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Shivane, A. B.

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Restructuring for India's Disputed Borders: An Appraisal

A.B. Shivane

Abstract

In the present geopolitical melee, the tools of strategic coercion and conflicts are finding new ways to achieve the desired end. The need today is to restructure and reshape a 'big war military with smart, lean, agile and combined arms joint warfare smart capabilities'. India's military strategy must focus on 'offensive domination with manoeuvre warfare orientation rather than attritionist ground holding mindsets. The restructuring philosophy will accordingly need to focus on a 'capability-based approach with deterrence based on denial'. The operational need is to move from large bulky formations to modular technology-enabled networked Brigades and Divisional sized Integrated Battle Groups (IBGs). The challenge is to restructure in an institutionalised time-bound manner that is neither too much too soon nor too little too late.

Geostrategic Landscape and Its Implications

Titanic and revolutionary changes in the global security environment are creating geopolitical fragility at an unprecedented scale. Chinese belligerence, Pakistan's misadventure with terrorism and Talibanised

Lieutenant General A. B. Shivane (Retd) is Distinguished Fellow and holds the COAS Chair of Excellence at the Centre for Land Warfare Studies, New Delhi.

Afghanistan has cast their security challenges centred around the Asian landmass and the oceanic tides of Indo Pacific. Both the economic centre of gravity and the potential conflict zones are surely shifting towards Asia, leading to rising geopolitical competition and competing power play shaping potential conflict zones. In such a geopolitical melee the tools of strategic coercion and conflicts are finding new ways to achieve the desired end.

Forecasting the future geostrategic landscape and predicting threats would be a factor of understanding environmental scarcity, cultural and social clash, geographic destiny and the transformation of war. Yet the denominator of multi-domain conflict and strategic coercion would remain a constant. Thus, strategies and structures to fight and win future conflicts must evolve in highly adaptive, innovative, and creative ways. Nations in pursuit of their enduring national interests are accordingly restructuring their Defence Forces to be future-ready and relevant. This man dates charting tomorrow's capabilities today and a review of concepts, doctrines and structures. Business as usual is not an option nor is making yesterday look perfect a solution.

Asian Fragility and Operational Imperatives

The trio of Afghanistan, Pakistan and China has added a new dimension to regional instability which directly impacts India. Afghanistan has emerged as the new geopolitical pivot with the re-emergence of terrorism taking shape from blazing guns to illusive governance. This portends both a psychological boost to terrorism and a potential spillover effect. China's disruptive rise has altered the balance of power with its unilateralism fuelling oceanic rivalries and landmass contestations, particularly in the Himalayas. While oceanic rivalries have a multinational response mechanism, countering the Himalayan transgression is the sole domain of India's military capability. Pakistan on the other hand with its cultural and economic fault lines fosters military-led revisionism and Islamist led terrorism, fuellinganti-India

disruptive policies. Pakistan's military, economic, ideological, geostrategic tandem with China along with the Taliban power play in Afghanistan portends a collusive threat to destabilise India. Pakistan and China may have reduced the likelihood of a full-scale war but have smartly increased the salience of military coercion below the threshold of war. For India, it defines an uneasy calm before the next storm.

Ironically the semulti-spectrum conflict challenges are fast outpacing the archival structures, legacy equipment and war fighting philosophy of the Indian Defence Forces, impinging upon resilient national security architecture. The recent threats manifestation on our Western and more significantly on our Northern borders are witness to the same. The emergence of disrupting military technologies has vastly impacted the character of conflict and levying new demands on the military's organisation, training, and doctrine. The need today is to restructure and reshape a "big war military with smart, lean, agile and combined arms joint warfare capabilities". The challenge is to transform into a future-ready force, within the all-encompassing budgetary constraints and overcome mind sets of the past. The recent transformation initiative in this regard is an exigent and logical step. Yet it requires a more holistic evolutionary approach with a reviewed doctrinal construct leading to the desired force structuring. The foundational principle is that force doctrine, restructuring and modernisation are mutually reinforcing and complementary aspects of military capability building. These must keep pace with present times and cannot be old wine in a new bottle.

Revitalising Military Strategy and Review of Doctrinal Construct

India's military strategy entails managing threats on its disputed border by 'defensive holding' psyche with 'attritionist force on force application' rather than 'offensive domination and manoeuvres warfare' orientation. While the erstwhile orthodox Defensive Offensive Strategy has been doctrinally replaced by a Proactive Operations Strategy, its character and mindsets remain deeply emended in the legacy of the past. Traditional force on force attrition strategy based on wartime experience (except for 1971 East Front) and the deeply embedded counter-insurgency psyche remain retarders to imbibe the culture on manoeuvre warfare and understanding of the operational level of war. The focus must be on dominating spaces instead of universally holding ground by manpower. The concept of "Pre-emption, Dislocation and Disintegration" as the three empirical means of defeat in Manoeuvre Warfare as stated in the Indian Army Doctrine requires both greater teeth and understanding. The force structure required for their application has to be modular, lean and integrated with a potentescalatory joint force application matrix.

Traditionally the ground forces have dominated the military defensive response strategy giving secondary look to aerospace, maritime and new domains of cyber, space and information warfare. While the integrity of continental boundaries will remain primary, the importance of the maritime and aerospace domain merits due recognition. The imperative is to optimise tri-service capabilities beyond a service-centric parochial approach based on an integrated military strategy to achieve the desired ends. India must thus calibrate its military capability as an integrated and synergised application of war fighting elements in all seven mediums – land, air, sea, space, underwater, cyber and cognitive domain. Besides the Special Operations Division, Defence Cyber Agency and Defence Space Agency need greater empowerment and focus.

The operational imperative is to orient requisite combat power on the primary Northern Front while denying any gains on the secondary Western Front by in-situ forces with desired offensive reserves as part of force posturing. The internal security domain must be kept under positive control. Rebalancing, reshaping and restructuring military power towards China including maritime domain, as also the creation of centralised reserves for inter front application and out of area contingencies must thus find strategic focus.

At the strategic level, we need to review our approach to state versus state and state versus non-state threats. As a nation with disputed borders and inimical neighbours, our military must orient essentially for the state versus state conflict and adapt to the state versus non-state threats. The severity and consequences of the former are more severe and face greater capability building challenges. India for the foreseeable future will thus need to balance its force structure to counter existent threats to its continental, aerospace and maritime domain while simultaneously building military capabilities in equally critical future domains like AI, IW, Space, Cyber, etc. The counter-insurgency or state versus non-state domain must be handed over to the PMF, CAPF and state security machinery duly empowered. The Armed Forces can ill afford to dilute their focus at the cost of their primary task.

At the operational level, the need is to strategically pre-empt, dislocate and disrupt enemy forces. Pre-emption implies initiating decisive operations before the enemy does thereby dictating terms on the battlefield. Pre-emption contributes towards gaining initiative and causing partial dislocation. Dislocation implies avoiding strength and striking at vulnerability through manoeuvre thereby causing physical and psychological paralysis on the enemy. Disintegration implies breaking the organic cohesion of the enemy and striking his strategic/operational/tactical centres of gravity thereby zapping his will to resist. In the end, it's the enemy's will not just the capability that should be targeted. The tools for this will be both kinetic and non-kinetic with information warfare and technology opening new vistas. We thus need an agile, versatile and aggressive integrated force structure to pre-empt and dominate all spectrums of conflict.

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) has yet been

another pitfall in the doctrinal construct leading to repeated strategic surprise and reactive disposition of the Indian Military establishment. The prevailing fragile situation on our disputed borders mandates an integrated C5ISR networked decision support system, integrated with state-of-the-art precision targeting, as part of our joint force future capability. A Joint C5ISR Philosophy must lead to shared and dominant battlespace awareness, blurring intra and inter-service silos. It must lead to the evolution of a fused integrated layered mix of sensor grid architecture that is pervasive, persistent, survivable, and enduring. Joint C5ISR operations must also be integrated into the overall operational philosophy and war fighting doctrine and not managed or be a standalone capability.

Restructuring Philosophy and Deterrence Primer

The Indian Defence Forces in recent past have donned the path of reforms with the recent establishment of a Chief of Defence Staff (CDS), the restructuring of Army Headquarters, the creation of IBGs, and now charting the evolution of Theatre Commands. Yet, the attritionist mindsets of mass over manoeuvre continues to define the use of force as hitherto fore. Modernisation is more than only new equipment and organisation; it also involves understanding the contemporary notion of victory, and doctrinal change that allows responses along the full spectrum of conflict.

India's conventional deterrence has been repeatedly put to test in the recent past, leading to the exposure of strategic and operational voids, vulnerabilities and reactive response constructs. Theoretically, there are two fundamental approaches to deterrence- 'Deterrence by Punishment' which threatens assured retribution making it cost-prohibitive for the adversary, and 'Deterrence by Denial' which seeks to convince an adversary that the aggression would fail to achieve its operational aims resulting in strategic embarrassment. Each approach is specific to a nation's threat matrix and geography. Yet punitive response strategies are rarely effective

in wartime, and even less useful as conventional deterrence in peacetime. As conflicts pave the way to military coercion below the threshold of a full-scale war, so must the doctrinal shift be to a strategy of denial to deter an adversary's misadventure.

India's force structuring philosophy has been essentially based on the traditional 'Deterrence by Punishment and Threat cum Capability Approach' rather than 'Deterrence by Denial and Capability Bases Approach'. Thus, both borders remain turbulent with space for conflict and coercion. This is essentially a fallout of the absence of the National Security Strategy and periodic strategic security reviews resulting in a lack of an institutionalised framework. Military transformation be it cultural, processes or capabilities requires an over arching framework. Doctrines and force structures as part of military transformation can never be evolved in a vacuum. This critical void needs to be addressed.

The future restructuring philosophy will need to focus on a 'capability-based approach with deterrence based on denial strategy'. Capabilities must optimise future technology exploitation in all domains and agile force structures must deny future threats by superior operational orientation. Further at the strategic and operational level, there is a need to comprehend the two basic concepts of 'denial versus defence' and 'holding versus domination'. Denial seeks to make conflict/coercion look bad to the enemy, while defence seeks to make conflict/coercion better for oneself by stalling the aggressor. Similarly, ground holding mindset brings in reactive ethos and predictability, whereas domination brings in aggressiveness and unpredictability. This is the essence and something the Indian establishment would do well to differentiate and arm its deterrence capabilities with a denial and domination strategy.

Ideating Force Restructuring Contours

The key issues for force modernisation are force rightsizing, force reshaping and budgetary rebalancing, elaborated as under:

Force Rightsizing

Rightsizing is a proactive approach to restructure and realign its human resources to the strategic security goals and desired capabilities. In contrast to downsizing, rightsizing is intended as a long-term move to maximise combat efficiency and future capabilities of a force to minimise risks and vulnerabilities, based on future threats and desired capabilities. The objective is to develop and field a credible force that is affordable, sustainable, versatile, and technology-enabled to deter and defeat potential adversaries, across the entire spectrum of conflict. Thus, force optimisation must reshape the Army with a quantitative and qualitative jump in teeth-to-tail ratio, modernisation impetus and joint force operations application. There is a need to address organisation inertia in rightsizing headquarters, as also adding teeth to combat echelons to fight and win future wars. This should also include optimisation of rapidly increasing civil manpower of MoD and monolithic civil establishments paid out of the defence budget. This flab remains protected and kept under the carpet.

Force Reshaping

The Defence Forces should modify their structures to achieve a 'lean and mean profile, with the thrust to convert some existing structures into 'smarter' technology-enabled ones. Reorganization of infantry units to reprofile the fourth company to an SF company with an integral sniper platoon, a mix of medium and light mechanised forces with integrated attack helicopters, multi-tier integrated air defence systems, reprofiling selected artillery units with long-range precision fires, induction of Drones/UAVs, UCAVs, restructuring existing intelligence staff to ISR and IW structures, and reorienting additional signal units to electronic warfare assets are some of the plausible deliverables. Analysis of the future security scenario has also thrown up the need for a rapid reaction joint force requirement with enhanced vertical lift and amphibious forces

capability, besides giving greater teeth to the existing joint force structures for Special Forces, Cyber and Space. While the aspects of strategic and operational mobility have been addressed by the induction of C130 and Chinook's, the tactical mobility merits greater focus with the introduction of light tanks, Armoured Personnel Carriers (both track and wheeled) and tactical lift vertical capability.

Budgetary Rebalancing

To be sustainable and with desired operational capabilities, the present force levels need to be optimised initially to progressively generate a revenue: capital ratio of 60:40 ratio. The ratios will only matter and make a difference provided matching budgetary support is assured. The defence budget must be gradually increased from current levels of all-time low to the closing of the world average of 2.5 per cent of GDP. Defence budgetary reforms must also be pursued in right earnest, complementing the military transformation effort.

Future Force Structure Goals and Doctrinal Construct

The operational effectiveness of a force depends on its 'Deployability' in terms of strategic, operational and tactical mobility, 'Employability' across the entire spectrum of conflict and 'Capability' to ensure combat overmatch. Sustainability dictates its operational reach and acceleration. Thus, the aim is to deliver an agile, integrated, sustainable, operationally-mobile combined arms capability to dominate the key operational factors of "Time-Space-Force-Information".

The core operational goals offorce restructuring include the following:

- Rapidly deployable, lethal, survivable and manoeuvrable (Joint and Special Forces) with sufficient combat effectiveness.
- Networked organic C5ISR systems.
- Stand-off strike capabilities, and PGMs.

- Dominant Battle space Awareness and Decision Dominance of OODA loop.
- Modular and scalable organisations with flexible command architecture.
- Desired intrinsic operational reach and endurance.
- Innovative human resource with offensive orientation.

While the doctrinal construct of the desired force structure must entail the following:

Surface to Space Continuum

To achieve knowledge dominance, precision effects and operational speed, the land forces must graduate from their traditional two-dimensional spatial orientation to a vertical and cognitive integrated third-dimensional manoeuvre. A "surface to space continuum" as an operational manoeuvre must result in a multi-dimensional force application from the surface through the exosphere into space. The vertical component must include high altitude long-duration UAVs, UCAVs and airborne cum space satellite systems for ISR, SATCOM and PNT (positioning, navigation and targeting).

Graduating from Jointness to Interdependence

The level of interoperability and complementarity between land, sea and aerospace must achieve the desired speed, economy and operational acceleration. This will result in precision fire and dominant manoeuvre in near-simultaneous applications across the entire battle space and beyond. The challenge lies more in silos mentality and service-centric mindsets.

Modular and Scalable Force

Time is the enemy of the force that depends on knowledge and tempo for effectiveness. Traditional monolithic forces of the past were inadequate for the desired mounting and execution tempo. Thus, force application must be in an escalatory matrix by modular and scalable forces while in situ forces with inherent reserves provide the immediate preemption capability. These forces need to be technology-enabled, modular, scalable and tailor-made based on a mission-oriented grouping. They should combine a higher degree of agility, lethality, and survivability, yet be more rapidly deployable and intrinsically sustainable than the traditional force structure.

Combined Arms Integrated Force Structure

What makes combined arms manoeuvre more potent than the sum of physical employment of multiple arms on the battlefield is its cumulative and complementary effect. This targets the enemy's will and ability to resistor respond effectively. The key to forcing constitution would essentially be based on intrinsic combat, combat support and logistics elements including Attack Helicopters, UAVs, Air Defence, Artillery and C5ISR capability. However, their combat effectiveness would be a factor of rapid deployment ability, integrated training, interoperability, complementary capabilities, and the competence of commanders to synchronise their effect.

Technology Empowerment

The mantra is quality over quantity and capability overcapacity. The requirement is for knowledge-based, decision-oriented and technology-empowered lean and agile forces to execute missions faster and with greater effect. Technology has also empowered smaller brigade-sized forces to execute missions faster and with greater effect, previously thought suitable only for divisions.

Empowered Leadership and Directive Style of Command

Knowledge of joint force application and technology exploitation of battle space will result in decisive outcomes. Risk-taking, audacity, creativity and offensive orientation are essential for success. Thus, along with restructuring, we must focus on moulding competent leadership with a directive style of command and traits such as innovative solutions and nonlinear thinking. Future commanders need to fight smart and not allow predictability and set-piece operations to stall the tempo.

Force Modularity Dynamics

The operational need is to move from large bulky formations to many modular networked brigades sized IBGs capable of escalatory application both for domination and offensive. Yet the quest for IBG must not result in the euphoria of mass conversion of all organisations into brigade-sized IBGs. Due prudence must be exercised to have a healthy mix of modular and scalable IBGs as light (Brigade sized) and Medium (Division sized) structures. The orchestration of operations and interplay of forces will still require a Corps HQ duly sized and kitted with operational fires and command and control means. The Brigade sized IBGs must include the under mentioned ability.

- Generate superior mounting tempo and speed of deployment.
- Pre-empt, partially dislocate and disrupt enemy forces.
- Seek and retain initiative with an overwhelming rate of execution tempo.
- Create conditions for the next level of escalatory application of forces as part of shaping operations.
- Be capable of force infusion and extend operational reach cum acceleration.
- Be self-sustained and ability to fight dispersed.

Force Application Matrix and Invigorating Deterrence

Western Front

On the Western Front, the Pivot Corps Integrated Battle Groups (IBGs) suitably constituted at Brigade or in some cases Divisional level must

pre-empt the enemy through multiple ingresses resulting in partial dislocation up to tactical depth. This creates conditions and multiple opportunities for decisive operations by Strike Corps Division level IBGs, in an escalatory continuum, to dislocate and degrade the enemy's operational and strategic reserves. Simultaneously, air power, vertical envelopment and operational fires are used for disruption and disintegration of the enemy's centres of gravity. In keeping with the timesensitivity of conflict, periodic conflict termination profile needs to be planned in various operational cycles with built-in surge capabilities and matching logistics.

Deterrence against Pakistan requires more teeth particularly in long-range precision operation fires and stand-off strike capability for preemptive strikes, particularly against its proxy war posture. A response that results in a status quo outcome will be a victory for Pakistan. The tit for tat and number game of kill ratios must be replaced by more lethal and preemptive force applications addressing both the psychological and physical domain. It's time Pakistan is made to react to India's pre-emptive cum proactive overt and covert actions, borrowing the traditional deniability of Pakistan. An irate and fanatical Pakistan would not understand any other language.

Northern Front

On the Northern Front, Brigade sized in-situ IBGs would deter, pre-empt, deny, dislocate, degrade and limit the adversary's offensive design while the sectoral reserve IBGs as Rapid Deployment Force would contribute to Quid-Pro-Quo gains. It needs to be understood that manoeuvre warfare and the three means of defeat elucidated are as relevant in the mountains as in the plains. In addition, certain centralised IBGs reserves on both the western and northern front could act as dual-task formations or strategic reserves for any exigent operational situation, including amphibious

operations and out of area contingencies. Deterrence against China is a more challenging form of credible denial with the present asymmetry. It must entail an offensive defence strategy along with in situ limited offensive pre-emptive capability along with standoff precision capability. This would dilute China's offensive capacity by forcing him to divert resources to his defence, taking the war to the enemy's territory and increasing the political cost of aggression. A sample of what was done at Kailash range recently. This would cause strategic embarrassment and be a de-facto defeat to the aggressor. China's response must also be physically and psychologically constrained by multilateral and bilateral cooperative security partnerships.

The Pace of Change

Adapting to change is always difficult but failure to adapt can be catastrophic at the cost of lives and military defeat. Managing change has its dynamics an evolutionary gestation period be it a political, economic or military revolution. Rightsizing, reshaping and restructuring military forces too fast can result in immature outcomes and inappropriate capabilities. It can also threaten doctrinal and organisational cohesion and set in a transitional instability. Further, it requires an institutional approach and understanding of its evolution and desired effect. Adaption must create incentives among stakeholders and thus have grassroots level acceptability which is best progressive. The challenges of fixated mindsets, institutional conservatism, military-political-bureaucratic harmony and budgetary penury are traditional retarders that need to be addressed. The challenge is to restructure in a progressive time-bound manner that is neither too much too soon nor too little too late. This calls for an institutionalised long-term perspective with a definitive time-sensitive road map for the short term, mid-term and long term, based on a value, vulnerability, afford ability and operational priority.

References

- Arzan Tarapore (2020), "The Army in Indian Military Strategy: Rethink Doctrine or Risk Irrelevance", Carnegie India, August 2020. Available online at https://carnegieendowment.org/files/Tarapore_Ground_Forces_in_Indian_Military.pdf, accessed on 25 August 2021.
- M. Shane Smith (2003), "Military Force Restructuring", Beyond Intractability, October 2003. Available online at https://www.beyondintractability.org/essay/force_restructuring, accessed on 30 August 2021.
- James N. Miller (2020), "Reshaping the U.S. Military with a New Force Planning Construct", CNAS, October 2020. Available online at https://www.cnas.org/publications/ commentary/reshaping-the- u-s-military-with-a-new-force-planning-construct, accessed on 1 September 2021.
- Jack Watling and Justin Bronk (2019), "Strike: From Concept to Force", RUSI, June 2019. Available online at https://rusi.org/explore-our-research/publications/occasional-papers/strike-concept-force, accessed on 1 September 2021.
- Major Brian D, Jones (1996), "Force XXI: What Are the Risks of Building a High Tech, Narrowly Focused Army?", May 1996, United States Army Command and General Staff College Fort Leavenworth, Kansas.
- Lieutenant General A B Shivane (2019), "IBG: Powering the Future Ready Force", Synodos Paper, Vol. XIII, No. 2, CENJOWS, March 2019. Available online at https://cenjows.in/upload_images/Synodos/pdf/IBG%20%20Powering%20the%20Future%20by%20 Lt%20Gen%20AB%20Shivane,%20PVSM,%20AVSM,%20VSM%20(Retd).pdf, accessed on 3 September 2021.
- Lieutenant General A B Shivane (2018), "Linking Force Sizing Decisions to Future Capability Outcomes", SPL and Forces, Issue 4. Available online at https://www.spslandforces.com/story/?id=533, accessed on 4 September 2021.
- Lieutenant General A B Shivane (2020), "Deterrence Paradox Northern Borders" CENJOWS, 21 July 2020. Available online at https://cenjows.in/upload_images/pdf/Deterrence-China-by-AB-Shivan-(Retd)-on-18-Jul-2020.pdf, accessed on September 2021.
- Lieutenant General A B Shivane (2021), "Indian Military Strategy And Deterrence Paradox", August 2021. Available online at https://www.raksha-anirveda.com/indian-military-strategy-and-deterrence-paradox/, accessed on 5 September 2021.
- Lieutenant General A B Shivane (2020), "India's security challenges", OPOYI, December 2020. Available online at, accessed on September 2021.
- Lieutenant General A K Singh and Lieutenant General Raj Shukla (2020), "Changing Nature of Conflict in the 21st Century", in AK Singh and BS Nagal (eds.) Military Strategy for India in the 21st Century, New Delhi: KW Publishers.
- Lieutenant General Vijay Oberoi (2008), "Need for Holistic Restructuring of the Indian Military", IDSA, Summer 2008. Available online at https://idsa.in/jds/2_1_2008_NeedforHolisticRestructuringoftheIndianMilitary_VOberoi, accessed on 5 September 2021.

- Stuart Johnson, et al. (2012), A Review of the Army's Modular Force Structure, Santa Monica, CA: RAND Corporation.
- Deepak Sinha (2021), "Rebooting the Indian Army: A Doctrinal Approach to Force Restructuring", Observer Research Foundation, February 2021. Available online at https://www.orfonline.org/research/rebooting-the-indian-army/, accessed on 6 September 2021.
- Brigadier V Mahalingam (2019), "Restructuring the Armed Forces Professionally Speaking", Vivekananda International Foundation, October 2019. Available online at https://www.vifindia.org/brief/2019/september/09/restructuring-the-armed%20forces-professionally-speaking, accessed on 7 September 2021.

