Issues and Steps in Force Modernisation

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Introduction

At any given point in time, there will always be a future. With the issues, problems and challenges of the present – like counter-insurgencies or manning defensive positions, force readiness and being ready to begin a quick battle of cold start—there is a simultaneous effort to plan for the future. In other words, an organisation has to modernise and reform. Failure to innovate will lead to stagnation. This article will select some important issues and deliberate on the steps that need to be taken. These issues, both material and non-material, are not the ones that can be solved at one time. Rather, they need to be considered throughout. For instance, even in 2020, some issues may be relevant and will demand contemporary solutions. Ideas generated in 2010 will not do.

Geo-politics is the study of international relations from the spatial or geographic perspective. National interests drive a nation's preparedness. Till such time the social phenomena of war and power exist, combat ready forces would be required. In the present context, it is unlikely that causes which lead to war in our neighbourhood can be eliminated with diplomacy. Force reduction is not recommended, though force transformation would be an ongoing process.

Nature and Character of War

In the author's understanding, the nature of war is enduring and unchanging. It is best captured by classics written by Sun Tzu of the Warring Period or by Clausewitz who called it "climate of war", as being composed of danger, exertion, uncertainty and chance. It is due to the unchanging nature of war that the

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classics of the great authors are still relevant. However, with time, the character of war changes. Thus, it is often said that the Indian military needs to be equipped, trained and be relevant across the spectrum of conflict from nuclear to sub-conventional, including hybrid warfare.

Ideas matter. One is the idea of unrestricted warfare as propounded by two Chinese Colonels, Qiao Liang and Wang Xianghui, in *Warfare Beyond Rules: Judgement of War and Methods of War in the Era of Globalization* (1999) translated by Western academics as *Unrestricted Warfare*. They see an increasing role of a mix of military and non-military means such as computer hacking, financial terrorism, urban guerrilla warfare, and innovative uses of biological weapons. This type of warfare has been further refined and is now known as fourth generation warfare (4GW). It identifies 4GW opponents as, for example, insurgents and Chinese employing asymmetrical warfare as propounded in the concept of unrestricted warfare. The basic idea has been captured by Col Thomas X Hammer of the United States Marine Corps in his widely debated book *The Sling and the Stone* (2006).The book, based on the failure of the US in Iraq (post the spectacular invasion in March 2003 in Operation Iraqi Freedom ending May 1, 2003) criticises the bureaucracy's failure to rely much on concepts such as Joint Vision 2020 and its derivatives, and neglect of issues such as history, human behaviour, and so on. The book indicates the challenge in identifying the nature and type of warfare. The idea has been widely debated and strategic thinkers and learned professors of war studies in the West are divided on the issue.

However, not everyone agrees on this. One very strong view is that conventional and nuclear forces cannot be wished away. A military needs the latest platforms and firepower. Getting sidetracked by the 4GW type of threat would be a disaster.

Post the events of September 11, 2001, international terrorism has been added to the lexicon of the types of war. Besides a nation as an adversary or enemy, a "non-state" player has emerged. The 2006 war waged by Israel in Lebanon against a non-state actor (Hezbollah) showed how non-state armed groups can wage war. Pakistani watchers in India fear that a Talibanised Pakistan may get out of control and may begin launching rockets and similar attacks across the border.

Perhaps the most important reform is in progress in the Russian Federation post the war in Georgia in 2008. The Russian military organisation found itself out of balance in three main areas of reforms: (a) military technology and doctrine, (b) threat perception and geo-political change; and (c) transformation of society. It has replaced the divisional level-based structure with brigades. The brigades

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will now directly operate under an equivalent of the army (corps equivalent) which, in turn, will be part of a Military District (Theatre or Command). This development needs to be watched as a case study, though aping it blindly will be a folly.

Technology and Military Industrial Complex

Historian Martin Van Creveld in *Technology and War* (1991) argues that technological progress does not necessarily equal military progress. Technology follows a cumulative, predictable logic, while war is subject to the vagaries of human nature and is supremely unpredictable. He further elaborates that a systematic, comprehensive theory of the relationship between technology and war is still not available. It would be highly desirable, and writing it would present an appropriate challenge to a new Clausewitz. Though technology is a powerful driver, it needs to be seen in relationship with the human context of its use. Presently, we are burdened with a weak indigenous technological base.

The need for massive imports by the Services in key technologies is one of the greatest challenges. Our research, development and industrial capacity to produce weapon systems is a weak link. Though there are historic reasons for India not entering the international arms bazaar, this position may not be acceptable in the future. The artillery is in the process of procuring from oversees various types of 155 mm guns and related equipment to the tune of US $ 4 to 5 billion. For the air force, India needs to buy $ US 7 to 9 billion worth of about 126 medium combat aircraft soon. Other aircraft also would need to be replaced in the near future. Do we want to think in terms of number of squadrons or in terms of multi-mission platforms? An answer to this is not easy to derive. To switch the planning yardstick from squadrons to platforms would take time and confidence of the users.

Network-centric warfare (NCW), the revolution in military affairs (RMA) and remote control of battle also beg the question on what is a tooth to tail ratio. Are cyber warriors hacking nets, performing tasks of electronic warfare and those involved in remote sensing teeth or tail? With the changing character and type of conventional wars, one needs to study the changing teeth-to-tail perspectives. One popular analogy is: what is the use of having remote sensors and a transparent battlefield if the target cannot be destroyed? How much to spend on sensors and how much on

shooters, is a puzzle that needs to be solved.

RMA also demands an RMA of ideas and a culture in the military for lateral thinking. A fine balance is to be worked out in cutting heirarchical links. In shooter-to-sensor links, it may work, but in certain terrain where tiers and echelons have their own practical implications, this may not be possible, such as in a battalion defended area which is part of a brigade defended sector near the border, on the approaches.

The issue of force modernisation demands a fine balance between combined arms operations and jointmanship.

We seem to be enamoured with jointmanship as it is the flavour of the season. But the Israeli failure in Lebanon in 2006 showed that the weaknesses were in the grassroots infantry tactics in built-up areas and poor employment of armour. The overreliance on jointmanship also made the Israelis think that air power and excellent sensor-to-shooter links alone may do the job, which they did not. Finally, though advanced militaries have, for decades, been conceptualising a platform independent way of effects, it was the innovative use of rocket artillery and missiles by Hezbollah that displayed a real "platform independent" model. The issue of force modernisation also demands a fine balance between combined arms operations and jointmanship. Jointmanship has probably made us ignore a great deal of time and energy spent in even simpler core competencies like bridging, mine laying, battle runs, field firings and practice camps.

Matching requirements with resources is like classic economics, a science, the managing of scare resources. The procedures and methods for budgetary allocation are being studied for a better way of doing things. In a parliamentary democracy, the budgetary exercise is still an expenditure-based budget. Ironing out ad-hocism is the challenge which is being addressed. It is well known that manpower costs eat away the bulk of the budget. More firepower with less manpower is an ideal *mantra*. But translating it into force reduction, given the military's commitment in manning borders in the manpower intensive Himalayas and counter-insurgency may not be practical. We must not forget that our disputed territory is in the mountains. Before the operations in Kargil in 1999, a pledge had been made to reduce manpower by 50,000. Post the war, it was promptly shelved. This indicates that in the Indian geo-political context, manpower would continue to be the main pillar of providing security or what is called "boots on the ground."

From the perspective of precision guided munitions (PGMs) with normal artillery rounds, the exercise has to be in quality versus quantity. PGMs are

expensive. Ordinary artillery mortar bombs or shells are cheap. At times, area neutralisation may be the object. Force modernisation also now compels us to study the costs of quality and quantity. The high cost of rocket artillery also needs to be compared with the cost of conventional artillery. In a long duration war, industrial capacity to mass produce simple artillery for use even by conscripts must not be lost sight of. At the same time, PGMs must be procured for precision use. None can be done away with.

Richard Simpkin in his *Race to the Swift* (1985) had mentioned that major equipment has a life-cycle of 50 years. Now the cycle is shorter but mainstream equipment like artillery pieces, tanks or ships would last a long time. Thus, military equipment becomes legacy-based. Being very expensive, it cannot be discarded. Now this life-cycle has further reduced. This means upgrading existing platforms would continue to be an important art. In computers, there is the famous Moore's Law which says that computing power doubles every 18 months while cost halves and the size of the chip shrinks. This results in the need of frequent replacement. How a military balances legacy (low cost) with the latest (high cost) equipment is a challenge which needs utmost attention. Though using commercial and cheaper products is one solution, one has to weigh this against the risk of a failure due to rough handling during combat or extreme weather. Also, our formations, deployed in high altitudes, may have to redeploy in deserts or their opposite. Who will be accountable for equipment failure if it is not ruggedised to meet these climatic conditions?

General Staff Qualitative Requirements

With the bulk of the army's equipment is still based on imports (like the 155 mm guns, advanced rockets, surveillance system, main battle tanks, and so on) a national problem that confronts us is regarding how we develop our own industrial base and become self-reliant. Some reasons for self-reliance in defence that are mentioned are: (a) to counter technology denial; (b) to have an independent foreign policy; and (c) to enhance the economy. However, what is missed out is the arms race in the region with potential adversaries and how knowledge is created and applied in the country. Arms inducted in Pakistan or China would obviously need a counter by India. With US aid pouring into Pakistan, it is unlikely that it will be ever be armed with inferior weapons comparable to India. Similar dynamics prevail in the Sino-India relationship. Besides arms, there is also a matching need to catch up with infrastructure in the border, by better roads, airports and connectivity.

But the central issue is creation and application of knowledge. The general staff qualitative requirement (GSQR) is one well tested method of translating the need into a weapon system. Recently, the writing of GSQR has come under scrutiny. In a newspaper article in 2009, and in a seminar on defence acquisition in 2010, the issue of why the Services write the GSQR was thrown up by civilians. The suggestion was that the task is best left to experts. This forces the military to address a key challenge: that is, the institutionalisation of education and the scientific temper in soldiers to write pragmatic GSQR.One way suggested was that each success or failure must be studied case by case to arrive at where the weakness lay, resulting in non-achievement of targets.

With technologies changing rapidly or now penetrating from the commercial field, there is a requirement in the army training and education to catch up.

How much of defence technology is taught is a moot question. Officers in general get influenced by the literature in well written journals and magazines, of the industrialised counties. Thinking to a great extent gets shaped by what is read. Thus far, it appears that it is a vicious blame game. The Defence Research and Development Organisation (DRDO) accuses the military of demanding the 'best of brochure claims' or 'asking for the moon.' They point out that imports will present a triple trap and quote: "What is developed abroad, will not suit our requirement; what is suitable, will be denied; what is not denied, will be unaffordable." The defence forces feel that DRDO has spread wide and thin and needs to focus on key technologies. Their delivery schedules as also those of the production agencies like the ordnance factories and defence public sector undertakings (DPSUs) do not inspire confidence. The civilian bureaucrats manning policy posts take decisions based on files or knowledge acquired *ex-cathedra*. By constitutional mandate, the financial pundits of the secretarial staff are more interested in expenditure management and scrutiny. In sum, rather than acquiring capabilities in a holistic manner, the outcome is a drab routine of processes and procedures.

With the aforementioned complexities, and with technologies changing rapidly or now penetrating from the commercial field, there is a requirement in the army training and education to catch up. A renewed focus needs to be given to understanding defence production, science, technology and how fundamental research is converted to applied research for production. In the field of technology integration, perhaps the Indian Army could learn from the Indian Navy. The navy's institutionalisation of shipbuilding was the driving force in having the subject

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included in the Indian Institute of Technology. Naval officers, along with their civilian counterparts, are in the driving seat in weapon design and related issues. The Indian military does not have the support of synergy of a national level initiative on artillery equipment or tanks. This is a serious drawback and modernisation demands that weapon design, production and integration also need to be understood by the military leadership by way of reorienting the education of officers and opening up select universities to undertake its study.

Challenges to force modernisation also demand innovation. A whole range of academic labour exists in advanced militaries as "Innovation Studies." The Indian experience must be captured by thinkers to identify trends, weaknesses and strengths. Defence economics may be an important topic which has now been given a fillip in the country, but that is not enough. We must remember that the final product which the military must deliver is "victory" and graphs and algorithms alone are unlikely to deliver that. Here we must encourage intellectual pursuits like regular officer training events in formations.

We also need a steady stream of the "thinking generals". However, this cult must not be based on what the US military has done or is doing, or what the North Atlantic Treaty Organisation (NATO) or the Chinese are doing. It should not only deliberate on strategy, operational art, tactics or equipment, but also the human resource of our conditions. The cult of the "thinking general" has produced a "paradigm shift". The historian of science, Thomas Kuhn, had shown in his classic *The Structure of the Scientific Revolution* (1969) as it related to scientific discoveries and breakthroughs. We use the term "paradigm shift" very loosely, but its essence is well understood. Our system needs to produce more original thinkers or even mavericks such as JFC Fuller who as commandant of the staff college got all old directing staff notes and exercises burnt in order to produce original thinking; or Orde Wingate "Chindit" who was involved like a missionary for the cause of deep penetration behind enemy lines; or Billy Mitchell who championed air power, but was court martialled for his alleged insubordination as a result; or Giulio Douhet for pioneering air power much against the normal conventional wisdom, which he challenged.

Human Resource and Its Recruitment

A fine balance of collective and individual training of all ranks has to be worked out. This is a dynamic process. Modernisation is not just procurement of weapons,

but the ability of the users to perfect their use. The right mix of live training with that of simulators has to be arrived at. The high costs of equipment and training facilities may demand more use of simulators. It is said that the Indian Army is one of the militaries training with maximum use of live ammunition with the concomitant wear and tear on the equipment. No value judgement is being made, but more study may need to be done to weigh the cost and benefits.

Gone are the days when intellectual capacity was frowned upon. But surely this should not let the officers drift away from the love and desire for regimental soldiering. A military system would also require dedicated, hard core, simple soldiers who take pride in serving with the men, are liked by them, and happily perform all routine tasks of regimental soldiering. The right type of officer and other rank recruitment has a direct relation with the labour market. With a huge population, getting soldier volunteers does not pose a problem. But in the case of officers, there is a glaring shortage in the younger and lower ranks. With complex weapons systems and systemic warfare, a proportion of aspirants must be from the brightest strata. But due to globalisation and rising expectations, the market forces tend to lure the youth away from the military. In one way, it could be said that there is less militarism in the society. The challenge, thus, is to motivate the right material to join the forces, and sustain their motivation. Another way is to tap the right and trainable material and nurture them for the military profession. This may be more expensive. The latter option or Plan A needs to be studied seriously. Presently, the Combined Service Examination of the Union Public Service Commission, followed by the Services Selection Board, is in English. This leaves candidates who lack a good working knowledge of English at a disadvantage. Most of the potential candidates of rural India or urban centres are then eliminated due to this asymmetry. What is being suggested is to allow intake also via regional languages, and then train them at the academy. This may mean that we revert to Class X for the intake and lengthen the training period. If this decision is not accepted due to fear of lowering standards, then Plan B, so to speak, may be needed. In Plan B, the aim will be to train and nurture non-commissioned officers (NCOs) and select junior commissioned officers (JCOs) to take on more responsibilities. The German Army model comes to mind where they had the best NCOs and accepted units with just a sprinkling of officers rather than lower standards. The idea is that it is better to have few good officers rather than many mediocre ones. Thus, both Plans A and B need to be deliberated upon.

Concluding Observations

In the 1970s, Gabriel's and Savage's book *Crisis in Command* was widely read and quoted. It showed how the US military had a number of suicides and cases of fragging (killing of leaders by subordinates) in Vietnam. One reason was that officers were ticket punching careerists who were rotated within units on combat. There was no regimental bond or *espirit de corps,* and there was low morale. The Indian Army was justifiably proud of the threshold of resilience and tolerance in our troops, as things like fragging were rare. Now we ourselves are its victims. It is surprising that no in-house workshop or seminar has been held on this vital human resource topic so far in any national think-tank dealing with security. We can no longer blame politicians or bureaucrats for the problem. An easy solution is to lay the blame on societal neglect and proliferation of mobile phones to operational areas. Now, on getting real-time bad news, the Indian jawan commits suicide. Seasoned soldiers will not buy this story. Let us not forget that for years, troops during World War II never even got leave. Also, as our troops were fighting in Jammu and Kashmir (J&K), partition had unleashed mass migration in North India, yet troops hailing from the region never committed suicide. This factor is a challenge for which we do not require foreign vendors or any qualitative requirements. A recent batch of officers who underwent half a year pre-release training at the Indian Institute of Management (Ahmedabad) were taught how to deal with humans. The challenge to force modernisation is to question how the military that pioneered leadership and management concepts, is now being tutored by civilian professors. While the rapid pace of commercial off-the-shelf technology like information and communication technology is worth learning and adapting from, in human resource management, we need to get back to simple and pure regimental soldiering. The old generation should not be "horrified" to learn that no franking of letters is now done by young officers, nor do the old fashioned pay parades take place where one could at least pay-cum-carry out a quick interview of the jawan who popped up from various administrative details. It is doubtful if even one-fourth of unit strength can be mustered for *sainik sammellans*, physical training, games or roll calls.

Force modernisation does not mean that we relegate true regimental soldiering to drudgery. Perhaps we may like to emphasise an old truth that what is required is strength of character over intellect. How to bring this about, no doubt, is a challenge. This has been a brief survey of some issues and the steps that need to be addressed. A military has to keep itself updated constantly and systematically. The above drivers of force modernisation may need more deliberation. The challenge may well be to institutionalise the process of thinking soldiers and generals.