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Reimagining Manoeuvre Warfare in the 21st Century: Evolution and Adaptations

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Introduction

Manoeuvre warfare probably has a long-drawn history. In 331 BC, Alexander the Great, changed the course of history by destroying the ranks of a numerically superior Persian Force under the command of Darius III in the plains of Arbela, Iraq.[1] Sun Tzu believed that, "To win hundred victories in one hundred battles is not the acme of skill. To subdue the enemy without fighting is the acme of skill".[2] One of the best examples of manoeuvre warfare in action is found in Genghis Khan's conquest of Transoxiana.[3] Khan overcame his numerical weakness by increasing velocity. The most enduring development during the Napoleonic Age was the creation and use of the *levée en masse*. While describing manoeuvre

Key Points

- Manoeuvre warfare is often considered synonymous with terms such as mission-type orders, reconnaissance pull, surfaces & gaps, and Schwerpunkt.
- Two distinct schools of manoeuvre warfare developed prior to and during the Second World War are—the German School and the Soviet School.
- The battlespace of 21st century is 'Expanded, Converged and Compressed'. To execute manoeuvre, ground forces will be required to operationalise Multi-Domain Battle (MDB).
- Proposed Resilient formations should be capable of manoeuvring semi-independently, projecting and accessing power in all domains and presenting enemy with multiple dilemmas which is the true essence of manoeuvre in the 21st century.

warfare, Ardant du Picq emphasised the morale side of war and remarked "weapons are effective only insofar as they influence the morale of the enemy".[4] Similarly, Liddell Hart emphasised 'Indirect Approach' to defeat the enemy. He also propagated a theory on modern manoeuvre named *Man-in-the-Dark Theory*.[5]

Modern Schools on Manoeuvre Theory

Two distinct (though related) schools on manoeuvre warfare developed prior to and during the Second World War —the German School and Soviet School. Shocked by the horrors of the trench warfare during World War I, militaries sought for a solution to this deadlock. The Allied solution was basically a technological one with 'Tank' as the main player, and the German solution was a doctrinal one that is 'Infiltration Tactics'. As part of the evolving concepts on manoeuvre warfare, Germans created the 'Blitzkrieg or Lightning War' which is a combination of successful infiltration tactics involving tank and combat aircraft. The concept of the 'Expanding Torrent' is fundamental to Blitzkrieg Theory".[6]

Evolution of 'Theory of Manoeuvre Warfare'

Richard Simpkin, a recognised manoeuvre warfare theorist, gave a truly unique perspective on manoeuvre warfare. According to him, "to achieve requisite penetration of the enemy, the Fixing (Ordinary) Force should be capable of achieving twice the relative velocity of the enemy, and the Mobile (Extraordinary) Force should be four times the enemy's velocity".[7] Colonel John Boyd developed the 'Theory of Manoeuvre Warfare' not on the basis of ground battles, but on the basis of a study of some mock air-to-air combat exercise (conducted at Nellis Air Force Base in 1974). This study also led him to analyse the air-to-air combat during the Korean War where the American aviators were successfully achieved a 10:1 kill ratio over their North Korean and Chinese opponents. Later Colonel Boyd also studied ground combat to see if there were situations similar to the air war over Korea. His answer was what is now called the Boyd Theory, or the original Theory of Manoeuvre Warfare. The Boyd Theory defines what is meant by the term manoeuvre warfare and seeks to outmanoeuvre the enemy by being ahead through the Observe, Orient, Decide and Act (OODA) loop.[8] This theory describes the psychological and temporal aspects of war and suggests that, victory can be accomplished by tightening friendly OODA loop and loosening enemy OODA loop.

Three Filters, Manoeuvre Warfare and Their Applicability

The three filters that are very helpful in manoeuvre warfare are: Mission Type Orders, Schwerpunkt, and Surfaces & Gaps.[9]

- ***Mission Type Orders and Schwerpunkt.*** One must remember that manoeuvre warfare avoids enemy strengths and attacks weaknesses. Thus, a military unit / formation in conflict should employ maximum effort to identify gaps and constantly probe for enemy's weaknesses and thereafter, target the same.
- ***Surface and Gaps.*** The term surfaces and gaps has been derived from a German terms ─Flaechen und Luekentaktik.[10] Surfaces refer to the enemy's strong points and gaps refer to the weak points. Flaechen und Luekentaktik often referred to this as the 'Oskar von Hutier Tactics'.[11] At the same time, Basil Liddell Hart called it the 'Expanding Torrent System Tactics';[12] if a force is unsuccessful in finding any gaps at all, it may have to 'create gaps' by what is known as 'Stosstruppentaktik'— it can be achieved by actions comprising suppression, assault and exploitation. However, a lesser costly way of creating a gap could be through 'deception enticing the enemy' or to draw out its key forces off from another critical point. In this context, the Germans had also coined a term called 'Aufrollen', literally meaning, 'thrusting upon' through the gap for a rapid breakthrough. The Russian Fire Sack Defence Concept, though it may appear as a gap, due to the absence of enemy, but in reality is a 'surface'— in real sense, it is the hardest spot to crack. [13]

Artificial Intelligence Revolution: Impact on Manoeuvre Warfare

Technology intensive operational environment of the 21st Century is adding new dimensions to manoeuvre warfare─ no one planned on an AI Revolution especially in the military domain. To begin with, US military stumbled into AI when hundreds of air and ground drones were deployed in Iraq and Afghanistan. 'Democratisation of Artificial Intelligence Technologies'[14], across the national boundaries reinforces the fact that, the world is moving towards an 'Era of Technological Equivalence'. Leading science and technology luminaries like Stephen Hawking, Elon Musk and many others have spoken out against autonomous weapon systems assisted by AI warning and clearly highlighted the possibility of a 'Global AI Race'.[15] Therefore, in today's world of digitalisation, it is worth analysing the recent developments and their concomitant impact on the future of manoeuvre warfare.

Manoeuvre Warfare and the Emerging Technological Battlespace of the 21st Century

Older operational frameworks led commanders and force developers to visualise the battlespace **'**compartmentalised in time, over geographic space, and by function or domain'. However, the new and evolving operational framework of the 21st Century allows commanders to visualise the posture and convergence of capabilities across domains, environments, and functions required to manoeuvre. This new technologically driven battlespace is **'**Expanded, Converged & Compressed' and will impact the mechanics of executing manoeuvre warfare to a large extent. [16] The battlespace has 'expanded geographically' because of the effects of space, cyberspace, and electronic warfare (EW), and even because of conventional weapons with increasing ranges. Today's battlespace is converged and involves detailed and consistent integration of reconnaissance, unconventional warfare, information warfare, and conventional capabilities. The ability of militaries to both 'expand the battlespace' and 'converge their capabilities' has compressed the strategic, operational, and tactical levels of war. This 'strategic-to-tactical compression' is a result of extended sets of conventional, information warfare, and unconventional capabilities attained through AI Revolution. This has shortened the decision cycle thereby, helping the commanders to effectively execute manoeuvres at the tactical and operational levels.

In the 21st Century, world militaries are entering the 'era of contested equality' wherein technology will make 'unequals, equal'[17]— perhaps this is already happening and impacting the canvas of manoeuvre warfare. Technological capacities in enabling domains like AI and cyber will decisively 'shake' the military balance and enable militaries to embark on the path of 'I' Combat (Information led combat, the sole mission of which is to take the algorithm warfare to such a high level so as to win the AI arms race conclusively). Military victories are likely to be attained through technological prowess in the battlespace. In a 2013 article on the future of warfare, Russian military Chief of Staff, General Valery Gerasimov[18] wrote, "While today we have flying drones, tomorrow's battlefields will be filled with walking, crawling, jumping, and flying robots. In the near future, it is possible that a fully robotics unit will be created, capable of independently conducting military operations". How shall the world fight this World War 'R' (Robots)? [19] What form will manoeuvre warfare have to assume to be employed against this robotised enemy?

Re-Imagining Manoeuvre Warfare: Evolution and Adaptations for the Indian Army

"India needs to prepare for the war of the future rather than just for tomorrow".[20]

—General M M Naravane, COAS, Indian Army

The Indian Army needs to carefully analyse the evolving technologically driven operational environment, and incorporate manoeuvre warfare within the overall framework of conflict as relevant to the Indian context. In fact, the Indian Army needs to focus and evolve 'Dynamic Response' —actions below the threshold of an all-out war, and develop both kinetic and non-kinetic responses with an aim to address diverse evolving threats and outmanoeuvre the enemy at each ladder of escalation. The army has also undertook process of 'IBG-isation'[21] as one of the responses to this changing character of war with an aim to retain the capability of executing the manoeuvres at both tactical and operational levels, dominate the escalation matrix and thereby, retain the flexibility of outmanoeuvring the enemy in battle.

Multi -Domain Battle (MDB) Concept: Applicability in the Indian Context

The competitiveness, lethality and complexity of the future battlefield has been well realised by the Indian Army especially post the surgical strikes (2016) conducted after Uri & Pulwama attacks and the recent Eastern Ladakh standoff. A threat based analytical approach is required to address such challenges. Multi-Domain Battle extends the battlespace to strategic arena for both friendly and enemy forces and expands the targeting landscape based on extended ranges and lethality. To execute manoeuvres, ground forces operationalises Multi-Domain Battles with three interrelated components—calibrated force posture, employment of resilient formations and convergence.[22] This concept demands employing 'resilient formations' that can operate semi-independently in the expanded operational environment while projecting power into or accessing all domains, and 'converging capabilities' with an aim to create windows of advantage at chosen and pre-defined locations—an essential pre-requisite for manoeuvre warfare. The creation of Integrated Battle Groups (IBG) as a lean, agile and tailor-made structure, is a right step to achieve operational objectives and executing manoeuvres at both tactical and operational levels. Resilient formations envisioned in this concept, remain effective despite multiple forms of enemy threat and are capable of cross-domain operations. These formations are capable of 'manoeuvring semi-independently, without secured flanks, cross-domain capable, projecting and accessing power in all domains in order to present the enemy with multiple

dilemmas which is the true essence of manoeuvre'. The intensity of operations and the enemy's ability to deny or degrade communication requires these resilient formations to conduct operations employing the 'mission command philosophy'. The Indian Army also needs to adopt the technological changes to leverage the emerging disruptive domains and evolve a long term roadmap, to shape the battlespace of tomorrow.

Need for Cross -Domain Manoeuvres: Indian Army

Based on the understanding of MDB so far, the Indian Army also needs to develop and incorporate capabilities to execute Cross-Domain Manoeuvres. It would include employment of 'mutually supporting lethal' and 'non-lethal capabilities' of multiple domains to create conditions designed to generate overmatch, present multiple dilemmas to the enemy, and enable the force with freedom of movement and action in executing the envisioned manoeuvres. Cross- domain fires assisting these manoeuvres must aim to integrate the delivery of lethal and non-lethal fires at the desired point of impact.

Conclusion

Manoeuvre warfare still remains a sound approach to both war and warfare especially in today's technology intensive battlespace. It is the collective ability of military strategists to embrace its ideals, both during peacetime and in war. There is a need to abide by and execute manoeuvre warfare as the character of warfare changes in the 21st century. To be sure, modern militaries must aim to exploit the modern evolving technologies but in a way that enhances their warfighting capabilities and at the same time not depending wholly upon it.

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