

**Battle Ready for the 21st Century**, edited by Lieutenant General A.K. Singh and Brigadier Narender Kumar, New Delhi: Centre for Land Warfare Studies and Pentagon Press LLP, 2021, pp. 284, Rs 995

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Currently and in the next 10–15 years in the Indian subcontinent, warfare is going to be based on multi-domain operations, including land, sea, air, space and information, with information warfare comprising essentially four components: psychological, electronic warfare, cyber and deception. Considering the military and nuclear capabilities of China and Pakistan, the chances of a full-scale conventional war are remote. Wars in the subcontinent will be mainly hybrid and linked to the use of militancy in Jammu and Kashmir and the North-East. With the growth of Chinese naval power, sporadic intrusions by their warships in the Indian Ocean will also be witnessed.

*Battle Ready for the 21st Century* takes into consideration all these facets and brings out the need for capability development in the future. The book deals with aspects at the operational level of war in the Indian subcontinent with a futuristic focus for 10–15 years. It not only covers salient operational aspects but also the combination of emerging technologies that will affect foreseeable ground realities in the current security environment where the country faces an adversarial threat from China, Pakistan and terrorists.

The major themes in the book are notion of victory, dynamic military strategy, grey zone conflict, impact of technology, cross-domain synergy,

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mountain warfare, urban warfare, maritime domain, aerospace power, two-front dilemma, cyber warfare, artificial intelligence, information operations and disruptive strategies. All these themes have been covered in the various chapters by experienced military practitioners.

In war, a nation wants to attain victory. The chapter on this subject covers all aspects of victory, starting from the tactical level to the operational level and the strategic level. The next aspect it touches upon is the end state and onwards to global contemporary conflicts. Herein Operations Desert Storm (1991), Iraqi Freedom (2003), Enduring Freedom (Afghanistan), the Syrian conflict and Israel's 'mowing the lawn' strategic doctrine have been explained. While all these aspects are well elucidated, it would have been interesting if these had been compared with the surrender of Japan after the use of nuclear weapons at Hiroshima and Nagasaki.

The Indian context has then been analysed, right up to the surgical strikes. Finally, the aspect of calibrating victory in the Indian context is discussed. With China, the potential exists from a flare-up to a confrontation, whereas with Pakistan, it would be a punitive response which may escalate into an all-out war. In the case of China, there is a need to build a credible deterrence and if required, a quid pro quo in selected areas. Rightly summarised, there is a need to rethink victory in the current century as it is a complex subject. Field Marshal Slim converted defeat into victory in the Burma campaign in World War II, but the overall result was that the British had to leave India. Similarly, in the Vietnam War which terminated on 30 April 1975, the United States (US) won all battles but lost the war. These nuances make victory a complex issue for comprehension.

In the book, the need for a dynamic military strategy has been justified due to the peculiar nature of threats which India faces. Accordingly, there is a need to cater for a dynamic military strategy that caters for a wide spectrum of future conflicts, ranging from conventional to sub-conventional conflicts and multi-space domains. The military strategy for conventional conflict ideally should be based on dissuade, deter, deny and defeat. In the case of hybrid and sub-conventional conflicts, the strategy should be disrupt, degrade and defeat. This calls for the Indian Army to be capable of fighting a new-generation warfare with kinetic and non-kinetic capabilities. Undoubtedly, there is a need to maintain a second-strike capability in nuclear deterrence. Dynamic military strategy needs to be considered against the backdrop of nuclear capabilities of

China and Pakistan. The moot question being: is it possible to undertake a full-scale war with a nuclear overhang? This is an issue for consideration.

Technology will also play a major role in future conflicts. Issues raised in the book are on data, quantum, robotics and unmanned aerial system (UAS) swarms. The aspect of where we are and how much more we have to cover could have been discussed. This is important in the no-contact scenario that we are likely to face in future.

Cross-domain synergy is imperative for the Indian Armed Forces. The subsequent theme deals with crisis management and escalation control. This is extremely well researched and gives details of Herman Kahn's seminal work on 'escalation'. Kahn's escalation ladder has 16 steps starting from crisis, and thereafter the entire matrix. The chapter thereafter deals with two events, the Kargil War and Balakot. The nuance of these events where escalation was controlled against a nuclear backdrop is brought out correctly. An aspect to be borne in mind for this is that good civil-military relations are extremely essential in escalation control.

Reimagining mountain warfare is dealt with in Chapter 8. This chapter justifies the reasons to fight an asymmetric war in the mountains. The need for accurate intelligence, surveillance and reconnaissance will be the key to fight operations logically by deploying troops correctly in vulnerable areas. Further, the use of kinetic and non-kinetic weaponry will be extremely important. Our defences must be hardened to make them indestructible against precision-guided munitions (PGMs). Logistics will be primarily based on the aerial route to include drones and other means. Leadership will need a directive style with minimum orders and ability to function fully delegated operations without communications. It would have been useful if the authors had discussed some scenarios in the Indian context. What are the measures to be taken to improve India's offensive capability in the mountains? Is it possible to capture strategic objectives across the Line of Actual Control and Line of Control in our context? Does pre-emption pay rich dividends in mountains? These are the issues which need deliberation.

Urban warfare is an interesting aspect covered in the book. As aptly described, it is a nightmare for a soldier to fight in urban terrain. The chapter comprehensively covers the subtleties of these operations after deep research of combat in Grozny, Mogadishu, Baghdad, Fallujah, Mosul and Aleppo. The major aspects are as follows:

1. Intelligence preparation of the battle and identification of the centre of gravity.
2. Employment of intelligence resources and weapon systems.
3. Technology-enabled operations to include information, cyber, artificial intelligence and air dominance.
4. Operations planned centrally and executed in a directive style on a mission mode.

Mechanised forces must isolate the objective and then, decimate the objective by PGMs and drones. Thereafter, based on the terrain, assault by armour or ground troops is to be undertaken. The chapter covers aspects undertaken by the Indian Army in counter-terrorism operations. Rightly stated, urban warfare in an information age requires transformation, that is, a change in mindset at the political, strategic and tactical levels. Operations in this mode are manpower intensive. However, the pertinent issue is that they are unavoidable.

Aspects pertaining to maritime, aerospace and information warfare are also covered adequately. The impact of these on a hybrid conflict will be important. Synergy will be the key to success in battles in the twenty-first century. Modernisation and building of capabilities are the important issues which need addressal.

Overall, the book is extremely well-researched and must be read by officers in the Ministry of Defence, Ministry of External Affairs, Indian Armed Forces, as well as analysts in the strategic field.