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Changing Nature of Limited Wars: Impact of Technology and Ramifications

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Abstract

Historically, wars have been fought to achieve political objectives by employing power. The art of warfare, however, has continuously evolved, driven by doctrinal and technological advancements. Post World War II, numerous wars have been fought, all limited in scope. The current conflicts are carefully calibrated, enabled by high-tech weaponry marked by strong element of public opinion. The conventional limited wars figure in the middle of the spectrum of violence; below the level of limited nuclear war but above the sub-conventional conflict. Such wars demand high state of preparedness as these are required to be prosecuted at a short notice. Limited wars have become increasingly hybrid in character; mix of conventional and unconventional, in certain situations under looming nuclear shadow. Disruptive technologies, like the 'Internet of Things' (IoT), 5G, Nano Technology, are set to play a major role in shaping the nature of warfare and deciding the outcome of operations. Chinese revised military doctrine envisions fighting and winning local wars under 'Informatised' and 'Intelligentised' conditions, in conjunction with 'Grey Zone Warfare' (GZW) strategy. Pakistan's strategy of 'limited war' is India centric, hybrid in character. The western nations have also reviewed the war fighting doctrines, deviating from the trend of

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extended campaigns on foreign lands. India is facing multiple security challenges; proxy war by Pakistan, and GZW by China. Given the emerging nature of future wars, India needs to shed its conventional strategic model and adopt transformational approach; this includes formulation of 'limited war doctrine', 'organisational restructuring' and 'capacity building' to ensure war prevention through deterrence. The wars of 21st century may take multiple forms wherein a soldier will be equipped to fight as entity-optimising the man-machine interface. India has to be fully prepared with techno savvy armed forces to fight and win the future 'hybrid-high tech' limited wars.

Introduction

Historically, the wars have been fought to achieve political objectives by employing power, compelling the adversary to yield. As per Carl Von Clausewitz, "Each age had its own peculiar form of war". Hence, the art of warfare has continuously evolved, influenced by the politico-socio dynamics, driven by new doctrines and advancements in technologies. The traditional ways of war fighting, designed to capture territory and annihilation of war waging potential of the adversary have undergone metamorphosis. Today, the distinction between war and peace stands blurred. David Halberstam has described the current conflicts as 'war in time of peace', carefully calibrated, enabled by high-tech weaponry, with strong element of public opinion.¹

Last century witnessed numerous wars of varying characteristics, starting with World War I. It got labelled as a great war, given the intensity and quantum of resources committed; root cause being the contest between status quo power and the rising one. Soon the World War II followed, involving far larger geographic space and scale of destruction. During the Cold War period, numerous wars were fought in Asia including the Indian subcontinent. These were all limited in scope with superpowers playing a key role, either directly or by proxy. Post the Cold War, West Asia was the scene of limited conflicts. Currently, we are witnessing limited war in Ukraine as a result of the Russian invasion in February 2022.

War still remains a legitimate instrument of state policy while the very concept of security stands redefined as external and internal dimensions, alongside the non-traditional threats, have got closely interwound. Limited localised conflicts have become the new norm. 21st Century is characterised by disruption attributed to hyper pace of change. Military domain is witnessing new doctrinal concepts with 'state-of-the-art' technologies proving to be the game changers in shaping the very course of war. In today's international milieu, it is the 'balance of interest' which overrides every other consideration. Comprehensive National Power (CNP) of a nation determines its war-waging potential. War prevention has gained pre-eminence, wherein capacity building and capability demonstration are the key elements to achieve credible deterrence. This article analyses the changing nature of wars, impact of cutting-edge technologies on the character of warfare and its ramifications.

Changing Nature of Limited Wars

The conventional limited wars as per John C Garnet, figure some where in the middle of the spectrum of violence; below the level of limited nuclear war but above the sub conventional conflict.² While waging limited war, the adversaries engage each other through graduated military responses, exercising mutual restraints, obviating destruction to achieve a negotiated settlement on favourable terms. While the basic nature of war remains violence and destruction, the character of war has continuously evolved.³ Limited wars demand high state of preparedness as these are required to be prosecuted at a short notice. In view of the speed and complexity of operations, there is an overlap between strategic, operational and tactical dimensions of warfare. Hence, speedy decision-making process requires decentralisation and flatter organisational structures. This mandates high degree of civil-military structural fusion for effective execution of 'higher direction of war'.

The 'limited wars' have become increasingly hybrid in nature, mix of conventional and unconventional, characterised by uncertainty in terms of timing and location; in some cases, in the shadow of nuclear overhang. In fact, sub-conventional conflicts have acquired prominence, wherein identifying the adversary itself poses a challenge. The age of information warfare is marked by network centricity and fluid nature of operations. This requires

high-tech multi skilled forces capable of preventive deployment, pre-emptive strikes, conventional war fighting, counter terrorism, and peace keeping operations; in nutshell fighting efficiently across the entire spectrum of conflict.

Emerging Battlefields-Impact of Disruptive technologies

Given the tri-Service nature of warfare characterised by simultaneity, the battlefields have become non-linear with compressed time and space, requiring high degree of situational awareness. In view of greater transparency, strategic deception becomes an imperative. The networks designed for 'sensor to shooter' capability, alongside high precision weapon systems, have resulted in swift and intense engagements. Effect Based Operations (EBOs) entail achievement of strategic outcomes by applying physical, cognitive, and informational methods against the adversary.

Technology plays a major role in shaping the nature of warfare; a key determinant of military superiority. Some technological breakthroughs being extremely overwhelming are referred to as 'Revolutions in Military Affairs' (RMA). In 21st Century, it is the advancements in the disruptive technologies and their effect on the ways of war fighting that are proving critical in deciding the outcome of operations. The disruptive military technologies can be categorised either 'revolutionary' or 'transformative'. The revolutionary technologies can be further classified under two sub sets of RMA:-

- 'Information and Communication Technologies' (ICT) are based on 'Network Centric Warfare' (NCW) and 'Information Operations' (IO). The NCW leverages own networks and applications for enhancing the combat potential by telescoping 'Observe-Orient-Decide-Act' (OODA) loop. IO, on the other hand, aims to achieve information dominance and significantly shift the arena of conflict from the physical to the information and cognitive domains. ICT includes space segments and those elements which enable Cyber Space Operations (CSO) and Electronic Warfare (EW).
- Looming 'Artificial Intelligence' (AI) and RMA i.e. combination of AI and robotics technologies is widely believed to be harbinger of next stage of RMA in the coming decades. AI

powered 'Autonomous Weapon Systems' (AWS) will lend new dimension to the 'Non-Contact Warfare'. AI in 'Intelligence, Surveillance, Reconnaissance' (ISR), together with 'decision making and war gaming', will enormously improve the quality of OODA loop and AI in CSO, thus, taking war fighting in Cyber Space to a whole new level.

There are numerous other technologies which are anticipated to have transformative effects on war fighting in the coming times. 'Internet of Things' (IoT) and 5G are envisioned to give a further boost to 'Nuclear Chemical Warfare'. Hypersonic and 'Directed Energy' (DE) weapon systems will necessitate review of operational concepts in the employment of missile defence and 'Anti Satellite Weapon' (ASAT) systems. Quantum technologies, with applications in communications (both encryption and cryptanalysis) and sensing, are envisaged to lead to disruptive effects on secure communications and stealth systems. Nano and biotechnologies are anticipated to have limited impact in the near and medium terms may result in transformative or even revolutionary effects in the long term.

China has initiated radical military reforms to enhance capabilities of People's Liberation Army (PLA) since 2013, after President Xi Jinping came to power. Its revised doctrine envisions "fighting and winning local wars under 'Informatised' and 'Intelligentised' conditions". While 'Informatised' warfare has the Command, Control, Communication, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) as the main driving force, AI is at the core of the 'Intelligentised' warfare.⁴ It is premised on the fundamentals of 'human-machine teaming' and AI. Salient features of China's military modernization to fight and win 'high-tech local wars' are:

- China is amongst the top tier of nations to develop disruptive technologies, such as big data, cloud computing, IoT, quantum, nano, hypersonic and DE weapon technologies, as a national priority. It is probably China's response to the 'Third Offset Strategy' of US, announced in 2014, which seeks to maintain its supremacy. China's 'New Generation AI Plan' was formalised in 2017.
- The Chinese war fighting doctrine envisages short and swift engagements, targeting opponent's will. The conventional

doctrine is complemented by China's concept of 'Unrestricted Warfare' (UW) which meets the criteria of 'Grey Zone' conflicts. It is in sync with the Chinese concept of 'strategic configuration of power-Shi; where aim is not annihilation but relative positioning of resources to gain advantage.⁵ The underlying rationale is to target the opponent by employing alternative means i.e. politico-diplomatic actions, economic clout, cyber warfare, and incorporation of 'Non-State Actors' (NSAs).

- The future warfare as per Chinese strategists will be largely non-contact and non-symmetric. Recent addition to PLA's GZW strategy is 'Three Warfare's' concept which encompasses psychological, propaganda and legal warfare's. It has been formally incorporated in PLA's education and operational planning.⁶ Chinese assertiveness in the East China Seas, South China Seas, and, on the LAC are the most notable example of GZW operations.

Pakistan's strategy of 'limited war' is primarily India centric, hybrid in character, unconventional warfare being the preferred option; case in point is the ongoing proxy war against India. However, should conventional operations become unavoidable, its limited war doctrine perceives short swift engagements, characterised by offensive-defence. It entails fighting multi-dimensional war in conventional and asymmetric spectrum in the realm of credible nuclear deterrence. Pakistan's force modernisation is driven by the necessity of creating lean, 'state of art' conventional force structures with Command, Control, Communications, Computer, Intelligence and Interoperability (C4I2) set up, complemented by missiles and Precision Guided Munitions (PGMs) capability. As Pakistan military guides nation's foreign and defence policies, it has created viable joint command structures to prosecute 'high-tech limited war' at a short notice.

Western nations have also been reviewing their war fighting doctrines as there is strong public opinion against the trend of extended campaigns on the foreign lands. General Mark Milley, Chairman Joint Chiefs of Staff, US Army, on the preparation of future wars had stated, "The way we train won't be the same because the environment now is totally different".⁷ America has reoriented its training to fight hybrid wars – a mix of conventional,

insurgencies, and cyber warfare, amidst highly complex environment. In the ongoing Ukraine War, alongside conventional operations, irregulars force like Wagner Group are fiercely engaged in waging 'low intensity warfare' in the eastern Donbas region, particularly Bakhmut.

Ramifications for India

With hostile neighbourhood, India is facing multiple security challenges. Having failed to achieve its strategic objectives through conventional means, Pakistan switched onto waging 'proxy war' against India while China has used unresolved border dispute to keep the pressure on the LAC. Post the 1962 War, the Communist leadership has resorted to 'nibble and negotiate' tactics, part of GZW. Incidents such as Doklam in 2017 and large-scale transgressions in May 2020 are cases in point. Ironically, a major flaw in India's approach is the inability to comprehend the complexities of hybrid threats and adopting extemporaneous-fragmented approach. Given the emerging nature of future wars, it is evident that India needs to shed off its conventional strategic models and rigid force structures. There is an urgent requirement to adopt transformational initiatives, salient ones are summarised below:

- Formulate limited war doctrine incorporating the essential dimensions of 'hybrid warfare'. The process ought to be top driven, emanating from well-defined national defence policy. This will facilitate development of much needed strategic culture of jointness. While technology is the key driver in RMA necessitating holistic review of doctrines, however, war fighting remains contextual. For example, to ensure sanctity of the borders - LoC/LAC, the troops have to be physically deployed on the ground regardless of 'non-contact warfare' or high-end technology systems.
- War prevention through deterrence entails building capacity to undertake calibrated pre-emptive actions in real time. This implies transition from incremental modernisation to deep rooted transformation. Major impediments to this end are dwindling budgetary allocations, mediocre indigenous R&D performance, individual Service driven procurements, and status quo mentality. There is a crying need to scale up defence budget from current sub 2 per cent of GDP to at

least 2.5 per cent. Recent initiatives to incentivise the private sector are the steps in in the right direction.

- As the ambit of wars today spans across the wide spectrum, hence, effective institutionalised apparatus involving civil-military integration at the highest level is crucial to ensure timely responses. This shortcoming has been underscored by various commissions and committees in the post conflict or security lapse reviews.
- The conclusive outcome is contingent upon on the application of requisite combat potential at the decisive points in a telescopic time frame. Given the two-front threat, exploitation of time differential in the pace of operations between the 'Eastern and Western Theatres' is critical.

India is faced with in a two front scenario as it is required to maintain the sanctity of LoC and LAC in the wake of aggressive behaviour of Pakistan and China. To be able to successfully undertake limited operations and ensure sound border management, operational doctrine is most essential. Concurrently, major structural changes are needed for reorganisation into theatres, with all resources under one commander. The key technologies which will have critical role in effective execution of tasks will be electronic surveillance, EW, precision guided munitions, and drones. There is also requirement of integrated logistics and robust supply chains which require massive infrastructure upgrade with all-weather connectivity to the forward areas.

Conclusion

Given the prevailing geo-political environment, limited conflicts have gained pre-eminence although the end-state is often unpredictable; precluding decisive outcome, often degenerating into state of stalemate.⁸ The On- going war in Ukraine is a classic case in point. Deterrence and war prevention is essence of the 'limited war doctrine'. As war today is a contest between the opposing governments, the nation's employ maximum CNP to achieve the intended objectives. Due to the overlapping modes of armed conflicts, the operations could start in the form of a full-fledged war or escalate from an asymmetric or 'low intensity conflict' scenario. Alternately, forces may be engaged in fighting at several levels simultaneously-'high-low mix'.

'State-of-the-art' disruptive technologies have emerged as the key drivers in transforming the conduct of modern-day warfare. Synthesis of new doctrines and high-tech weapon systems has resulted in hyper pace of operations, leading to intense engagements with high rate of attrition. Despite the RMA, it is a fallacy to conjecture that future wars will be fought by the techno warriors. While a soldier equipped with ultra-sophisticated technological weapons package may fight as a system; yet will remain irreplaceable.

Given the multiple security threats India is faced with, evolving of holistic national defence policy, in the long-term perspective, is an urgent security imperative. In consonance with the changing nature and character of war, formulation of integrated 'limited war fighting' doctrine merits highest priority. Existing institutions, systems, and organisational setup needs to be streamlined. The current ad-hoc structures to prosecute full scale war remains a major shortcoming. On the other hand, our two hostile neighbours have centralised control mechanism to orchestrate higher direction of war at the strategic and operational levels.

The force structuring must be capability based, with inbuilt capacity to meet multiple contingencies across the spectrum. Creation of theatre commands is an urgent operational imperative. Integrated logistics system and well-developed infrastructure, especially in the border areas, need to be fast tracked to ensure timely application of combat potential at the critical areas. This requires requisite strategic and tactical airlift capability besides all-weather connectivity. Specifically with respect to the northern border in the wake of two front collusive scenario, current reactive strategies evidently have not delivered. To defeat the evil designs of the belligerent neighbours, comprehensive doctrine is a strategic imperative. The border management requires a comprehensive review, duly incorporating the development of border villages to act as the forward defence line. Given the changed ground situation wherein 'Patrolling Points' (PPs) are being replaced with buffer zones in eastern Ladakh, the LAC will be increasingly contested and has to be manned in strength. Therefore, effective surveillance mechanism complemented by all-weather sustainable infrastructure is the need of the hour.

As per Frank Hoffman, "The wars of 21st century may take multiple forms. As conflicts reflect high degree of convergence

and complexity, so must our mental models and frameworks”.⁹ In the future warfare, a soldier will be equipped to fight as an entity-optimizing the man-machine interface. While technology is a good servant, it is a bad master; indicating that soldier will remain predominant battle winning factor. Given the hostile security environment, India has to be fully prepared with techno savvy armed forces to fight and win the future ‘hybrid-high tech limited wars.

Endnotes

¹ Halberstam David, (2001), *War in Time of Peace*, Simon and Schuster, New York.

² Garnet John (1979), *Limited Conventional War in Nuclear Age*, in Michael Howard *Restraint on War*, Oxford University Press, London, p 82-83.

³ Schelling Thomas (1960), (*The Strategy of Conflict*, Harvard University Press, Cambridge.

⁴ Kania Elsa B, (7 June 2019), *Chinese Military Innovation in Artificial Intelligence*, Centre for New American Studies, p1-5.

⁵ Thomas G Mahnken (2011), *Secrecies & Strategies: Understanding Chinese Culture*, The Lowy Institute of International Policy, p8.

⁶ Wu Jinping & Liu Zhifu (2014), *An Introduction to Public Opinion Warbase, Psychological Warbase and Legal Warbase*, National Defence University, p1.

⁷ Cooper Helene, (12 June 2016). US Shifting Back to Conventional Warfare, New York Times.

⁸ Steven Metz, (18 December 2015), *Future Wars Could be Nightmare Scenario for US Military*, World Political Review.

⁹ Frank Hoffman, (8 November 2018), *Examining Complex Forms of Conflict: Grey Zone and Hybrid Challenges*, PRISM Volume 7, No 4. <https://cco.ndu.edu/Newsarticle/1680696/examining-complex-forms-of-conflict-gray-zone-and-hybrid-challenges>. Accessed on 27 January 2023.