

Future Challenges for the Army 2030

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The last decade has been a disorienting period for the Indian Army. While land borders with Pakistan and China remain unsettled, the Army's core competency—conventional land warfare—has been increasingly constrained by the maturation of Pakistani nuclear capabilities and Indian leaders' prioritisation of stability. While much-publicised ground raids into Myanmar and Pakistan have put the Army at the heart of conventional deterrence, supplanting the Air Force as the presumptive instrument of first resort, these operations have employed a small and atypical subset of the organisation, and cannot yet be said to have had strategic effects. Modernisation in the combat arms has been slow and halting, with growing competition for resources from the capital-hungry Navy and Air Force. Despite unquestioned civilian supremacy, civil-military relations have grown more acrimonious, tensions between veterans and the government have grown, and intra-Army disputes over promotions and appointments have spilt over into the courts.¹ What does the future hold for the Army, what are its challenges, and how can it best address them?

Priority Missions

Barring a breakthrough in diplomacy with Pakistan or a fundamental change in Beijing's view of New Delhi, primary threats will remain insurgency and terrorist activity, Kargil-like efforts to revise borders or control of territory, and conventional military attacks arising from other scenarios such as a Pakistani ground response to Indian air strikes. The Army's priorities will therefore remain territorial defence, conventional deterrence, and counterinsurgency. The most significant changes to the Army's doctrine and structure—the evolution of a “proactive” strategy colloquially known as Cold Start, and the raising of a mountain strike corps—have been driven by the second of these. However, the recent decision to have an infantry general supersede two mechanised forces' officers in the appointment of army chief indicates the continued importance of counterinsurgency to political leaders, not least during what could be a long phase of unrest in Kashmir.² It is likely that these will remain the priority missions for the foreseeable future.

Secondary Missions

In addition to these three central missions, the Army increasingly faces a wider set of secondary tasks. In December 2015, Prime Minister Narendra Modi told the Combined Commanders

Conference that “our responsibilities are no longer confined to our borders and coastlines. They extend to our interests and citizens, spread across a world of widespread and unpredictable risks”.³ The Army lags behind the other services in its embrace of out-of-area operations, but a growing Chinese presence in the Indian Ocean littoral, particularly Pakistan and Djibouti, may increase the salience of amphibious and other expeditionary forces. Other secondary tasks include humanitarian and disaster relief (HADR), which has acquired an overt element of regional competition and international prestige, and which includes large-scale evacuation of Indian nationals from unstable areas. Again, these secondary missions will likely remain stable over the next decade.

India's Way of War

India, informed by history, has shunned formal military alliances and is likely to continue doing so. India is highly likely to fight alone in its border wars. However, India's growing defence partnership with US, its deepening interest in the security order in the Western Pacific, and its self-identity as a “net security provider” mean that the Indian Army is called upon to play a role in a future military coalition. India's heavy involvement with UN peacekeeping operations provides some experience in this regard.⁴

Priority	Threats/interests	Example
Higher priority		
Territorial defence	Revision of borders	Kargil
Conventional deterrence	Terrorism, conventional war	Post-Uri strikes
Counterinsurgency	Insurgency, terrorism	J&K, Assam
Lower priority		
HADR	Regional influence	Op. Maitri (Nepal)
Out-of-area operations	Regional influence, peacekeeping	MONUSCO (Congo)

Force Structure

What is the Army's current force structure, and what might that force look like in the coming years?

Core skills

Both modern warfare and its political context are changing. Military technology is rendering the battlefield more transparent, units and platforms are better networked (but also more vulnerable), and norms against large-scale conventional warfare are driving the use of hybrid, less overt methods of coercion and compellence. At the same time, the fundamentals of land warfare have not changed.

Stephen Biddle has shown that military capability depends ultimately on proficiency with cover, concealment, dispersion, suppression, small-unit independent manoeuvre, and combined arms.⁵ Caitlin Talmadge argues that these skills require merit-based promotion, rigorous and frequent training, and decentralised, unified, and clear command.⁶ The Indian Army enjoys considerable autonomy in these areas, with the exception of mid-level and senior promotions.⁷ However, a shortage of over 9,000 officers is likely to impact the quality of junior leadership.⁸ Recent reductions of officers' status relative to civilian counterparts, along with rising private sector salaries, may compound this problem.⁹ Building out an augmented quality force structure, however, takes significant time and it is likely that the current structure of the Indian Army will persist for the next decade.

In addition to these core skills, the Indian Army also requires sufficient numbers and quality of arms in core combat branches: infantry, artillery, and armour. Each of these areas is undergoing a belated, gradual, and uneven process of modernisation. This has significant implications for the Army's future operational capacity.

Infantry

Infantry modernisation began over a decade ago with the 'Future Infantry Soldiers As a System' (F-INSAS) scheme for lighter and better-equipped forces, has since broken up into separate parts for equipment and communication.¹⁰ Progress has been extremely slow. Bulletproof jackets approved in 2009 arrived only seven years later, in late 2016, leaving the Army to operate with half the required quantity in the interim.¹¹ The Defence Research and Development Organisation's (DRDO) \$7-8 billion replacement carbine and assault rifle programme has been beset with problems such as delayed trials, slow negotiations, and cost overruns.¹² DRDO's latest effort, the Excalibur, is being "provisionally" inducted¹³ but has been widely criticised¹⁴ and, according to a senior Indian Army official, "does not have any future".¹⁵ In 2014, senior Army officers described infantry modernisation as "delayed by six to seven years", almost exclusively because of the Army's inability to formulate qualitative requirements (QR).¹⁶ If these institutional failings at the Army, ministry, and governmental levels go unaddressed, infantry capabilities are likely to remain an issue of concern into the 2020s. This is especially concerning because the rate of Pakistan and, particularly, Chinese infantry modernisation is quite significant.

Artillery

India has only a tenth of self-propelled artillery it requires, a shortfall of 1,600 guns across all types, and widespread obsolescence in existing inventory.¹⁷ India's towed, wheeled, and self-propelled guns have subject of drawn-out procurement and manufacturing efforts.¹⁸ These are now yielding fruit, with 80 per cent of the Army's capital budget dedicated to artillery in 2016.¹⁹

Six Indian-built 35km-range Dhanush howitzers have been inducted and deployed in Siachen and Rajasthan—the first new artillery guns in three decades, since the 1980s vintage Bofors-with 114 more approved for manufacture in June 2016.²⁰ In November, India finalised a \$700 million deal with US to buy seven regiments of the M777 ultra-right howitzer, with 20 guns delivered within two years and the remaining 120 to be assembled in India over the next four to five years.²¹ Their weight, permitting carriage by Chinook, makes them particularly suited for the new 17 Corps, India’s fourth strike corps and the first intended for mountain terrain. Finally, India is likely to induct around 100 self-propelled 155mm K9 Vajra-T, a modified Samsung K9 with about 50 per cent indigenous content, over the next three years.²² This would rectify a perceived imbalance created by the US sale of self-propelled artillery to Pakistan in 2009.²³ The 45km-range Advanced Towed Artillery Gun System (ATAGS) is an earlier stage, with firing trials in December 2016.

These efforts should also be considered alongside progress in building and acquiring both indigenous Multiple Launch Rocket System (MLRS) and multiple regiments of the short-range BrahMos cruise missile. Some of these systems should be available to the Indian Army in the coming years, but the challenges of equipping and procuring a modern force will remain.

Armour

The future of Indian armour is similarly in flux, with tension between indigenous and imported systems, and deeper questions around the optimal balance between protection and mobility in India’s likely theatres of conflict. While the T-72 remains in service, deployed in greater numbers to Ladakh over the past few years, the pillar of armour modernisation is the indigenous Arjun Main Battle Tank (MBT) and license-built Russian T-90S MBTs. As of 2016, India had produced less than a quarter of the 945 T-90s ordered by the Army.²⁴ Over 400 further T-90s were ordered in November.²⁵

The Arjun Mark 1 has not been cleared for combat because of its weight, and three-quarters of the fleet was grounded as of mid-2015 because of technical problems with the transmission system, targeting, and thermal sights, as well as a shortage of imported parts.²⁶ As many as 118 lighter and more advanced Mark 2 variants have been cleared, but the Army has requested international proposals for a Future Ready Combat Vehicle (FRCV) to be inducted in 2025-27. This could circumvent DRDO and undermine the future utility of the Arjun tank.²⁷ Arjun’s defenders point out that it has out-performed the flagship T-90S in trials while critics in the Army criticise its inability to fire anti-tank guided missiles (ATGMs) through its main gun²⁸ as well as its inability to cross some bridges owing to weight.²⁹ The future of Arjun is likely to be a bellwether for indigenous modernisation.

Platform	Old	New
Assault rifle	INSAS (1990s-2000s)	TBD
Ultra-light artillery	?	MH77
Towed artillery	FH-77B (1980s)	Dhanush, ATAGS
Self-propelled artillery	M-46 (1980s)	K-9 Vajra
MBT	T-72 (1980s)	T-90, Arjun, FRCV

But even if it is a success, India is not procuring tanks in sufficient numbers to open up a militarily meaningful gap over Pakistan—if such a gap could be exploited under nuclear conditions at all.

Doctrinal Developments—Where India is and Where it can Go

These are India's capabilities and force structure, but what are the challenges in how it might be employed? That is, what is India's current Army doctrine, how did it get here, and where can it go in the next decade or so? The fundamental political issue driving the security competition between India and Pakistan is that the latter continues to have a revisionist political agenda towards the former. Pakistan has used both its covert, and then overt, nuclear weapons capabilities to more aggressively pursue that agenda.³⁰ While India desperately tries to escape entanglement between conventional and nuclear doctrine, Pakistan races to more deeply intertwine the two as a deterrent to Indian conventional action. This is the fundamental doctrinal challenge facing the Indian Army, and has been for decades, with variation on the same theme.

Indeed, India and Pakistan are presently in their third cycle of conventional nuclear dynamics. Even prior to testing nuclear weapons in 1998, Pakistan used its recessed nuclear capabilities to more aggressively support insurgent and secessionist movements in India's Punjab and Kashmir.³¹ This was the first cycle in the India-Pakistan security competition under the shadow of nuclear weapons. The second cycle began after India openly tested nuclear weapons in May 1998, and Pakistan followed suit three weeks later. In that iteration of security competition, elements within the Pakistan Army attempted to directly revise the status quo by infiltrating across the Line of Control (LoC) in the Kargil sector, on the

theory that Pakistan's nascent nuclear capabilities would enable it to achieve a *fait accompli* and deter Indian conventional retaliation, particularly across the International Border (IB).³² A delayed, but ultimately effective, Indian conventional response limited to the LoC highlighted the risks of potential further escalation across the IB and underscored just how risky an overt Pakistani revisionist strategy could be. Force on force engagements in open terrain between nuclear powers would generate extreme and unwelcome risks.

That birthed the third cycle where the Pakistani state shifted away from the failed strategy of overt infiltration in Jammu and Kashmir to sponsoring mass-casualty terrorism in Indian cities—such as the 2001 Parliament attack and the 2008 Mumbai siege—using quasi-firewalled proxies such as the Jaish-e-Mohammed (JeM) and Lashkar-e-Taiba (LeT), on the theory that India's nuclear weapons cannot deter terrorist attacks and that Pakistan's growing nuclear inventory would deter ground-based conventional retaliation.³³

For India, the dilemma of this third cycle has been how to generate credible conventional retaliatory options—primarily Army-driven—that would punish particularly the Pakistan Army for sponsoring mass-casualty terrorist attacks against its cities, and thereby deter future support for such outrages, without approaching Pakistan's nuclear thresholds? The fundamental paradox of this condition is that any retaliation punitive enough to serve as a potential deterrent for state-sponsored terrorism would almost by definition require India to cross Pakistan's presumed nuclear redlines, especially the so-called military attrition threshold.³⁴ Through the Parliament attacks, India's mainstay conventional response centred around what is colloquially known as the Sundarji Doctrine, which envisioned massive armoured manoeuvre warfare through the plains and desert sectors of Pakistan and which would certainly, if

ever employed, risk threatening the survival of the Pakistani state. This response, which would require weeks to mobilise, proved futile as a coercive tool in the 2002 Operation Parakram.

But the lesson the Indian Army drew from its experience in Operation Parakram was not that the fundamental retaliatory concept was flawed, but that the long mobilisation time (of 21 days) for the main strike corps elements (I, II, and XXI Corps) to deploy from their peacetime locations in the interior narrowed India's perceived window for a retaliatory ground war. The Indian Army's subsequent changes to doctrine and posture became popularly known as 'Cold Start', although there is little evidence this was formally adopted by the Army, agreed with other services, or approved by civilians.³⁵ Public accounts of Cold Start suggested that it entailed breaking up the Strike Corps into eight to 10 so-called 'integrated battle groups' (IBGs, which ended up never being integrated, nor battle ready) and locating them closer to the border so that India could begin offensive retaliatory operations from a 'Cold Start' in 48-72 hours from an order to do so. The operational problem with this concept is that those IBGs, being deployed so close to the border, would be ripe targets for preemption. The logistical challenge was the grave difficulty of acquiring land for new bases. As a result, though 'Cold Start' received a lot of media hype, the Army was never keen to move away from its main operational concept of employing the existing strike corps, with I and II Corps engaging their counterparts in the Jammu and Punjab sectors, and XXI Corps conducting deeper penetration in the desert sector.³⁶

What the Indian Army instead adopted is what is internally known as 'Proactive Strategy Options', which maintains the erstwhile strike corps' concept but focuses on more streamlined mobilisation—on both the Pakistani and Chinese fronts. On the Pakistani front, this first involved reorganising the four defensive holding corps which have always

been deployed closer to the IB (IX-XII Corps). By attaching an armoured brigade to each of the holding corps, the Army converted IX-XII Corps into 'Pivot Corps', which can quickly 'pivot' from defensive to offensive operations while the three strike corps mobilise behind them. This has allowed the Indian Army to claim to the political leadership that it would be ready to initiate offensive operations roughly seven to 10 days after an order to do so. But critically, the *operational concept* of Proactive Strategy Options is no different than India's longstanding conventional strategy.³⁷

For all the talk of waging conventional war below Pakistan's nuclear thresholds, the concept still calls for I and II Corps to engage and destroy their counterparts in the northern plains sector and for XXI Corps to execute a deep strike in the desert sector. However, the Army's assumed war aims—in particular, the balance between attrition of the Pakistan Army (punishment) and seizure of territory (bargaining)—remain unclear. Indeed, the latter may inadvertently but inescapably overlap with the former, as the level of attrition of the Pakistan Army that would be required to hold sizeable pieces of Pakistani territory, particularly population centres, would certainly cross any nation's nuclear redlines, and certainly Pakistan's. A similar concept of territorial seizure and bargaining may also have informed the Indian Army's currently largest unfunded mandate: the so-called Mountain Strike Corps (XVII Corps headquartered in Panagarh), which would similarly attempt to seize territory in Tibet to use as either a deterrent to Chinese aggression, or as a bargaining chip if deterrence has failed. The Indian Army doctrine towards Pakistan and China is converging on the same concept, even though the two fronts are radically different and pose different conventional and nuclear challenges.

At the broader political level, Indian leaders' key problem, likely considered during the Cabinet Committee on Security deliberations following

the Mumbai attacks, is that the distinction between ‘limited’ ground retaliation and ‘total war’ is extremely difficult to maintain once a large-scale war commences.³⁸ This is especially so in the case of Pakistan, given its small size and the vulnerability of its population centres and lines of communication. And on the Chinese front, without the ability to surge reinforcements to a Mountain Strike Corps, Chinese forces might be in a position to significantly attrite the Indian position rather than attempt to bargain for peace. Therefore India finds itself, in this third cycle, with only marginal improvements in finding a credible punitive/deterrent conventional option.

However, the media hype around Cold Start, particularly its description as a national war strategy rather than an operational concept, has been a strategic blunder for India, as it facilitated Pakistan’s efforts to justify the expansion of its nuclear arsenal and the development of a wider array of delivery capabilities to further to entangle conventional operations with the risk of nuclear use. This was captured in Pakistan’s shift in nuclear doctrine from “credible minimum deterrence” to “full spectrum deterrence”, the latter requiring Pakistan to ‘close the gaps’ in deterring both Indian conventional and nuclear forces. At the lower end, that means developing battlefield nuclear systems like Nasr and cruise missiles such as Babur and Ra’ad to deter Indian conventional power by operationalising them as usable war-fighting instruments should the Pakistan Army be attrited by an Indian offensive.³⁹ At the higher end, that means developing a survivable ‘third strike’ of strategic nuclear forces to deter India’s (increasingly incredible) threat of ‘massive retaliation’ to Pakistani limited first use. In this way, Pakistan is betting that India would not retaliate against Pakistani cities for a tactical nuclear use on Indian forces—most likely in the Pakistani desert against, for instance, XXI Corps elements⁴⁰—not only because it would be disproportionate, but also because Pakistan would be able to hold at risk

multiple Indian cities should India retaliate. India’s inability to develop a credible—here, meaning plausibly limited—conventional retaliatory option, coupled with Pakistan’s closing of the gaps in deterring India’s conventional and nuclear forces, has essentially resulted in Indian paralysis should it suffer another mass-casualty terrorist attack on its soil. While Pakistan further entangles its nuclear and conventional operations, the Indian Army must stop deluding itself into believing that these domains are completely firewalled and that Army doctrine can be developed and implemented in isolation from India’s nuclear doctrine.

Indian leaders therefore have four options. First, they can shun overt military force, opting for diplomatic, covert, and other means of retaliation. This was the course chosen in 2008.⁴¹ Such an approach makes some sense, given the risks of escalation outlined here, and the potential impact of escalation on India’s broader economic, political, and diplomatic objectives, in relation to the comparatively modest cost imposed by terrorism. However, domestic political pressures mean that overt restraint is not a viable long-term approach. This is where future Army doctrine and posture becomes salient.

Second, Indian leaders can opt for ultra-limited ground incursions, constrained in size (sub-company level) and penetration (sub-4km). Such raids have been regular occurrences on the LoC in the 1990s and 2000s, but reached their zenith in the publicly announced “surgical strikes” of September 2016.⁴² The use of Para (Special Forces) units gives the Army an outsize role in conventional deterrence, but reduces its scope to effectively escalate to the strategic level—a far cry from Cold Start. Building up this capability so that it can perform more complicated raids and operations is a task that will take years. This might be the most plausible role for the Army but it relegates it to operations that are relative strategic pinpricks.

Third, Indian leaders may consider stand-off capabilities that do not require large-scale ground penetration.⁴³ Airstrikes are the most potent and precise of such capabilities, although a longer-term reliance on these would challenge the Army's domination of Indian military strategy. However, the Army could still play a role through the use of artillery (the mainstay of tactical deterrence on the LoC today), rockets, or its expanding tactical cruise and ballistic missile forces.⁴⁴ The use of stand-off force can of course expand into a conventional ground war, but this would have the advantage of placing the onus of escalation onto Pakistan, putting India on a credibly defensive footing, and so precluding credible Pakistani threat of even limited nuclear use. There would, however, be a risk of Pakistani stand-off retaliation against Indian military facilities and population centres. It should not be assumed that the escalation dynamics of a war confined to stand-off capabilities will necessarily favour India.

These options have implications for the Indian Army's doctrine in the years upto 2030. Should airstrikes take a more dominant role in India's repertoire of retaliatory options, the evolution of the Army's doctrine should consider how best the institution could provide support to a stand-off strategy. This would be institutionally and ideologically difficult, given the Army's historically central and paramount role in Indian wars. Furthermore, ultra-limited ground engagements are likely to grow in importance, particularly after the political—if not necessarily *deterrent*—success of the September 2016 raids. Indian leaders may also demand better options for targeting, killing, or capturing high value targets within Pakistani territory. As with support for airstrikes, this will require close cooperation between the Army and intelligence agencies, as well as enhanced investments in airlift and other specialised equipment.

While this discussion has focused on Pakistan—

India's most likely and arguably complicated adversary—India's approach to China has somewhat different constraints. While nationalist sentiments on both sides might drive escalation once a militarised dispute has begun, the risk of conventional or nuclear escalation is generally less severe than in the case of Pakistan. One reason for this is that India's probable military targets do not present a plausible existential threat to Beijing. Another is that China does not view nuclear weapons as war-fighting instruments. But if a strategy of seizure and bargaining is less risky against China, it is also militarily more difficult, given the correlation of forces and the difficult terrain. The demands on fixed-wing and rotary airlift in particular are likely to be exceptional, surpassing even the rapid pace of India's present buildup. Even if India were to develop a viable Mountain Strike Corps, the question of what piece of territory to seize, how deep, and how it could hold it against Chinese PLA reinforcements are all questions to which the answers remain unclear.

Civil-military relations

India's civil-military relations have been summarised by Anit Mukherjee in the previous iteration of this volume.⁴⁵ How do these affect the Indian Army?

First, military strategies based on manoeuvre warfare demand rapid, responsive, and therefore decentralised decision-making. While special forces raids allow for a high degree of political oversight given the limited scope of such operations, this is not so in conventional ground wars. Political leaders would have to entrust commanders with greater autonomy if strike units were to maximise opportunities for penetration and advance.

India's recent military history, notably the restrictions imposed on airpower in Kargil, and the risks of conventional and nuclear escalation,

indicate that this will not come easily. It will require political leaders' familiarity with the details and risks of war plans, an understanding of political and diplomatic sensitivities by commanders, and resilient wartime communications, especially for out-of-area operations. If war aims are unclear—whether strikes are to punish, to seize territory or bargain—mutual civil-military understanding becomes all the more crucial. Even with improvements in these areas, India's civilian dominance is likely to prove a further constraint on the types of strategies that the Army can realistically employ.

Second, while the Rafale is likely to continue a nuclear-delivery role for the Air Force, India's nuclear forces will be re-balancing away from the air-breathing leg of the triad towards the Navy-operated sea-based and Army-operated land-based legs. India's intermediate-range missiles are increasingly deployed in canisters.⁴⁶ This shortens launch times and enhances survivability; however, it also lessens the dispersal of nuclear weapon components that prevailed in previous decades and, therefore, dilutes a powerful physical means of negative civilian control.⁴⁷ But this gives the Army a major role in nuclear operations, and in the Strategic Forces Command. It presents the Army with an opportunity to better integrate conventional and nuclear doctrine—not to operationalise nuclear weapons as war-fighting instruments but to better consider how to deter lower order Pakistani nuclear use by making the threat of limited, rather than massive, retaliation more credible.

Conclusion

This chapter has provided a brief overview of the challenges facing the Indian Army's force structure, doctrine, and civil-military relations. Armies do not turn on a dime and they are big institutions, so many of the challenges that have plagued the Army thus far—shortage of equipment and innovative doctrinal thinking—will likely continue for the foreseeable future. The question is whether the Army's leadership in the coming years will be nimble and creative enough to seize opportunities to develop more credible conventional offensive options and roles against both Pakistan and China, and potentially reshape the Army to implement them. Historically, the nature of civil-military relations in India has resisted radical shifts in Army thinking—Sundarji may be the only example, but the belief that he may have almost dragged India into war during the Brasstacks crisis has led to a string of Army leaders that have more restrained ambitions for the institution. For that to change, there has to be will among the Indian political leaders to re-craft the Army for modern challenges. Even with the latest supersession of the Army Chief, it is unclear whether that will exist for a long term. Without it, the Army will likely continue on a straight-line path, strong enough to protect the country's fate, but too weak to change it.