as two sides of the same coin. But they should be’. Scripps Institute of Oceanography at La Jolla and its scientist Prof. Walter Munk is quoted copiously. Author calls marine biology the league of extraordinary women because of extensive study carried out by women like Sylvia Earle and Rachel Carson.

‘Vast majority of the world’s supply of oil is either found at sea or moved by sea to its destination.’ ‘Wherever it’s burned, oil and gas release carbon, and that carbon reenters the atmosphere, and -as we increasingly understand-reenters the seas’. Author has held industrialized nations responsible for those emissions. Since 1970, the global ocean has taken up more than 90% of excess heat in the climate system. On Oceans and the climate the IPCC’s (Intergovernmental Panel on Climate Change) message is that much of what sustains human life comes from interplay between surface and deep waters and sea ice; an interplay affected in turn by the interaction between the surface waters and the atmosphere - and that delicate balance is threatened by a warming planet. ‘The US navy has committed itself to using 50% less petroleum by 2015 and at least 50% of all energy it uses to come from non-fossil fuel by 2020’.

A lot of historical information added while writing the book has made the book spellbinding for readers. The Physical Geography of the Sea by Mathew Fontaine Maury originally published in 1855 is the first textbook of oceanography used universally by mariners in the 19th century; FD Roosevelt met with King Abdul Aziz (of Saudi Arabia) on board the USS ‘Quincy’ in Great

Bitter Lake (of Suez Canal) in Feb. 1945. The ladies of his harem went into ritual mourning at the thought that their protector would never return, are just two examples. He has dedicated the book to his ancestors, descendants of Lord Kelvin who helped lay the first undersea transatlantic cables. It is also amusing to note that Jones has an Anglo-Indian ancestry.

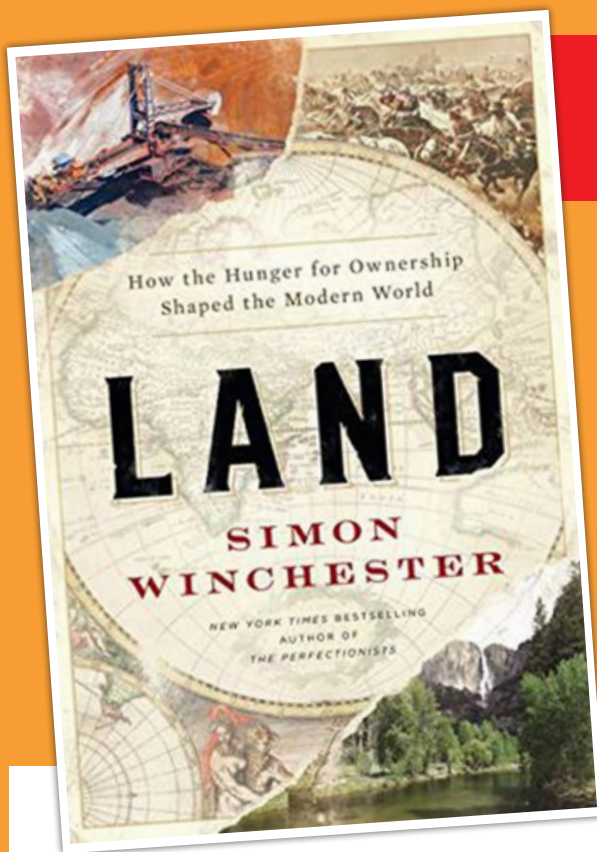


**CAPTAIN  
MILIND R. PARANJPE**



## **ABOUT THE AUTHOR**

Captain Milind R. Paranjpe is a master mariner, formerly vice president in Killick Nixon Ltd (shipping division), ex deputy master of Company of Master Mariners of India, ten years editor of its journal 'Command' and author of 'Ramblings of Sea Life' a book of some of his experiences of sealife. His articles appear in Marathi and English periodicals.



## Book Review



# LAND

How the Hunger for  
Ownership Shaped the  
Modern World

Author : Simon Winchester

Harper 2021,

448 pp, Rs 2024/-



BY MILIND R. PARANJPE

**T**his book, replete with information written in the usual lucid Winchester style is dedicated to Standing Bear (native American chief of Nebraska) whose photograph is printed on the first page. The very touching caption below the photograph “ In 1879 the US government declared this Ponca chief to be a person. — But they still took away his land” starts a reader’s thought process. North America was first populated by homo sapiens who came across the Bering Strait land bridge some 13000 years ago, not by pre-human Neanderthals. Throughout the book the author has shown how racist contempt was a characteristic of all too many of the colonists, with native American chagrin and disappointment its twin.

It is amazing to read the quest of so many scholars to find the correct size and shape of our planet since ancient times. Greek astronomer Eratosthenes compared the 7 degrees angle of Sun’s rays falling in a well in Alexandria in Egypt with the vertical rays in water at Aswan 524 miles upriver along the

Nile about 2200 years ago. It followed then for him, that for 360 degrees the circumference of the sphere ( i.e. earth) would be some 24000 miles, not too far from reality. Albrecht Penck the German visionary conceived the idea of the International Map of the World (IMW), a common map for a common humanity. Much bickering took place at the conference before England's Greenwich was chosen as prime meridian and 'Meter' of the French for distance, and Roman alphabet; Each map would cover 4 degrees of latitude and 6 of longitude and projection of a kind that if all sheets are fastened they would form a gigantic sphere of the planet at scale of one to one million. The Statesman's Yearbook, a massive and legendary compendium of global information was first published in 1864 and has continued every year till today. (price Rs 35000/-). Sir John Scott-Keltie the impassioned geographer and a member of the IMW committee, was its editor for 44 years!

Winchester has squarely blamed the unspeakable tragedy after partition of India on Lord Louis Mountbatten the last viceroy of India who appointed Sir Cyril Radcliffe, the former director-general of Britain's Ministry of Information, to pry open the country giving him only seven weeks to complete the job. Radcliffe had never been even east of Paris and knew nothing about the subcontinent. Maps given to him were wrong and census returns out of date. When ready, Mountbatten kept the report secret with him in Delhi under lock and key. The partition line was deliberately made public on 17th August ie. two days after Mountbatten's magnificent ceremonies in Karachi and New Delhi for independence were seen as grand successes. It left people in border areas suddenly in disbelief that they are no longer in the country of their faith. The exodus started after the panic resulted in mass killing of more than a million people. Author mentions Ram Madhwani's documentary and narrates fully the very touching poem composed by WH Auden the Anglo American poet in 1966 on Sir Cyril. 'His [Mountbatten's] repute is now in such tatters that ....genteel British actress who played lady Radcliffe remarked that Mountbatten was thought of so comprehensively crooked that "if he swallowed a nail he'd shit out a corkscrew.'" But in the long bibliography I could not find the name of Stanley Wolpert or his book 'Shameful Flight' nor of 'Freedom at midnight" or any Indian author. There were exclaves of Hindu majority inside Bangladesh and of Muslims inside India. People living inside them could not cross over to their respective countries because they did not have visas. The author calls it a 'cartographic eccentricity', held in a time warp of Kafkaesque dimensions (having a nightmarishly complex, bizarre, or illogical quality), is a legacy of Cooch Behar- Mogul wars and treaties thereafter. The last attempt mentioned to solve the issue is of 2015. The Modi-Sheikh Hasina accord of May 2015 which finally solved them seems to have just been



missed in the book as it occurred only a few days later. Bangladesh enclaves inside India became Indian territory, Indian enclaves inside Bangladesh became Bangladesh territory; people living inside them were given the choice to go and opt for the country of their choosing. Muslims inside India opted for Indian citizenship but surprisingly the vast majority of Hindus inside Bangladesh opted for Bangladeshi.

The most important point for any Indian, though not mentioned in the book, is that entire north-east India is strategically left permanently vulnerable to hostile foreign interference. With no outlet to sea, it is joined by a narrow strip of 10-20 mile wide land known as 'chicken neck' with the rest of India. Socially, economically and politically a very sensitive area is now difficult to defend.

Winchester believes that the science of map making has certain intellectual honesty to it. British Ordnance Survey maps are nonpareil and bought for sheer accuracy and pleasure, (but not the US Geodetic Survey topographical sheets). Existence of maps says something notable about the notion of freedom-to enjoy a relationship with the land that is unique, and even if owned privately, everyone should have a right of access to it. Author himself admits the British and their empire is remembered with disfavour. "When the missionaries came to Africa," Desmond Tutu famously (but originally having said by Jomo Kenyatta) remarked "they had the Bible and we had the land. They said 'let us pray.' We closed our eyes. When we opened them, we had the Bible and they had the land."

Nature made some new land, mostly islands, in the 19th and 20th centuries, Anak (child) Krakatau being the best known. It appeared from the sea in 1927 at the same place as the parent which had exploded and demolished in 1883. Man made lands mentioned are - Stonecutter's island near Hongkong, Battery Park in Manhattan, Marina District of San Francisco on rubble of 1906 earthquake. God made the world - but the Dutch made the Netherlands is often heard by most.

If a white man had land and someone should swindle him, that man would try to get it back and you would not blame him. - Standing Bear, Ponca Indian leader's address to the 1879 trial in Nebraska, in which native Americans were finally declared to be human beings. In 1513 Ponce de Leon the Spanish conquistador named and claimed Florida. (He had also discovered the existence of the current now known as the Gulf Stream). Francis Drake claimed California from Miwok Indians for Queen Elizabeth I. Oklahoma land, where native Indians lived for thousands of years peacefully, was freely allotted to white settlers who claimed by riding at given time and from place. They considered that land, based on the Dutch humanist scholar-poet Hugo Grotius's legal opinion, as belonging



to nobody earlier - terra nullius .

Caledon family's estate in northern Ireland was acquired by simple purchase in 1772 for 9000 pounds, the money made in the 18th century Bengal by a returning ancestor. In Scotland, Winchester cites the country eccentricity gentleman who lived in a castle comfortably situated in some 29000 acres of lush meadowland on the banks of the River Blackwater. "Nothing in my life is ever urgent," he said. (His lifestyle reads similar to Zamindars of colonial India who did no work in their whole life but lived cozily on income from tenants who tilled their vast farmlands).

In Scotland the enclosure of land, often against villagers' will, the enforced removal of the surface of the Earth from the common ownership of many to that of one or more private individuals, represented a revolution in the social order, a cataclysmic change like few others before or since. Photograph of Dunrobin castle juxtaposed with modest sod-roofed cottage of a kind inhabited by the great majority of the Sutherlands' crofting tenants offers a stark contrast. It shows the disparity created by the so-called 'improvement.' It prompted thousands to emigrate to Manitoba, Canada. Many return back to pay homage to their melancholy beginnings.

Ted Turner, founder of media giant CNN, owns vast tracts in the US, outdid only by a rival TV executive John Malone. The author frankly mentions how it was briefly considered sporting fun to board a train in Nebraska and head west over the prairies, blazing away with rifles at any passing bison. In the aftermath millions died and skulls were piled fifty feet high. Indians who thought animals sacred, wept, incredulous. 50 million bisons slaughtered. Turner did much to restore their population on his nearly 2 million acres. 'Silent Stan' Kroenke, who owns sporting teams including Britain's Arsenal football club bought Waggoner Ranch in Texas, then sent eviction notices to a group of elderly and impoverished people who lived there for decades under an informal arrangement with the previous ranch owners. They presented a sorry sight; they cursed Kroenke loudly as they left for the final time. On the one hand there is an absolute right to private ownership; yet most agree there is spiritual poetry to quiet pastoral beauty and efforts to preserve such landscapes that offer such escape and provide an incalculable benefit to the American public soul. Formerly people could walk through estates, now a raft of enhanced anti trespassing measures has become settled law in some American states like Idaho.

A 13th century Italian jurist said "Whoever owns the land, owns it all the way to the heavens and to hell". The invention of the airplane played havoc with this ancient maxim and cases were brought that flying machines crossing over your

house constituted trespass. 1946 case US v. Causby ruled the upper limit to owner exclusivity of 365 feet -reason why drones today fly 400 feet above, in the legal free zone. Invention of barbed wire (the devil's rope) in 1874 was to keep animals penned in but also to keep strangers out. Coils of it keep Pakistanis west of India's border. But Scotland is different. There is today essentially no such thing as trespass. One now has an absolute statutory right to wander anywhere in the country at any time of night or day, no matter who the land belongs to, and no matter if the landowner objects to your presence on his acres. Land, air, and ocean were once all components of the human birthright. In Scandinavia, and in eastern European countries like Belarus it is strongly felt that access to land is every bit as much the right to air or water.

North and South Korea have been separated by a 4 km wide DeMilitarized Zone 155 mile long since 1953. All humankind is forbidden from ever entering the DMZ, and Nature in consequence is gratefully flourishing in the peace. A varied menagerie of animals and birds flourish there. They include black bears, deers, the lynx and the seldom seen Amur leopards. In Netherland's artificially created Oostvaardersplassen thousands of herbivore animals were introduced - a Dutch experiment in wilding, the Dutch Serengeti, some called it. In the harsh winter of 2017, however, most animals died. And the experiment failed. Full time farmers insist that sensible management of farms is more responsible than its wholesale abandonment.

Captain Cook in 1770 had skirmish after which an aboriginal wooden shield was retrieved as spoil of war, in what is now New South Wales. It is displayed in a Cambridge museum and its aboriginal owners are claiming it unsuccessfully. Abos practice well controlled selective burning of land which clears the underbrush "cool fires". It minimizes the likelihood of major conflagrations. Now the Australian government not just permits, encourages it. Author has not forgotten to mention that the Andamanese islanders survived en masse the 2004 tsunami which killed a quarter of a million people elsewhere. By the oral tradition passed down generations they run to the hills when an earthquake shakes the ground or seawater suddenly recedes.

Kolkata's maidan, kept by the British army to keep Indians away from Fort William offers blessed rural relief for the millions now living in one of the country's most crowded cities. The sheer existence of the Victoria Memorial, built on the orders of Curzon, somewhat 'mutes the pleas for forgetting and forgiving that the Maidan otherwise suggests.' Of the world's fifty most polluted cities, 14 are in China and 34 in India and Pakistan. Detrot's Grosse Pointe where one could only live if one's 'degree of swarthinness' was found acceptable. Denver

(Colorado) suburbia's corner is heavily polluted with one of the most unpleasant elements known: the silvery and highly radioactive metal first discovered in 1940, plutonium. It is used in making atomic bombs, part of which was done at plants outside Denver. From 1952 to 1992 it was secret. In 1957 and 1969 plutonium escaped and buffer zones were created around it. Dow Chemicals and Rockwell were contractors involved. Both were sacked. Investigative journalism by a magazine 'Westworld' blew the lid off. The US navy in 1990, announced it no longer needs plutonium for its latest missiles and the plant was closed down. A multiyear restoration program like Chernobyl and Fukushima got underway. Lawsuits have been aplenty. 'Stewardship of land is a complicated business.' Fortunately for native Americans, there is no reservation for them in Colorado.

All too often the enmity between people subsides with distance and is replaced by the greater notion that all inhabitants of the land surface are simply humans, with more reason to be united than divided. When a Protestant man and a Catholic woman, both from rife torn Northern Ireland, land on the tarmac of a Canadian airport, there is no religious enmity left between them because the land for which they were fighting is not there. Indians and Pakistanis seem no more hostile to each other who live at either end of Devon Avenue of Chicago.

The author has described the history of the entire dispute between Jews and Palestinian Arabs from Balfour Declaration to present days. It seems their fight for land will go on endlessly. Thought comes to mind that a nation of Jews that did not exist for nearly two thousand years, was recreated at the same place by people of same race and faith who had lived those two millennia in diaspora. Whereas Tibet which existed for two thousand years as a nation of civilization and culture, disappeared at the same time when the Jewish state was coming into existence. Tibet's head priest is exiled at Dharamshala in Himachal Pradesh. Surprisingly there is no mention of Tibet in the book, not even in the index.

Deliberate killing of peasantry in Central Europe by Soviet rulers in late twenties and early thirties just to prove the success of collective farming of socialist idea of economy is almost as bad as Nazi killing of Jews. A young British journalist named Gareth Jones walked 40 miles in the exceptionally fertile land of Ukraine in 1933 and wrote a series of eyewitness reports of the very farmers, millions of them, who had produced bumper grain dieing of hunger because their crop was forcibly taken away without leaving even a little for their survival. Lenin's telegram to his comrades to shoot anyone opposing the order, produced in the book, is a shocking proof. Gareth Jones was murdered in Manchuria by Soviet agents. Jones is a hero in today's Ukraine, there are statues in his honour and any number of plaques and memorials, as well as a Hollywood movie.

Cruelest regulation of Stalin is known as “the law of five ears of wheat”. It held that any removal of leftover grain from collective farm fields was punishable by imprisonment for at least ten years or by death, with execution performed on the spot.

Winchester has described how the first generation Japanese-Americans were persecuted by the US government and people before and particularly during the second World War. However, in 1988 “HERE WE ADMIT A WRONG” was carved into the sandstone of a memorial to Japanese-American patriotism in Washington DC. That is a redeeming feature.

New Zealand was the last country on the planet to be discovered and settled by a human population. The Polynesian canoeists came in the mid 14th century (Maories) . Three hundred years later came the Dutch naming it NZ followed by James Cook the English navigator in 1769. The difference between NZ and Australia or North America is that NZ natives got their voting rights along with the country’s white citizens. Maoris now are also getting their land grabbed by colonizers back. NZ is a rare exception in the world history of colonization.

On Africa author remarks ‘Brazil, Indonesia, Argentina, China and even to an extent, poor, hapless and benighted India (emphasis added) - have made immense improvements in their rural lot; but Africa, which superintends planet’s fully half uncultivated land, seems pinioned in an immobile and intractable mire’.

The saintly reputation of Scotsman John Muir, an early conservationist and cofounder of the Sierra Club has been somewhat tarnished in recent years because of his white supremacist views and evident disdain for native Americans and black people. Comment next to a photograph of impoverished natives says “The Miwok Indians, who had long lived in and around Yosemite, were by and large turfed out of their traditional lands to make way for the onrush of tourists, though some were retained as attractions and entertainment for the visitors.” The 6000 natives of Yosemite valley are today reduced to 150.

The author has explained trusts in the US by which the owner gives land for preservation in perpetuity with conservation restrictions (or conservation easements), which allow the land to be used in certain carefully prescribed ways, while the owner retains ownership. The community trust is an idea born in India that concerns housing, with cities rather than countryside, and with ‘mitigating poverty rather than mandating serenity and pleasure. Vinoba Bhave finds mention with a photograph, ‘urging landowners to donate a sixth of their holdings to the local people as part of the Bhoodan movement. It fizzled.’

With climate change the land is drowning. The steady melting of the once pure white polar ice sheets has the simple effect of decreasing the planet’s

reflectivity, its albedo. A nonreflective earth allows more solar heat to reach down and do its damage, melting more. The Suquamish leader Chief Sealth, after whom Seattle is named, had reportedly said 'how can you buy or sell the sky ? Buy or sell the land ? The idea is strange to us'. The book ends with Tolstoy's well known story and documentary 'How much land does a man need?'

In the 'glossary of possibly unfamiliar words' is 'Yojana : A varying unit of distance used in early 5th c. India and equating to between eight and nine miles.' The Filosofia typeface makes reading the book easy. List of photographs, all black and white and interesting, runs into a full two and half pages. Long bibliography mentions John Keay's 'How India was mapped and Everest was named' but does not contain a single Indian author.

This book was conceived out of discussion of 'current American immigration policy - concerning the degree to which land enclosures in Britain might have played a part in the 18th and 19th century transatlantic crossings for migration. There seemed a cruel irony about it: that those who found themselves newly dispossessed on one side of the ocean had then sailed across it and settled again, but only promptly to dispossess those who already lived and prospered in what to the migrant Britons was a newfound and unowned country.'

Land belongs equally to all, it is the common mother of everyone. It is a very cogent argument. But the lesson that one infers is that one must be eternally vigilant to guard and defend one's motherland at all times. There is no substitute for it.



**CAPTAIN  
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## ABOUT THE AUTHOR

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# DEFENCE ACQUISITION PROCEDURE 2020 : A STEP TOWARDS SELF RELIANCE?

 BY MAJ GEN S H MAHAJAN(RETD)

1. India's Minister of Defence Rajnath Singh released the DAP-2020, which is an improvement on the Defence Procurement Procedure-2016, released four years ago. The media statement on the new DAP-2020 that the Ministry of Defence put out mentioned that the first Defence Procurement Procedure (DPP) was promulgated in the year 2002 and has since been revised periodically to provide impetus to the growing domestic industry and achieve enhanced self-reliance in defence manufacturing. The Defence Minister had approved constitution of Main Review Committee under chairmanship of Director General (Acquisition) Shri Apurva Chandra in Aug 2019 for preparation of DAP-2020. The document which has been formulated post interactions over a year, is an enabler & industry friendly procedure aligned with Government of India's vision of Atmanirbhar Bharat & impetus to Make in India. DAP 2020 document instils a confidence and will meet aspirations of stakeholders across the spectrum

2. Defence Acquisition Procedure is based on the concept of "Womb to Tomb" and has certain unique aspects such as supplier constraints, technological complexity, foreign suppliers, high cost, foreign exchange implications and geo-political ramifications, and therefore is not a standard open market commercial form of procurement. While maintaining highest standards of transparency, probity and public accountability, a balance between competing requirements such as expeditious procurement, high quality standards and appropriate costs needs to be established. As a result, decision making pertaining to defence acquisition remains distinctive and complex.

3. Atmanirbhar Bharat Abhiyan clarion call given by the Hon'ble Prime Minister, further accentuated by Policy Reforms in the Defence Sector as part of Phase IV 'New Horizons of Growth' are focussed towards enhancing self reliance in defence production, indigenisation of spares, overhauling of Trial and Testing procedures based on realistic Services Qualitative Requirements and requisite monitoring by Project Management Unit (PMU) for time bound



procurement. There is a need to institute enabling provisions for utilisation and consolidation of design, development and manufacturing infrastructure available in the country. A need has also been felt, for identifying strategic partners for promoting defence production in the private sector. The visionary FDI policy statement of enhancing FDI through automatic route from 49% to 74% in defence will enable in making 'Manufacture in India' a lucrative option for foreign equipment manufacturers.

**4.** DAP 2020 focuses on simplifying the Defence acquisition procedure and institutionalising monitoring mechanism with concurrent actions using digital technologies & data base for selection of best equipment in a transparent and competitive manner giving adequate opportunities to capable vendors. Make in India initiative of the Government of India focuses on increasing participation of Indian Vendors including MSMEs, and therefore "Make" procedure has been further refined in DAP 2020 to make it more objective and time bound with focus on Indian industry especially MSMEs. Cutting down permissible timeframes for various activities and institutionalising robust mechanisms to monitor for probity at various stages of the acquisition process are the attributes of this DAP.

**4A.** While the Defence Acquisition involves long gestation periods, where as the needs of the Armed Forces being non negotiable, flexibility in the procedure has been provisioned for, to ensure timely availability of important equipment. Thus, the DAP favours swift decision making, provides for suitable timelines and delegates powers to the appropriate authorities to ensure an efficient and effective implementation of the acquisition process, by all stakeholders concerned.

**5.** DAP 2020, a product of extensive analysis, deliberations, interactions and focused formulations, aims to further 'Self Reliance' of the country in the defence sector and implement 'Ease of Doing Business' with emphasis on Simplification, Delegation, Reduced Timelines and making the process as Industry friendly as possible. Separate chapters have been formulated to incorporate specialised acquisition through the DRDO/OFB/DPSUs, procurements related to Information and Communication Technology Systems, enable Leasing of equipment as also address issues related to Post Contract Management.

**6** India's new acquisition rules for arming the defence forces focuses on energising the domestic arms industry and on making most weapons and military systems within the country. Aimed at simplifying the procurement process, enhancing the ease of doing defence business in India and to minimise



the time delays in arming the forces, the Defence Acquisition Procedure-2020 (DAP-2020) will now be valid for five years. In the previous years, the document was revised erratically without any fixed term for its validity. DAP 2020 will be applicable with effect from 01 Oct 2020. Formulation of DAP 2020 has been done over more than one year, incorporating comments/suggestions from a wide spectrum of stakeholders. DAP 2020 has been aligned with the vision of the Government of India's Atmanirbhar Bharat and empowering Indian domestic industry through Make in India initiative with the ultimate aim of turning India into a global manufacturing hub.

7. With the new Foreign Direct Investment policy announced, DAP 2020 has adequately included provisions to encourage FDI to establish manufacturing hubs both for import substitution and exports while protecting interests of Indian domestic industry. Specific reforms enunciated in Atmanirbhar Bharat Abhiyan, have been incorporated as under:-

**(a) Notify a List of Weapons/Platforms for Ban on Import:** Relevant incorporation has been done in the DAP to ensure that NO equipment as mentioned in the list is procured ex import post timelines notified.

**(b) Indigenisation of Imported Spares**

**(i) Request For Information:** Request for Information (RFI) stage will explore willingness of the prospective foreign vendors to progressively undertake manufacture and setup an indigenous ecosystem at the spares/sub component level.

**(ii) New Category of Buy (Global – Manufacture in India):** The new category incorporates 'manufacture of either the entire/part of the equipment or spares/assemblies/sub-assemblies/Maintenance, Repair and Overhaul (MRO) facility for the equipment, through its subsidiary in India.

**(iii) Co-production through IGA:** This enables establishment of co-production facilities through Inter-Governmental Agreement achieving 'Import Substitution' and reduce Life Cycle Cost.

**(iv) Contractual Enablement:** Buyer's Right to optimise Life Cycle Support costs and system enhancements through indigenous eco system incorporated.

**(c) FDI in Defence Manufacturing:** With the announcement of new FDI Policy, suitable provisions have been incorporated like new category 'Buy (Global – Manufacture in India)' done to encourage foreign Original Equipment Manufacturers to setup 'manufacturing/maintenance entities' through its

subsidiary in India while enabling requisite protections to domestic industry.

**(d) Time Bound Defence Procurement Process and Faster Decision Making:** As part of the Defence Reforms announced in the Atmanirbhar Abhiyan, setting up of a PMU has been mandated to support contract management. The PMU will facilitate obtaining advisory and consultancy support in specified areas to streamline Acquisition process. Other issues included in these reforms are:-

- (i) Realistic Setting of GSQRs of Weapons/Platforms:** The process of formulation of SQRs has been further refined with greater emphasis on identifying verifiable parameters based on analysis of 'comparative' equipment available in the world and domestic markets.
- (ii) Simplification of Trial Procedures:** DAP-2020 emphasises the need to conduct trials with an objective to nurture competition based on the principles of transparency, fairness and equal opportunities to all and not as a process of elimination.

**3. Ease of Doing Business:** One of the key focus areas of the review was to implement 'Ease of Doing Business' with emphasis on simplification, delegation and making the process industry friendly with certain specific provisions incorporated:-

**(a) Procedural Changes.**

- (i)** Single stage accord of Acceptance of Necessity (AoN) in all cases up to Rs 500 crore (Approx. \$67 million) has been instituted thereby reducing time.
- (ii)** Fast-Track Procurement cases, post accord of AoN, will be progressed as per delegated powers thereby reducing the procurement cycle considerably.
- (iii)** In Planning Process, Long Term Integrated Perspective Plan (LTIPP) has been re-designated as Integrated Capability Development Plan (ICDP) covering planning period of 10 years instead of 15 years.

**(b) Request for Proposal (RFP) and Standard Contract Document (SCD):** Certain measures to provide clarity and alignment of requirements as also enabling provisions have been incorporated in the RFP and SCD in terms of Flow Chart driven guidelines, provision of in-storage preservation and termination of contracts in cases where projects are not progressing as per pre-defined milestones.

## Salient features of DAP 2020

**4. Reservation in Categories for Indian Vendors :** The categories of Buy(Indian-IDDM), Make I, Make II, Production Agency in Design & Development, OFB/DPSU and SP model will be exclusively reserved for Indian Vendors meeting the criteria of Ownership and Control by resident Indian Citizens with FDI not more than 49%. This reservation will provide exclusivity in participation to domestic Indian industry.

### **5. Enhancement of Indigenous Content.**

#### **(a) Overall Enhancement in Indigenous Content (IC).**

Ser No	Category	DPP 2016	DAP 2020
(i)	Buy (Indian-IDDM)	Min 40%	Min 50%
(ii)	Buy (Indian)	Min 40%	Indigenous design – Min 50% Otherwise – Min 60%
(iii)	Buy & Make (Indian)	Min 50% of Make	Min 50% of Make
(iv)	Buy (Global – Manufacture in India)	–	Min 50% of Buy plus Make
(v)	Buy (Global)	–	Min 30% for Indian vendors

**(b) IC Verification :** A simple and practical verification process has been instituted and IC will now be calculated on 'Base Contract Price' i.e. Total Contract Price less taxes & duties.

**(c) Indigenous Military Material :** Promoting use of indigenous military material with provisions for examination of platforms and other equipment/systems and reward for vendors for using indigenous raw material.

**(d) Indigenous Software :** Provision for exploring options for operating base applications like Fire Control System, Radars, Encryption, Communications etc on indigenous software in Buy (Indian- IDDM) & Buy (Indian) cases has been included.

### **6. Rationalisation of Trial and Testing Procedures**

**(a)** Testing equipment based on its employability and for other conditions appropriate certifications confirming functional effectiveness may be obtained.

**(b)** Scope of Trials will be restricted to physical evaluation of core operational

parameters, other parameters may be evaluated based on vendor certification, certification by accredited laboratories, computer simulations of parameters.

- (c) Avoid duplication of trials and waiver will be granted based on Certificates of Conformance. Ensure simultaneity of various Trials and wherever feasible, entire trials be conducted by a Combine Trial Team in order to save time.
- (d) Requisite opportunity will be afforded to participating vendors to rectify shortcomings/faults during the Trials with permission to carry out repairs.
- (e) Request For Proposal will apprise vendors to submit draft Acceptance Test Procedure (ATP), to be finalised by QA agency during Technical Trials itself. Sample size for destructive tests including the aspect of cost to be borne by seller will be stated upfront in the RFP for vendor.
- (f) Inspections : No repetition of inspections will be done especially during acceptance of equipment. Third Party Inspections will also be carried out.

#### **7. Make & Innovation.**

- (a) Make I (Government Funded upto 70%): Laying down a cap of Rs 250 crore (approx. \$34 million)/DA and selection of DAs based on bidding criteria.
- (b) Make II (Industry Funded) for production of indigenously designed & developed weapons/equipment/systems/platforms along with sub components/assemblies.
- (c) Make III (Indigenously Manufactured) category for manufacture of equipment/platforms or spares/assemblies/sub-assemblies for enabling import substitution.
- (d) Procurement of prototypes developed through 'Innovation' under various initiatives like iDEX, Technology Development Fund and Internal Services Organisations has been facilitated.

**8. Design & Development:** A separate dedicated chapter has been incorporated in the DAP 2020 for acquisition of systems Designed and Developed by DRDO/DPSUs/OFB. A simplified procedure with Integrated Single Stage Trials to reduce timelines and laying greater emphasis on evaluation through certification and simulation. Aspects of Spiral Development have been incorporated.

**9. Address Voids :** Certain existing voids have been addressed in the form of new Chapters as under:-

- (a) 'Information Communication Technology': Peculiar issues related to

procurement of ICT intensive equipment especially of Interoperability & Built-in Upgradability, enhanced security requirements and change management have been included.

- (b) Leasing: A new category introduced to enable operating of assets without owning thereby, substitute huge initial capital outlays.
- (c) Post Contact Management : To formalise procedures post signing of contract with respect to inspections, levying of Liquidity Damages, Contract Amendments etc.
- (d) Other Capital Procurement Procedure : A new procedure has been included as a new chapter in DAP and structured as an enabling provision for Services to procure essential items through Capital Budget under a simplified procedure in a time bound manner.

#### **10. Industry Friendly Commercial Terms.**

- (a) Price Variation Clause has been incorporated for large and protracted contracts in order to avert inflated initial quotes by vendors and arriving at a realistic price of the project.
- (b) Payments to Vendors: Suitable provisions like parallel processing of documents by SHQ/PCDA through digital verification, within laid down timelines, has been included to ensure timely payment to vendors. Payments to Indian industry have been aligned with foreign industry.

**11. Offsets :** The Offset guidelines have been revised, wherein preference will be given to manufacture of complete defence products over components and various multipliers have been added to give incentivisation in discharge of Offsets.

## **ACQUISITION CATEGORIES, ACQUISITION PLANNING AND INDIGENOUS CONTENT**

**12.** The aim of the Defence Acquisition Procedure (DAP), erstwhile Defence Procurement Procedure (DPP), is to ensure timely acquisition of military equipment, systems and platforms as required by the Armed Forces in terms of performance, capabilities and quality standards, through optimum utilisation of allocated budgetary resources. While enabling the same, DAP will provide for the highest degree of probity, public accountability, transparency, fair competition and level-playing field. In addition, self-reliance in defence equipment production and acquisition will be steadfastly pursued as

a focus of the DAP with an ultimate aim to develop India as a global defence manufacturing hub.

### **13. Scope.**

- (a)** The DAP will cover all Capital Acquisitions other than Works and Land undertaken by the Ministry of Defence (MoD) and Service Headquarters (SHQ) both from indigenous sources and ex-import, except for medical equipment. SHQ for the purpose of DAP would include HQ Integrated Defence Staff, Integrated HQ of the MoD (Army), Integrated HQ of the MoD (Navy), Integrated HQ of the MoD (Air Force) and the Indian Coast Guard. Defence Research and Development Organisation (DRDO), Ordnance Factory Board (OFB) and Defence Public Sector Undertakings (DPSUs) will, however, continue to follow their own procurement procedure.
- (b)** In the event of enactment of new legislation or change or amendment or enforcement of any Act or Law or Policy, rules or regulations or guidelines of MoD or Government of India or body such as Chief Vigilance Commission (CVC), which becomes effective after the date of last amendment to this DAP, the same will automatically be deemed as replacement to the one referred to in this DAP.

## **Capital Acquisitions**

**14.** Acquisition of goods and services which are booked under the Capital Budget Head will follow the procedure as laid down in the DAP and will be termed as 'Capital Acquisitions'. However, if the SHQ wishes to procure goods and services from the Capital Budget through any other procedure, specific approval of the Defence Acquisition Council (DAC) may be obtained for each such case.

**15.** Capital Acquisition schemes are broadly classified as, 'Buy', 'Buy and Make', Leasing, 'Make', 'Design and Development (D & D) and Strategic Partnership Model (SPM). Other Capital Procurement Procedure (OCPP) may be followed for overhaul, major refits, upgrades and replacement of items of Capital nature. Under the 'Buy' scheme procurements are categorised as 'Buy (Indian - IDDM)', 'Buy (Indian)', and 'Buy (Global)'. Under the 'Buy and Make' scheme, the procurements are categorised as 'Buy and Make (Indian)' and Buy (Global - Manufacture in India).

**16.** Priority of Categorisation. Acquisition of defence equipment under this procedure will be based on the above-mentioned categories. The categories,

except Make, Leasing, D & D and SPM, have been prioritised based on their relative importance towards indigenisation. However, there is no embargo on a vendor qualifying in a higher category to participate in the lower category in case all requirements of the lower category are met. In decreasing order of priority, the priority of categories will be as follows: -

- (a) Buy (Indian – Indigenously Designed Developed and Manufactured) i.e. Buy (Indian-IDDM).
- (b) Buy (Indian).
- (c) Buy and Make (Indian).
- (d) Buy (Global - Manufacture in India).
- (e) Buy (Global).

**17. Weapons/Platforms Banned for Import.** With a view to promote domestic and indigenous industry as also align the DAP with the reforms enunciated in the 'Atmanirbhar Bharat Abhiyan', the MoD has notified a list of weapons/platforms banned for import, as updated from time to time on the MoD website and guidelines thereon, and SHQ will ensure that no weapon/platform figuring on the list is procured ex import. These equipment may, therefore, be procured under the Buy (Indian - IDDM), Buy (Indian), Buy and Make (Indian) (only if Buy quantities are zero) and Buy (Global - Manufacture in India) (only if Buy quantities are zero) categories of acquisition.

**18.** In addition to the above listed categorisation, the Make, D & D and SPM categorisations aim at developing long-term indigenous defence capabilities. Depending upon factors such as Indian industry's capability, access to technology, time frame required and available for development, the Make and D & D category of acquisition would be pursued in isolation, in sequence or in tandem with any of the five categories under 'Buy' or 'Buy and Make' classifications, with a separate heading under Defence Capital Acquisition Plan (DCAP) and Annual Acquisition Plan (AAP).

## Definition of Acquisition Categories

**19. Buy (Indian-IDDM).** 'Buy (Indian-IDDM)' category refers to the acquisition of products from an Indian vendor that have been indigenously designed, developed and manufactured with a minimum of 50% Indigenous Content (IC) on cost basis of the base contract price i.e. total contract price less taxes and duties.



**20. Buy (Indian).** 'Buy (Indian)' category refers to the acquisition of products from an Indian vendor which may not have been designed and developed indigenously, having 60% IC on cost basis of the base contract price. Vendors eligible in 'Buy (Indian-IDDM)' category will also be permitted to participate in this category with indigenous design and a minimum of 50% IC on cost basis of the base contract price.

**21. Buy and Make (Indian).** 'Buy & Make (Indian)' category refers to an initial acquisition of equipment in Fully Formed (FF) state in quantities as considered necessary, from Indian vendor(s) engaged in a tie-up with a foreign Original Equipment Manufacturer (OEM), followed by indigenous production in a phased manner involving Transfer of Technology (ToT) of critical technologies as per specified range, depth and scope from the foreign OEM. Under this category of acquisition, a minimum of 50% IC is required on cost basis of the Make portion of the contract less taxes and duties. Acquisition under this category can also be carried out without any initial procurement of equipment in FF state.

**22. Buy (Global - Manufacture in India).** Buy (Global - Manufacture in India) category refers to an outright purchase of equipment from foreign vendors, in quantities as considered necessary, followed by indigenous manufacture of the entire/part of the equipment and spares/assemblies/sub-assemblies/Maintenance along with Repair and Overhaul (MRO) facility (only in cases these are part of the main contract) for the equipment, through its subsidiary in India/through a Joint Venture/through an Indian Production Agency (PA) (with ToT of critical technologies as per specified range, depth and scope to the Indian PA), meeting a minimum of 50% IC on cost basis of the Base Contract Price. Indian vendors will be permitted to participate in Buy (Global - Manufacture in India). Acquisition under this category can also be carried out without any initial procurement of equipment in FF state. All payments for the 'Manufactured' portion will be paid to the vendor in Indian Rupees as per contract provisions.

**23. Buy (Global).** 'Buy (Global)' category refers to outright purchase of equipment from foreign or Indian vendors. In case of procurement through foreign vendors, Government to Government (G2G) route/Inter Government Agreement (IGA) may also be adopted, for equipment meeting strategic/long term requirements. An Indian Vendor participating in this category would be required to meet minimum 30% IC, failing which such vendor would be required to discharge offsets as applicable in the case. Foreign vendors will need to discharge offsets in all Buy (Global) cases with Acceptance of

Necessity (AoN) cost of ₹ 2000 crores or more, other than all ab-initio Single Vendor Cases, including procurements based on IGA/FMS.

**24. Participation in Lower Category.** Vendors eligible for participating in a higher category will be permitted to participate in the lower category, provided they meet the requirements for the same.

**25. Applicability of Offsets.** The Offsets clause would be applicable for Buy (Global) categories of procurement where the estimated AoN cost is ₹ 2000 crores or more. An Indian Vendor participating in the Buy (Global) category would be required to meet minimum 30% IC, failing which such vendor would be required to discharge offsets as applicable in the case. In certain cases, the DAC may consider partial or full waiver of the Offsets clause. In case of a waiver for a particular acquisition case, eligible/selected Indian vendors need not be exempted from the corresponding IC stipulations. No offsets will be applicable in all ab-initio Single Vendor Cases, including procurements based on IGA/FMS.

**26. Make and Innovation.** Acquisitions covered under the Make and Innovation including Innovation in Defence Excellence (iDEX) and Technology Development Fund (TDF) categories refer to equipment/system/sub-system/assembly/sub-assembly, major components, or upgrades thereof, to be designed, developed and manufactured by an Indian vendor/processed by the Services through their internal organisations, such as Base Workshop/ Dockyards/ Base Repair Depots etc. with or without participation of Private industry, as per procedure and norms in Chapter III.

**27. Design and Development (D & D).** Design and Development (D & D) cases progressed by DRDO/DPSUs/OFB for acquisitions of equipment/system/subsystem/assembly/sub-assembly, major components, or upgrades thereof, to be designed, developed and manufactured by an Indian vendor, will be as per procedure and norms in Chapter IV of the DAP.

**28. Strategic Partnership Model (SPM).** Acquisitions under the Strategic Partnership model refer to participation of private Indian firms along with foreign OEM in 'Make in India' in defence and play the role of a System Integrator by building an extensive eco-system comprising development partners, specialised vendors and suppliers, in particular, those from the MSME sector. Strategic Partnerships will seek to enhance indigenous defence manufacturing capabilities through the private sector over and above the existing production base. Detailed norms and procedures of the same are as given in Chapter VII of the DAP.

**29. Leasing.** Leasing has been introduced as another category for acquisition in addition to the existing 'Buy' and 'Make' acquisition categories as it provides for an innovative technique for financing of equipment/platforms. Leasing provides means to possess and operate the asset without owning the asset and is useful to substitute huge initial capital outlays with periodical rental payments. Leasing would be permitted in two sub categories i.e. Lease (Indian), where Lessor is an Indian entity and is the owner of the asset, and Lease (Global). The procedure for Leasing will be as laid down in Chapter IX of the DAP.

**30. Other Capital Procurement Procedure (OCP).** Overhaul, major refits, upgrades and replacement of items of Capital nature, will be procured following a simplified procedure as laid down in Chapter X of the DAP.

**31.** In case where niche technology-based equipment, like in aerospace, with no or miniscule availability of desired material in the country, the SHQ may recommend lower IC than that stipulated in the category. In such cases, if IC becomes less than 30% IC of the base contract price, discharge of Offsets will be applicable. The AoN according authority may approve higher or lower threshold of IC than that stipulated for various categories. Detailed justification for the same should be submitted while seeking AoN. In cases involving BNE, the cost of the BNE will be excluded from the base contract price for the purpose of calculating IC.

**32. Upgrades/Life Extension.** Cases involving upgrade to 'in service' weapon systems /equipment/assemblies/sub-assemblies/sub-systems and life extension of 'in service' weapon systems/equipment will also be covered by this procedure. Categorisation of the proposal may be carried out depending on scope, availability of indigenous technology and need for seeking critical technologies from foreign vendors.

## Acquisition Planning Process

**33.** To address the current and futuristic security needs, the Services will need to engage in capability development in a prioritised manner based on long term perspective plan from which should flow procurements planned for modernisation of the Services based on Capital Acquisition Plans. Proposals for acquisition of capital assets will cover the long-term, medium-term and short-term perspectives as under: -

- (a) 10 years Integrated Capability Development Plan (ICDP).
- (b) Five years Defence Capital Acquisition Plan (DCAP).
- (c) Two years Annual Acquisition Plan (AAP).

**34. Planning Process.** The planning process would evolve from the National Security Strategy/Guidelines (as and when promulgated) and Raksha Mantri's Operational Directive. The following planning process would be adopted to address the current and future needs of the Services: -

- (a) HQ IDS will prepare a 10-year ICDP in consultation with the SHQ, every (five years), comprising of two five-year plans. This will be prepared, along with a Technology Perspective and Capability Roadmap (TPCR) reflecting the details of technologies and capabilities that could be made public for use by the industry. The ICDP will be approved by the Defence Acquisition Council (DAC) prior to promulgation. ICDP would be translated into appropriate problem definition statements and R&D establishment and industry would be given time and resources to enable transition from technology development for testing, trials and production to take place. This would help set the requirements clearly and help in deriving the system specifications so that grant of AoN for major systems included in the ICDP, take note of the lead times needed to develop, test, evaluate and productionise the systems required.
- (b) HQ IDS will thereafter prepare the DCAP based on recommendations of SHQ, which will include acquisitions planned for the next five years culled out from the ICDP, based on prioritised operational requirements. The DCAP will be approved by the DAC prior to promulgation. The ICG Capital Acquisition Plan will be processed separately by HQ ICG along with the DCAP for approval of DAC.
- (c) Based on the DCAP, each SHQ shall prepare a two-year roll-on acquisition plan, to be called Annual Acquisition Plan (AAP), before the commencement of each financial year, which shall form the basis for initiation of every acquisition proposal for AoN. The draft AAP will be submitted by the SHQ to HQ IDS by 31st of December each year, after obtaining comments of the concerned Joint Secretary & Acquisition Managers (JS & AMs), Additional Director Generals (ADGs) Acquisition Technical and Finance Managers (FMs) of the MoD (Acquisition).
- (d) A consolidated AAP will be prepared by HQ IDS along with prioritisation of schemes based on the overall financial limits linked to the anticipated budget (limits being fixed in consultation with MoD (Fin)). HQ IDS will

obtain approval of the AAP from Defence Procurement Board (DPB) latest by 15th of March. Approval of DPB of AAP in respect of Indian Coast Guard (ICG) will be processed by HQ ICG after due prioritisation, for approval of DPB.

## Annual Acquisition Plan (AAP)

**35.** The AAP will comprise of four sections; Part A will contain a list of all carry-over acquisition proposals from the previous year and those for which AoN has been accorded during the year, Part B will include acquisition proposals likely to be initiated for AoN in the forthcoming year, Part C will list out cases under the 'Make' and 'Design & Development' category and Part D will list out procurements planned under OCPP.

**36.** Acquisition proposals not included in the AAP may also be initiated by SHQs on account of unforeseen circumstances and will be included in the relevant section of the AAP after grant of AoN. However, AoN for such cases being processed within the overall budget estimates as prescribed for AAP. The AAP will be accordingly revised and brought up for approval of the DPB as per next scheduled revision.

**37.** The DPB may also carry out amendments to the AAP, if considered necessary, on account of national security requirements, operational urgencies and budgetary provisions or any other exigency based on recommendations made by SHQ/HQ IDS/Department of Military Affairs (DMA)/MoD (Finance)/ Department of Defence (DoD).

## Project Management Unit (PMU)

**38.** As part of the Defence Reforms announced in the Atmanirbhar Bharat Abhiyan, setting up of a PMU has been mandated to support contract management so as to usher in faster decision making and time bound defence acquisition process. The PMU will facilitate obtaining advisory and consultancy support in specified areas to streamline Acquisition process. The case for establishment of the PMU and its charter and responsibilities are being processed separately and further details will be promulgated accordingly.

## Applicability of DAP

**39.** Defence Acquisition Procedure 2020 would be in supersession of Defence Procurement Procedure 2016 and will come into effect from 01 October 2020. This DAP would remain in force till 30 September 2025 or till reviewed.

**40.** Amendments to DAP 2020. MoD (Acquisition), in consultation with MoD (Finance), will be authorised to issue clarifications required to remove difficulties arising due to typographical, referencing and syntax errors. The DAC will be informed of all such clarifications carried out by the MoD (Acquisition) after one year. Any amendments to the DAP 2020 will be approved by the DAC, post recommendations of the DPB, based on proposals initiated by the MoD (Acquisition). All guidelines referred to in the DAP will, however, be amended based on the approval of the guidelines according authority. Amendments to various templates, formats, flowcharts etc. included in the DAP may be amended by the MoD (Acquisition) as required.

## ACQUISITION OF SYSTEMS PRODUCTS AND ICT SYSTEMS

**41.** Acquisition of Systems and Information & Communication Technology (ICT) products is in a few aspects different from the regular acquisition projects. The software and hardware elements of these projects usually require periodic up-gradations and intense obsolescence management to maintain tactical dominance in C4I2, EW and Cyber domain. To provide an efficient and agile acquisition mechanism for acquisition and up-gradation of such products, certain provisions are incorporated in this Chapter, to be read in conjunction with relevant provisions of Chapter-II of Defence Acquisition Procedure.

## LEASING

**42. Definition of a Lease.** A lease is a contract outlining the terms under which one party agrees to rent Goods owned by another party. It guarantees the lessee, use of an asset and guarantees the lessor, regular payments for a specified period in exchange. Both the lessee and the lessor face consequences if they fail to uphold the terms of the

contract. Lease is a legal and binding contract, set forth in the form of an agreement.

**43.** Leasing is introduced as another category for acquisition in addition to the existing 'Buy' and 'Make' acquisition categories as it provides for an innovative technique for financing of equipment. Leasing provides means to possess and operate the asset without owning the asset and is useful to substitute huge initial capital outlays with periodical rental payments.

**44.** Leasing would be permitted in two sub categories i.e. Lease (Indian), where Lessor is an Indian entity and is the owner of the asset, and Lease (Global) which refers to lease of equipment from foreign or Indian Lessors. Lease (Indian) would be the preferred category.

**45. Cases for Lease.** Cases where lease of equipment may be preferred are:-

- (a) Where procurement is not feasible due to time constraint.
- (b) Where the asset/capability is needed for a specific time or would be under utilised if procured.
- (c) Where smaller numbers of assets are needed and administrative / maintenance infrastructure expenditure would be high.
- (d) When lease rentals are a better option compared to a one-time acquisition cost.
- (e) To gain experience for operational exploitation of equipment.
- (f) Due to operational necessity.

**46.** New unused equipment, as well as previously used equipment could be procured under lease. For the MoD, the lease enables use of equipment without making a large initial Capital outlay, mitigate effect of equipment obsolescence, faster acquisition of capability, and reduced administrative costs. For the Lessor, a lease instrument provides a way to offset benefits of equipment depreciation for better returns on capital, against assured returns from a Govt contract.

**47.** Types of Leases. SHQ, while examining the cases, may examine the applicability of appropriate lease type, from the following types, with due justification:-

- (a) **Operating Lease.** An arrangement where Lessee (MoD) uses the asset for a specific period and makes rental payments for the use of the asset, but does not gain ownership rights over the asset. At the conclusion of the



arrangement, or at predetermined times during the terms of the lease, the asset may be acquired by the MoD (the Lessee) for an agreed-to price set at the beginning of the lease (the residual value). Alternatively, the asset/equipment can be returned to the lessor at the end of the lease term, meeting certain return conditions, which are similarly negotiated at the onset of the lease.

- (i) An operating lease could be Dry/Wet or Damp lease. While in a Dry lease only an asset is leased, in a Wet lease arrangement a lessor provides the asset, crew, maintenance and insurance to the Lessee.
- (b) **Finance Lease.** Operates similar to a loan, as Lessee (MoD) pays for the entire value of the asset over the term of the lease. At the conclusion of the arrangement, the MoD (the Lessee) can take ownership of the asset for nominal predetermined consideration or return it to the Lessor

## OTHER CAPITAL PROCUREMENT PROCEDURE (OCP)

**48. Background .** Acquisition of new capital assets for the Services is to be undertaken as per the procedure defined in the DAP. Apart from such capital assets, there are other items of capital nature that enhance the utility of existing assets. Expenditure on such items is also treated as Capital expenditure, which is based on Rule 84 of General Financial Rules (GFR) 2017 which defines capital expenditure as 'Significant expenditure incurred with the object of acquiring tangible assets of a permanent nature (for use in the organization and not for sale in the ordinary course of business) or enhancing the utility of existing assets'. In the context of defence procurements, such items of capital nature that enhance the utility of existing assets include overhauls, major refits and upgrades of existing platforms/equipment. Such items will be covered in the procedure prescribed in this Chapter.

**49. Scope.** Items such as overhauls, refits, upgrades and replacement of items of Capital nature etc. which enhance the utility of existing assets in terms of the definition laid out in GFRs 2017, will henceforth be procured under the procedure laid out in this Chapter. This Procedure will be referred to as 'Other Capital Procurement Procedure' (OCP). The procurement under this chapter will be as per list of items (as amended from time to time), which will be drawn up by HQ IDS and respective SHQs and promulgated by DG (Acquisition) in consultation with MoD (Finance).

**50.** Thus, OCPP will be applicable only to procurements involving expenditure on overhaul, refits, upgrades and replacement of items of Capital nature while expenditure on items of routine maintenance, repair etc., will be incurred under Revenue Budget following the DPM. It will be ensured that items covered under this Chapter will not be taken up for procurement under procedure defined in other Chapters of DAP.

## Conclusion

**51.** The Defence Acquisition Procedure (DAP) derives its ethos and spirit from the clarion call of an 'Atmanirbhar Bharat' and 'Make in India' which define India's growth story and the dream to become a USD 5 trillion economy by 2024. Defence is a key sector that will help achieving these objectives. Defence manufacturing is unique and complex due to fast changing cutting-edge technologies. It demands major impetus in Research and Development, creation of intellectual capital as well as argumentation of defence production facilities within the country. A smooth, efficient and well defined acquisition procedure is the pre requisite for giving an impetus to Defence manufacturing in India. The DAP introduces a slew of conceptual, structural and procedural reforms in the acquisition procedure to create a climate in which the industry can thrive while meeting the security and operational needs of the Services. The focus of DAP lies in ensuring that contemporary technology based equipment is made available to the Services in a time bound manner, to further expedite the modernisation of the Armed Forces.

India has a huge defence industrial base of Defence Public Sector Undertakings, Ordnance Factories and dedicated establishments under the umbrella of the Defence Research and Development Organisation augmented by a thriving private sector. The increase in the Foreign Direct Investment sectoral limits to 74% becomes a catalyst for the foreign players to develop India as international manufacturing hub. The DAP accordingly focuses on 'Ease of Doing Business' to encourage Foreign Manufacturers to setup manufacturing entities in the defence industrial corridors established in the country and elsewhere.

The DAP also focuses on 'Self Reliance' wherein indigenisation and innovation is enabled through processes of 'Make', 'Design & Development' and 'Strategic Partnership'. Import substitution has been facilitated through various schemes with an aim to reduce Life Cycle Costs and build a robust

eco system based on domestic MSMEs.

We can sincerely hope that the DAP 2020 will energise Defence Acquisition and ensure achievement of our collective aspirations of a capable and 'Atmanirbhar Bharat'.



**MAJ GEN  
S H MAHAJAN**



## ABOUT THE AUTHOR

During his 38 years of Army service, the General officer has served in all the border areas of our country to include J & K, Sikkim, Mizoram, Tripura, Arunachal Pradesh and Assam. The General Officer is an alumni of the Defence Services Staff College, Wellington, Army War College, Mhow and the National Defence College (NDC), New Delhi. Maj Gen Mahajan has seen active service in Jammu & Kashmir having commanded the 4th Battalion the MARATHA LIGHT INFANTRY and a Mountain Brigade in Assam. For his distinguished service in Counter Insurgency Operations in Assam, he was awarded Vishisht Seva Medal. The General Officer has commanded 23 Infantry Division as part of strike corps on the Western Front. Presently he is Deputy Director of Centre for Advanced Strategic Studies, Pune. He is also a member of Committee of experts appointed by the Ministry of Defence.

# PAKISTAN'S NATIONAL SECURITY POLICY

 BY MR JAYANT UMRANIKAR

## Policy and strategy

**A**t the outset, the terms national policy and strategy need to be clarified. The strategy is a unique plan, chosen from a number of plans, designed to reach the national goals and objectives. It is an interpretative plan, that guides the nation in realizing its destiny while, policy refers to a set of rules followed for rational, day to day decision making. Policies are subordinate to strategy. The strategy is a plan of action while the policy is a principle of action.

‘Strategy is a master narrative, a story that we tell ourselves and others about how we see the world and our role in it; in other words, strategy communicates a particular worldview. Strategic worldviews exert a powerful influence on our priorities, policies, decisions, and activities and are best examined with a reflexive approach.’

Before undertaking detailed analysis of Pak NSP, it may be useful to know what prompted the US educated Pak NSA, Moeed Yusuf, (holding dual nationality; Pakistani and American) to come up with this document.

## USA NSS (National Security Strategy)

In the USA, the National Security Strategy (NSS) is prepared periodically by the National Security Council that projects the national security concerns and suggests how to deal with them. The legal foundation for the document is Section 603 of the Goldwater-Nichols Department of Defence Reorganization Act of 1986 (Public Law 99-433). It mandates that an updated National Security Strategy is to be submitted to Congress annually but that does not happen, necessarily.

The 2017 NSS focuses on four vital national interests: Protect the Homeland, the American people, and American way of life; Advance American Prosperity; Preserve Peace through Strength; and Enhance American Influence.

The 2018 National Defence Strategy is based on;

- a. US-led rules-based international order (RBI) and
- b. a “free and open order” given by the victors of World War II to the rest of the world.

‘The NDS acknowledges an increasingly complex global security environment, characterized by overt challenges to the free and open international order and the re-emergence of long-term, strategic competition between nations. These changes require a clear-eyed appraisal of the threats we face, acknowledgement of the changing character of warfare, and a transformation of how the Department conducts business.

The central challenge to U.S. prosperity and security is the re-emergence of long-term, strategic competition by what the National Security Strategy classifies as revisionist powers. It is increasingly clear that China and Russia want to shape a world consistent with their authoritarian model—gaining veto authority over other nations’ economic, diplomatic, and security decisions.’

In March 2021, President Joe Biden published the 2021 Interim National Security Strategy (NSS), superseding NSS 2017, that recommitted the US to the NATO alliance and emphasised that the United States “must demonstrate that democracies can still deliver for our people. It will not happen by accident – we have to defend our democracy, strengthen it and renew it.”

Taking lead from the American system of having periodic NSS and NDS as base documents, Pak NSA, Moeed Yusuf introduced this concept in Pakistan.

## **Pakistan’s National Security Policy (NSP)**

Pakistan’s National Security Policy (NSP), for 2022 to 2026, was approved by the Pak cabinet on 28 December 2021 and a public version of it was published on 14 January 2022. The process of drafting had been started in 2014 by Ambassador Sadiq, the then NSA and completed by experts of National Security division headed by the present NSA, Moeed Yusuf. Seven years of “rigorous analysis and consultation”; hundreds of academics, civil society members and military stakeholders were, reportedly, involved in the preparation. Yusuf described it as a citizen-centric, ‘mother document’ that no govt. will go back on, although it has been dated for 2022-26 period, liable to

be changed with the change of government.

The NSP document made public, contains eight sections:

Section I gives the formulation process while Section II gives conceptual elements of NSP. Thereafter, six thematic sections discuss policy's desired outcomes. Section III elaborates how 'National Cohesion' would be achieved through ideology, ensuring unity and stability; having public service responsive to citizens' needs. Section IV talks how 'Economic Future' could be 'secured' by prioritising trade, energy, education and human resources. Section V deals with Defence, Territorial Integrity, Space and Cyber security. Section VI, on 'Internal Security', deals with challenges of terrorism, extremism, violent sub-nationalisms and sectarianism. Section VII elaborates 'Foreign Policy in a Changing World'. Finally, Section VIII, titled 'Human Security' deals with population and migration; health, climate and water; food and gender security.

There is no comparable document in the past, to determine if there is any change in Pak NSP. Since independence, Pakistan was a US allied frontline state (till 2021) that was also playing vassal to China since the sixties. Going by statements of its leaders, their unwritten NSP since independence was based on Indophobia, feigning equivalence, seeking strategic depth in Afghanistan and using cross border terrorism, through state/non state actors to bleed India.

## The Trigger - Gen Bajwa's Geo-economics

The speech of Pakistan Army chief, Gen Qamar Bajwa, in March 2021, at the inaugural Islamabad Security Dialogue (ISD) organised by the National Security Division of the PMO, had signalled a noticeable shift in Islamabad's strategic orientation. He had said, 'the contemporary concept of National Security was not only about protecting a country from internal and external threats' and was 'not solely a function of the armed forces anymore'. He had added that 'A nation at peace and a region in harmony' were 'essential prerequisites for attainment of national security'.

Gen. Bajwa had emphasised geo-economics instead of geo-politics; 'connectivity', 'regional integration', 'human security' and 'trade and transit corridors. He had talked of Pakistan's geo-strategic location as "a bridge between civilisations and connecting conduit between the regional economies". He had highlighted the possibility to "unlock the untapped potential of South and Central Asia by ensuring connectivity between East and West Asia". None of this was possible without engaging India but Bajwa had repeated the

traditional precondition to this engagement, “Without the resolution of Kashmir dispute through peaceful means, process of sub-continental rapprochement will always remain susceptible to derailment..”

It seems that the present NSP document merely enlarges the ideas mentioned in the speech.

## Geoeconomics

The concept of geoeconomics was originally postulated in the nineties, by E. Luttwak, an American strategist when the Cold War was coming to an end. The US-China economic engagement that led to the rise of prosperous China was touted as the prime example of geoeconomics but Luttwak had argued that the “logic of conflict” between the states was likely to persist even in the age of globalisation, dictated by the national interests of the states.

Does the new NSP signal that based on geoeconomics, Pakistan was replacing the traditional ‘rentier national security state’ by a ‘developmental state’, ending the dominance of the military and power capture by elite? The detailed reading of document belies this hope as it returns to the usual India bashing.

The feeling that NSP has been dictated by the Army was reinforced on April 2, 2022 when Gen Bajwa addressed the second Islamabad Security Dialogue and contradicted PM Imran on Pak-USA relations. Khan had alleged a day before at ISD, that a “powerful country” (the US) was upset with his Kremlin visit on the day Russia launched attacked Ukraine on 24 February. Bajwa highlighted Pakistan’s “long and excellent strategic relationship with the US”. He said Pakistan did not believe in camp politics and enjoyed a close strategic relationship with China as well as the United States. Pakistan seeks to broaden and expand relations with both China and the United States, without “impacting our relations with either”, he added.

## Propaganda Blitz

Before the launch of NSP, on Jan 11, 2022, some ‘Pak official’ was quoted by media to state that Pakistan wants no conflict with India for the next 100 years. This was immediately and gleefully, lapped up by the ‘usual suspects’ to predict better Indo-Pak relations. It turned out to be a false hope, as usual.



The speculation merely indicated that Pakistan wanted world media attention to an aspirational document that is basically an old wine in old bottle with the new NSP label on it. The NSP turned out to be a non-serious document presented in a serious manner.

Surprisingly, it is the foreign policy section that reveals the propagandist purpose of the NSP, “To reverse any unfair negativity attached to its image due to sustained disinformation and influence operations by adversaries.” For Pakistan, which continues to be on FATF grey-list, to claim that its negative image is because of disinformation and not because of its policy of state-sponsored terrorism, harbouring Islamic terrorists who operate with almost official connivance, is sheer hypocrisy.

## Political Manifesto

The public version of the NSP reads like a political manifesto of the ruling party, full of platitudes, jargon and good intentions, pandering to western sensitivities; an exercise in information warfare. This impression got confirmed by Pakistan’s ‘bonsai’ PM Imran’s speech at the release of the NSP that talked of security to common man, upliftment of poor and development of backward areas, etc. He was obviously preparing a political narrative for the next elections and that intention gets firmed up in his message that prefaces NSP. The message talks of “bold visions and big ideas”. Imran claims that the NSP “centres on my government’s vision, which believes that the security of Pakistan rests in the security of its citizens. This citizen-centric approach to national security prioritises national cohesion and the prosperity of people, while guaranteeing fundamental rights and social justice without discrimination.”

The NSP identifies three socio-economic challenges - ‘external imbalance, vertical (regional) inequalities, and horizontal (social) inequalities’ – that would be addressed by “preventing elite capture of policy, removing barriers and expanding opportunities for low-income households” but does not tell us how these are to be achieved.

## Elite privileges

In fact, according to UNDP report of April 2021, elite privileges consume \$ 17.4 bn of Pak economy - equal to the current account deficit for 2021-22:

military, was found to receive \$1.7bn in privileges, in the form of preferential access to land, capital and infrastructure, as well as tax exemptions. Islamabad had allocated \$7.85bn for defence in the budget for the financial year 2020-2021. To avoid hard questions from the International Monetary Fund (IMF), acquisitions by the armed forces, expenditure on the nuclear programme and para-military forces, payments for military pensions, a newly set-up national security division and a few other military expenditures were not reflected in the budget. Put together, Pakistan's defence spending would be at around \$11bn.

## Red Lines for Future Governments

Besides elaborating PM Imran's politics and Gen Bajwa's geo-economics, NSP shows that the (military) Establishment has decided to document its red lines for the next govt (especially for PML-N, allegedly, softer on India). The anti-India message spread throughout the document precludes any meaningful bilateral talks. Post-publication, expounding on NSP, Moeed Yusuf told the world media that there could be no talks with PM Modi as he runs a (Hindutva) fascist govt. So, besides the usual core issue of Kashmir, a change in the Indian govt has become another precondition for engagement with India! Again, in his interview to the Indian Express (Feb 3, 2022) Yusuf made it clear that Pakistan can move forward only if India created the enabling environment. Thus, he wants better relations with India on Pakistan's own terms.

Going by the fore-taste, the classified portion of NSP is likely to be even more virulent, anti-India document that may sanctify military veto on dealings with India, general foreign policy, military supremacy over civilian govt, priority over limited national resources and control over nuclear arsenal. In a way, NSP document ratifies the doctrine that Pakistan will continue to have 'Military Rule by Other Means,' as mentioned by Hussain Haqqani in his book, 'Pakistan between Mosque and Military'.

### **Message by Imran:**

As mentioned earlier, the public version of NSP is prefaced by a message from PM Imran which states that NSP 'will contribute immensely to our country's economic security, human welfare on the lines of Riasat-e-Medina, and a stronger defence capability.'

From Gen. Zia's Nizam e Mustafa, through Sharia Laws, we now have this new Islamic formulation. Interestingly, Riasat-e-Medina is not just a welfare

state as is being made out by some scholars of Islam. Headed by the Prophet, this Medina dispensation undertook 101 brutal military campaigns against her enemies - the non-believers, with Prophet leading 28 of them, himself. It was a very aggressive Riasat and the main revenue model was plunder.

### **Appeasing the West:**

The abundant platitudes in NSP are deliberate and directed at the western audience. e.g.

**a. Our guiding principle for national cohesion and harmony will remain ‘unity in diversity’.**

This is a country that has Blasphemy Laws and has resolved the problem of minorities by nearly eliminating them. It has scores of Sunni sectarian organisations and ‘lashkars’ that indulge in violence against Shias and Ahmadis and attack minorities under the cover of blasphemy laws. Imran Khan had to drop the celebrated economist Atif Mian from his Economic Advisory Council as he belongs to the Ahmadiyya sect, categorised as non-Muslim by Pak constitution.

**b. Symbiotic Relationship Between Traditional and Non-Traditional Security**

This concept is borrowed from UNDP characterization of human security as ‘(1) economic security, (freedom from poverty); (2) food security (access to food); (3) health security (access to health care and protection from diseases); (4) environmental security (protection from such dangers as environmental pollution and depletion); (5) personal security (physical safety from such things as torture, war, criminal attacks, domestic violence, drug use, suicide and even traffic accidents); (6) community security (survival of traditional cultures and ethnic groups as well as the physical security of these groups); and (7) political security (enjoyment of civil and political rights, and freedom from political oppression).

**c. NATIONAL COHESION chapter starts with Pakistan being “An Islamic Republic based on the principles of equality and justice”**

However, Sharia laws dominating Pakistan’s jurisprudence are inherently unjust to non-Muslims and make them less than equal in the eyes of law. Shariah even belittles women vis-à-vis men.

Yet, what takes the cake, is the following observation;

**d. ‘Pakistan’s economic resilience is demonstrated by a positive growth trajectory and vibrant economy despite political uncertainty and**

## security challenges.'

For a country begging for 22nd IMF bailout since 1958, having external debt of 127 billion and being permanent member of FATF grey list, to crow about economic resilience is nothing short of delusion. The mismanagement of the economy by Imran govt has resulted in high inflation, low growth, shortages of energy / essentials, unemployment, and high tariffs on fuel and energy.

Economic distress had reached unbearable levels when Imran government lost parliamentary majority leading to the regime change but Imran blamed it on USA plot against him.

## Internal security:

This section identifies terrorism, violent sub-nationalism, extremism, sectarianism, narcotics and organised crime as the main challenges. Interestingly, it also takes note of 'gender violence'. Declaring "a policy of zero tolerance for any groups involved in terrorist activities on its soil" it suggests that the policy doesn't cover terror activities from its soil, in other countries. The NSP criticizes "the exploitation and manipulation of ethnic, religious, and sectarian lines through violent extremist ideologies". However, PM Imran himself has colluded with the extremist Tehreek-e-Labbaik (TLP) since his days in the opposition as well as when in power. His compromises with TLP and Pak Taliban negate NSP directive.

## Afghanistan

The foreign policy section mentions, "Afghanistan's potential as a gateway for economic connectivity with Central Asian states is a key driver for Pakistan's support for peace in Afghanistan." Pakistan has always wanted to control and dominate Afghanistan to acquire 'strategic depth' in the past and now to serve as the trade and transit hub for Central Asia. Yet, Pakistan's geoeconomics is flawed as without India, Af-Pak region can never become a 'trade and transit hub'. Pakistan shot itself in foot when it severed all links with India as a reaction to the constitutional reforms in Jammu and Kashmir in 2019.

The bland para on Afghanistan hides the present political problems with the Taliban. Till date, no country has recognised the Taliban regime. Kabul has objected to Pakistani border fencing along disputed Durand line and Pak NSA had to cancel his visit to Kabul when Mullah Abdul Hakim of Afghan MoD advised Pak to mind its own business. The Mullah even pointed out that Imran

was not a properly elected PM. The continuous trouble on Pak-Afghan border since August, 2021 takeover by Taliban tells its own story.

## Specific references to India

The following references set up the tone for the regurgitation of old wine against India.

- a. 'Pakistan's prized geo-economic location provides a unique opportunity through north-south and east-west connectivity but eastward connectivity is held hostage to India's regressive approach'.
- b. 'Special attention is required to manage lingering border disputes which continue to pose security threats, particularly along the Line of Control and Working Boundary where ceasefire violations by India threaten civilian lives and property while endangering regional stability.'
- c. 'With a regressive and dangerous ideology gripping the collective conscience in our immediate neighbourhood..... The possibility of use of force by the adversary as a deliberate policy choice cannot be ruled out.'

This reference is not about the Taliban in Kabul but Indian 'Hindutva'. Giving interview to Al Jazeera and other channels on NSP, Pak NSA described Indian govt as 'fascist.'

- d. 'The self-professed role of any one country (read India) as a so-called net-security provider in the wider Indian Ocean would affect the region's security and economic interests negatively.'
- e. 'The expansion of India's nuclear triad, open-ended statements on nuclear policy, and investments in and introduction of destabilising technologies disturb the strategic balance in the region'.
- f. 'Towards the immediate east, bilateral ties have been stymied as a consequence of the unresolved Kashmir dispute and India's hegemonic designs.'

## Jammu and Kashmir

'A just and peaceful resolution of the Jammu and Kashmir dispute remains a vital national security interest for Pakistan. India's illegal and unilateral actions of August 2019 have been rejected by the people of Indian Illegally Occupied Jammu and Kashmir (IIOJK). Indian occupation forces continue to

undertake human rights abuses and oppression through war crimes, crimes against humanity, and genocidal acts.’

Thus, there is no softening on J&K. All the old lines have been repeated, including UN resolutions.

‘Pakistan also recognises the centrality of the UN in ensuring that the people of Jammu and Kashmir are allowed to exercise their right to self-determination in accordance with relevant UNSC resolutions.’

This seems to be ‘raison d’etre’ of UNO’s existence for Pakistan.

The NSP accuses India of imposing one-sided solutions affecting regional stability. Pakistan’s worry about surgical strikes gets reflected when NSP talks about Indian military adventurism.

‘Jammu and Kashmir dispute remains at the core of our bilateral relationship. The rise of Hindutva-driven politics in India is deeply concerning and impacts Pakistan’s immediate security. The political exploitation of a policy of belligerence towards Pakistan by India’s leadership has led to the threat of military adventurism and non-contact warfare to our immediate east.’

It may be recollected that the then CDS, late Gen Rawath had been tasked to draft a doctrine for non-contact warfare, comprising all non-kinetic forms, including those related to information, cyberspace and psychological domains. Such warfare could involve drones and other such munitions. NSP treats that also as military adventurism.

Thus, the whole narrative on India is a crib about how India is victimising Pakistan.

### **Rest of the world: Pakistan does not subscribe to ‘camp politics’**

This is quite a statement by a member of every possible US/West led alliance since independence! It signals that Pakistan would want to maintain relations with the US, but not at the cost of Chinese friendship.

The foreign policy section mentions that Pak-China relations are based on “trust and strategic convergence” which will continue to be strengthened. Despite the difficulties in and opposition to implementing the China Pakistan Economic Corridor (CPEC), NSP misstates, ‘As a project of national importance, China Pakistan Economic Corridor (CPEC) enjoys national consensus.’ Besides the Baluch who oppose CPEC tooth and nail, there are many commentators who have warned about the unviable debt-trap inbuilt into CPEC contracts. Yet, NSP says that CPEC is “redefining regional connectivity and providing impetus to Pakistan’s economy with the potential to jump-start

domestic growth, alleviate poverty, and improve regional connectivity.”

The long-term mentor, US has now been relegated to ‘rest of the world’ and is discussed after Middle-East / West Asia. Admitting that “cooperation with the United States will remain critical for regional peace and stability”, the NSP wants the partnership to move “beyond a narrow counter-terrorism focus”. Pakistan cannot do without the US and the West because of its trade links, assistance and financial dependence. The effort is to balance the relationship between China and the US in times of rising differences between the two.

On April 2, 2022 Gen Bajwa, as mentioned earlier, repeated this message about centrality of US/West relations, while reiterating that Pakistan did not believe in camp politics.

Imran got voted out of power in April 2022, alleging that USA had plotted to get him out and the new govt has sent the new Foreign Minister, Bilawal Bhutto to placate USA and get some relief from the IMF. The new government is too preoccupied with their own political survival and economic survival of Pakistan, to have a re-look at Pak NSP. Besides, the real maker of NSP - the GHQ, Rawalpindi – has not changed.

From the Indian perspective, Pak-China nexus and their ‘iron-clad’ friendship necessitates a look at the Chinese policy/strategic documents as well.

## **Sun Yat Sen and Chinese NSP**

In contrast to Pakistan, Chinese NSP and strategic thinking seems to have evolved historically from Sun Yat Sen’s (the leader of the first Chinese republic that emerged in 1912) thoughts and writings. Sun had visualized and planned industrialisation, rail/road building, development of ports and so on, of a ‘race-nation’ laying the foundation of Chinese NSP. Even recent Belt-Road-Initiative and Xi Jinping thoughts seem to follow Sun’s vision.

The books, ‘The Political Doctrines of Sun Yat Sen’ and ‘The International Development of China’, besides his famous lectures — ‘San Min Chu I’, advocate ‘Colonisation in Manchuria, Mongolia, Sinkiang, Kokanor (Qinghai province) and Tibet’.

Out of these, Tibet is of geostrategic interest to India. A free and independent Tibet prior to 1949 was the buffer zone between the two Asian giants that vanished when the Peoples’ Liberation Army occupied Lhasa and China merged parts of north-eastern and southern Tibet into the Chinese provinces of Gansu, Yunnan and Sichuan.



The cancelling of the Tibetan ethnic, national identity and culture, stems from Sun's ambition that republican China would finally regain "the territory of the Chinese Empire" including all of Tibet and Sinkiang.

Sun's solution to "the minorities problem" was obliteration of 10% of the population composed of the Mongols, Manchus, Tibetans and Uighur Muslims of eastern Turkestan (Xinjiang). "In simple terms, the race or nationality has developed through natural forces," Sun said, "while the State has developed through force of arms." His vision has been followed by both, the nationalist Kuomintang and Mao's Communist Party of China, till date. On Tibet, Mao had even elaborated further, calling it a palm with five fingers, viz., Nepal, Bhutan, Ladakh, Sikkim and Arunachal Pradesh.

Tibetans could have escaped the colonisation if India had intervened but the then Indian PM, Nehru's views of a 'benign Communist China' and lack of strategic thinking, let the Chinese annex Tibet, extinguishing special rights that India had in Tibetan affairs.

Yet, India has retained some leverage by refusing to recognize Tibet as "historically a part of China".

A century, down the line, following Sun's tenets, China has emerged as a major power. Its White Paper, 'China's National Defence' in the New Era issued on July 22, 2019 is the answer to the 'U.S. 2017 National Security Strategy' and '2018 National Defence Strategy' that had targeted China as America's primary strategic competitor.

It responds to the visible shift in U.S. strategy from counterterrorism and extremism to competition and possible conflict with China and Russia. It flags the fact that America and China are now competing superpowers, and that China's growing military forces are developing to the point where they will be able to challenge the United States.

India has 18 references in the White Paper reflecting generally positive outlook towards India but this was prior to May, 2020 Galwan clashes.

The Central European Institute of Asian Studies has released a report on 'Chinese views of the world at the time of the Russia-Ukraine war' in March, 2022. (In Episode 1008 of Cut The Clutter, Shekhar Gupta shows that India is among the most hated countries after the US.)

### **Where is Indian national security strategy/policy?**

Thus, Pakistan covets J&K and China wants 'five fingers of Tibet'. Yet, in spite of being a civilisational state like China, there is no official Indian national

security policy or strategic white paper available. The lack of a formal National Security Strategy for India has been criticised by the strategic community.

In the seven decades of power the Indian National Congress could have brought out a white paper but failed. Prior to elections in 2019, the INC commissioned Lt Gen D S Hooda (Retd) to prepare a report on India's National Security Strategy. The document covers the following subjects:

### **ASSUMING OUR RIGHTFUL PLACE IN GLOBAL AFFAIRS**

A Strategic Global Scan, Great Power Rivalry, Retreat of Multilateralism, The Middle East and North Africa, Navigating the Global Space, A Global Role, Bilateral Engagements

### **ACHIEVING A SECURE NEIGHBOURHOOD**

A Troubled Neighbourhood, Ensuring Regional Security, Engaging China, Dealing with Pakistan, Afghanistan, Cooperation in the Neighbourhood, Indian Ocean Region

### **PEACEFUL RESOLUTION OF INTERNAL CONFLICTS**

J&K, Mainstreaming Measures, The North East, Integrating the North-East, Left-Wing Extremism (LWE), Tackling LWE, Transnational Terrorism, Combating Terrorism

### **PROTECTING OUR PEOPLE**

Economic Security, Climate Change and Environment, Demographic Pressures, Technology Disruption, Cyber Threats, Energy Security, Policy Recommendations/Initiatives

### **STRENGTHENING OUR CAPABILITIES**

Securing our Land and Maritime Borders, Strengthening Military Capability, Indigenisation of Defence Production, Transforming the Police, Intelligence, Cyber Warfare, Nuclear Forces, Space, Strategic Communications

## BJP election manifesto (2019) talked of;

- 1) National security: Zero tolerance to terrorism; surgical strikes and the air strikes; free hand to security forces in combating terrorism; strengthen the Armed Forces and border infrastructure.
- 2) Welfare measures: Welfare of farmers and small traders; pension scheme for all small and marginal farmers above the age of 60 across the country; a pucca house to every family by 2022.
- 3) Kashmir: Annuling Article 370 and Article 35A of the Constitution of India; Kashmiri Pandits safe return; financial assistance for the resettlement of refugees from West Pakistan, Pakistan occupied Jammu and Kashmir (POJK) and Chhamb;
- 4) Ram Mandir: Explore all possibilities within the Constitution, to facilitate the expeditious construction of Ram Temple in Ayodhya.
- 5) Economic development: Make India the third largest economy of the world by 2030 having US \$ 5 trillion economy by 2025 and US \$ 10 trillion economy by 2032.

Thus, the manifesto deals mainly with the internal security issues and does not discuss India in the global perspective. Surprisingly, it gives no inkling of the active foreign policy pursued by Modi government, subsequently.

### **No official NSP document**

In the absence of any official white paper, these two documents provide us with the nearest formulations on national security by the two national parties who have formed governments in Delhi. Except for some political sparring over these two documents, there has been no educated discussion on the national security policy.

### **NFU policy**

India had adopted a “no first use” (NFU) policy after the serial nuclear tests, Pokhran-II, in 1998. In August 1999, our government released a draft of the doctrine which asserts that nuclear weapons are solely for deterrence and that India will pursue a policy of “retaliation only”. There is no official indication if this draft has been finalised, till date.

### **The Kargil Review Committee**

The KRC was set up at the end of the Kargil War. Its report was completed

on 15 December 1999 and presented to the Parliament on 23 February, 2000. On its recommendations, a Group of Ministers and several task forces were set up to review the Indian security system. It became the first such review in independent India's history to be made public, in redacted form. It had suggested various task forces:

- National Security Council
- Intelligence
- Counter-terrorist operations
- Border Management
- Defence Budget and Modernisation
- National Security Management and Apex Decision Making
- India's Nuclear Policy
- Media Relations and Information
- Technology
- Civil–Military Liaison
- Declaratory Policy for LOC

In 2011, the Naresh Chandra task force reviewed recommendations of the KRC, assessed the implementation and suggested new changes (on 23 May, 2012) highlighting the need for framing a National Security Doctrine (National Security Strategy) which has still not taken off.

It is not clear if the absence of a documented Indian national security policy /strategy is deliberate, based on the (presumed) advantage of 'strategic ambiguity'. More likely reason may be, the lack of national consensus on the world view, regional strategy and even on internal security challenges.

Seventy-five years after independence, India needs to have a rigorous discussion on this subject and have at least a base document elaborating her long term national interests and plans to achieve them.

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## ABOUT THE AUTHOR

Mr Jayant Umranikar joined Indian Police Service in 1973 and was selected for deputation to Cabinet Secretariat, New Delhi in 1979. He has also worked as Commissioner, Special Bureau, Mumbai and participated in investigations of the 1993 Mumbai bomb blasts and Purulia Arms Drop cases. He specialises in International Communism, Islamic fundamentalism especially in Pakistan, and transnational organized crime/ terrorism.

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