CLAWS JOURNAL

Journal
of the
Centre for Land Warfare Studies

Distributed by:

KNOWLEDGE WORLD
KW Publishers Pvt Ltd
New Delhi

CLAWS Journal

CENTRE FOR LAND WARFARE STUDIES
New Delhi

CLAWS Journal is published by the Centre for Land Warfare Studies (CLAWS), New Delhi. CLAWS is an independent think-tank dealing with national security and conceptual aspects of land warfare, including conventional and sub-conventional conflict and terrorism. CLAWS conducts research that is futuristic in outlook and policy oriented in approach.

For submission of articles, commentaries, review articles and book reviews, please see "Notes for Contributors" given at the end of the Journal.

Subscription Rates

India:	Rs 300 (Single Issue)
SAARC Countries:	US $10 (Single Issue)
All Other Countries:	US $15 (Single Issue)

Mailing address
Managing Editor, CLAWS Journal
Centre for Land Warfare Studies
RPSO Complex, Parade Road
New Delhi 110010, India.
Tele: +91-11-25691308, Fax: +91-11-25692347
Email: director.claws@gmail.com / claws.publications@gmail.com
Website: http://www.claws.in
CLAWS Army No. 33098

Distributed by:
Kalpana Shukla
KW Publishers Pvt Ltd
4676/21, First Floor, Ansari Road
Daryaganj, New Delhi, 110002.
Email: kw@kwpub.com

Contents

Book Reviews

Note from the Editor

This is the eleventh year of the *CLAWS Journal* as published by the Centre for Land Warfare Studies (CLAWS). It also marks the change of editorship to me from Dr. Monica Chansoria, who had steered it for ten full years for which CLAWS as an institution will always be grateful, for her dedication and quest for excellence.

This Winter edition of the *CLAWS Journal* is occurring at the precise junction of time and ideas when a series of transformations is taking place on how the world will look at the conceptual issues related to conflict, war and world order. More so, it is a time when bridging the gap between the realm of ideas and the domain of public policy will pose the greatest challenge. It is a time when strategic analysis will be essentially to securitise the components contributing to the vitality of a nation, on the one hand, and, on the other, to define the purpose of the intent to use power to ensure that multi-nuclear power states remain interdependent in the quest of peace and stability at the global levels. If one could compress the entire evolutionary process of our world to 24 hours, then man appears only in the last few seconds of that evolutionary process. The 20th Century showed how close man had come to become his greatest enemy when an atomic bomb was used against man himself.

Beginning this issue, it will be our earnest endeavour to project what we think about India's role as an emerging power globally and also how we interpret how other powers see us amongst the comity of nations. Therefore, in this issue, we have put forward a variety of ideas contributing to the fulcrum of power, paradigm of science and technology and conceptualisation of the management of conflict. Thus, the present

volume discusses at a global level the role of the vicissitudes of the future of land warfare, artificial intelligence, the ambitious nature of China's expansionist policy and its quest for modernisation, the relevance of the Indo-Pacific region, India's oil security, India's civil-military relationship, its interest and role in the affairs of the Indo-Pacific region, and assessment of the American grand strategy in Asia. Writings to observe in hindsight the participation by the Indian armed forces beyond the international borders, reviewing how India manages its national security and how the role of the Indian Army is perceived internationally as drawn from the book reviews and opinion pieces.

From an Editor's perspective, I expect a healthy feedback of critical analysis, especially from our young professionals and researchers, to enrich our future endeavours.

Gautam Sen
Editor-in-Chief
CLAWS Journal

Centre for Land Warfare Studies (CLAWS)

Membership Details

The Centre for Land Warfare Studies (CLAWS), New Delhi is an autonomous think-tank dealing with national security and conceptual aspects of land warfare, including conventional, sub-conventional conflict and terrorism. CLAWS conducts research that is futuristic in outlook and policy oriented in approach.

The vision of CLAWS is to develop a 'strategic culture' to bring about synergy in decision-making at both national and operational levels. Since its inception, CLAWS has established itself as one of the leading 'think-tanks' in the country. To achieve its vision, CLAWS conducts seminars (at Delhi and with commands), round table discussions and meetings with academia and intellectuals of the strategic community from both India and abroad. CLAWS also comes out with a number of publications pertaining to national and regional security, and various issues of land warfare.

Members are invited to all CLAWS seminars/round table discussions (details regarding impending events are communicated to all members through e-mail. Information is also available on our website, http://claws.in). For the benefit of members, who cannot attend various events, reports are forwarded through e-mail. Members are sent copies of the bi-annual *CLAWS Journal* and *Scholar Warrior*. Institutional and life members are also sent *Occasional (Manekshaw) Papers*. Life members are also given library membership. Annual members will be given library membership on the deposit of Rs 2,000/- as security money.

All members can also order CLAWS sponsored/commissioned books at a special discount of 25% from the cover price.

Eligibility:

- **Individual for Life Membership**: All serving and retired Army officers.
- **Individual for Annual Membership**: Serving and retired armed forces officers.
- **Institutional for Life-Time Membership**: All formations, units and establishments of the armed forces.

Membership Fee:
Individuals:

- Life Membership – Rs 8000/-
- Annual Membership – Rs 1,000/-

Formations/Units and Establishments

- Institutional Membership for 10 years – Rs 20,000/-

For membership, please make all payments in favour of
Centre for Land Warfare Studies, payable in New Delhi.

Future of Land Warfare:
A Global Perspective

Deepak Kapoor

Introduction

War is always a messy business. It brings in its wake, a tremendous amount of death, destruction and devastation. In an idealistic world, one would banish war for good. However, we live in an imperfect world wherein human egos, greed, power, religion, revenge, etc. have a major role to play in shaping the environment. This ushers in the inevitability of war as the final arbiter in deciding which way the world should move at a particular point of time in history. We are also aware, of course, that history has a way of repeating itself, thus, underlining the frailty of the human mind in repeatedly falling prey to the same mistakes and not learning much from the past.

Warfare is perpetually evolving. From ancient times, when foot soldiers held sway with swords, spears, bows and arrows, and used forts and obstacles for effective defence, it moved to the use of elephants and horses to provide enhanced mobility and raised platforms for dominating the foot soldier. Introduction of dynamite brought about a revolutionary change in the concept, methodology, conduct and execution of warfare. A similar effect was created when the tank, followed by the aircraft, entered the battlefield. A study of the two World Wars fought in the 20th century clearly brings out how rapid changes in mobility, lethality,

General **Deepak Kapoor** (Retd) is former Chief of India's Army Staff.

battlefield transparency and precision affected the very methodology of the conduct of warfare from one to the other, thus, dictating the outcomes. Of course, use of nuclear weapons at Hiroshima and Nagasaki added a dimension, the consequences of which have threatened the very existence of mankind.

Unfortunately, the advent of nuclear weapons has not stopped the evolution of warfare. We are now delving into Artificial Intelligence (AI), robotics, cyber and space warfare to achieve victories in conflicts, with maximum destruction to the adversary and least own casualties, while remaining below the nuclear threshold. Thus, while the devastating potential of nuclear weapons is well acknowledged, the attempt is to win wars in the backdrop of a nuclear holocaust while continuing to remain within the conventional threshold.

Most strategists adopt previous wars as models to predict the future environment of warfare which then becomes the basis for developing force capabilities for the future. While this approach is logical and has worked reasonably well in the past, the changes currently taking place in areas which have a bearing on the future battlefield environment are so cataclysmic and huge that an incremental approach to future war-fighting is hardly likely to succeed. These changes require out of the box thinking, not necessarily in sequential order, to throw up innovative solutions which would then lead to success. Therefore, it would only be right to first study the future battlefield environment, successively followed by the role and future of land warfare.

Future Battlefield Environment

Unlike in the past, a future battlefield is likely to be non-linear in nature wherein neither the front nor the rear would be clearly defined. Actions undertaken at a strategic level may have a direct bearing on battles being fought at the tactical level and vice versa. It would be a multi-dimensional battlefield, employing physical, economic, psychological, cyber, space and

information warfare domains simultaneously to impact the outcome of a conflict on an adversary.

The attempt would be to demoralise the adversary and break his will to fight. The United States (US) executed such a strategy during the Iraq War with considerable success. However, while this strategy worked against an established regime in an all out war, wherein all the above domains could be freely used, it may not work when operating within restrictions and constraints in limited wars. Thus, when the US had to undertake counter-insurgency warfare operations against the Taliban in Afghanistan, the success was minimal as the fighting was way below the conventional level, restricting the US' ability to optimally employ all components to achieve the desired success.

Similarly, Sun Zi advocated winning wars without firing a round. This is done by the use of diplomatic, economic, military, psychological and informational domains to pressurise the adversary.[1] Currently, China seems to be achieving its objectives in the South China Sea in relation to its disputes with its smaller neighbours by pursuing this strategy, thus, strengthening its stranglehold in the region. Likewise, China has also violated the United Nations Convention on the Laws of the Seas (UNCLOS) as well as decisions of the International Court of Justice (ICJ).

In this perspective, for a comprehensive understanding of the future battlefield environment, it becomes imperative to analyse the different components that would constitute it and have a decisive impact on the outcome of the conflict.

Battlefield Transparency

It is a well-known fact that the greater the knowledge about the adversary, his dispositions and capabilities, the higher the chances of success in a conflict. In view of this, use of satellites, Unmanned Aerial Vehicles (UAVs), drones, etc. has resulted in providing total battlefield transparency on a real-time basis. It helps in breaching the adversary's

secrecy and enhances knowledge about his activities, their pattern as well as the future course of action he is likely to adopt. This knowledge is invaluable in preempting his actions and taking suitable steps to thwart his plans and defeat him in detail.

The depth and range of battlefield transparency would vary depending on the level at which an operation has to be executed. Thus, while for a company or battalion level operation, transparency of up to 10-15 km may suffice, at the brigade and higher levels, the depth of transparency requirement is likely to successively shift from the tactical to the strategic domain, going up to 100 km and beyond. This transparency has, of course, to be shared across the horizontal spectrum besides the vertical one since operations in one sector may have a bearing on other neighbouring sectors.

With the vast number of means available to achieve battlefield transparency, the danger is of surfeit of information gathered not getting systematically collected, collated and analysed, thus, defeating the objective. It is, therefore, important to have a trained organisation to shift through the plethora of data gathered in order to arrive at meaningful results which can be communicated in real-time for decisive action.

Artificial Intelligence (AI)

In a future battlefield environment, AI is likely to play a major role for a number of reasons. Firstly, it would help in reducing human casualties by virtue of being used to carry out tasks generally assigned to humans in a battlefield. Secondly, intelligence programmed in the machines is likely to be much faster and more precise in a set of given situations, thus, achieving results on a real-time basis. Thirdly, the ability to analyse complex options based on specified inputs is likely to be higher than that of average human beings. Of course, unpredictable and unforeseen situations would always remain the preserve of the human mind but a majority of such situations in a battlefield fall in the predictable pattern, enabling use of AI. Fourthly,

AI does away with emotions like fear, stress, tension, fatigue, response to injury, etc. whose effect can lead to adverse outcomes in a battlefield. It concentrates on rational decision-making.

As the frontiers of science expand wider and deeper, the potential of exploiting AI is increasing tremendously. Combined with robotics, AI is headed towards virtually removing the human being from the battlefield. The US is already experimenting with ocean-going drones in the form of mini human-less ships hunting for hostile submarines and destroying them.

Research is also ongoing in the field of autonomous weapons. Once fully developed, these weapons will be programmed to identify the enemy through the maze of the battle, target him and use precision munitions to destroy him whether during day or night. Use of driver-less fighting vehicles in the battlefield is also inching gradually towards reality. With such revolutionary changes on the horizon, transformation in the methodology and conduct of warfare is bound to take place.

Purely from an ethical perspective, there is a serious debate on whether AI should be used at all during war. In a 2018 survey carried out by the Brookings Institution, it was found that just 30 per cent of the adult internet users felt AI should be developed for warfare, while 39 per cent negated its use, with the balance being unsure.[2] However, if adversaries were already developing such weapons, then 45 per cent felt that the US too should do it while 25 per cent still felt that it would be ethically wrong to use AI during war.[3] However, notwithstanding the debate, if it gives a distinct advantage in the battlefield by its use, there is no doubt that AI would be put to use by both sides.

Cyber Warfare

Cyber warfare is the use and targeting of computers, online control systems and networks in warfare. It involves both defensive and offensive operations. Today, most modern militaries are becoming increasingly

dependent on computers since these have tremendous applications in almost all aspects of warfare. Vulnerability of computers and networks to cyber attacks has opened up the whole new field of cyber warfare. Russia, China, Iran and North Korea are way ahead of the others in this field.

The command and control chain from the lowest to the highest levels, inclusive of tactical as well as strategic operations, is controlled through networks and communications engineered with painstaking efforts. The best of military plans need efficient systems for passage and execution of directions/orders to achieve success at the ground level. Breach or hacking of control systems and networks can wreak havoc due to loss of security or blackout of directions at crucial periods during ongoing operations, resulting in possible failure.

In a future battlefield environment, increasing use of cyber warfare will bestow its practitioners with tremendous gains, far out of proportion with the efforts employed. No wonder, most militaries are working towards ensuring efficient use of their own networks and systems while, at the same time, degrading the adversary's and rendering them ineffective.

Space Warfare

In a broad understanding, militarisation of space is understood as the placement and development of weaponry and military technology in outer space. For instance, the early exploitation of space in the mid-20th century had a military motivation, given that the US and Soviet Union used it as an opportunity to demonstrate ballistic missile technology and other technologies having the potential for military application.[4]

It remains indisputable that space is the next dimension that would be added to the complex and dangerous battlefield environment of the future. China, Russia and the US are all taking steps that will ultimately result in weaponisation of space. North Korea launched two satellites in 2012 and 2016 that can threaten the US by guiding its Intercontinental Ballistic Missiles (ICBMs) to attack the US with an Electro-Magnetic

Pulse (EMP) as part of a larger surprise assault aimed at crippling the US military. The North Korean satellites that orbit over the US are on trajectories consistent with surprise EMP attack—with one of the two satellites always in orbit directly over the US at any point in time. An EMP attack could severely disrupt America's electricity grid, telecommunications, transportation network and other forms of critical infrastructure. China sees space warfare as its best chance to compete with the US militarily, since it has no blue water Navy, nor anywhere near the assets and firepower capability that the US military has. Rather than trying to match the US military and Air Force, China believes it can gain an advantage by effective use of space through production of specialised missiles, spacecraft and platforms.[5]

What advantages do space-based weapons provide to a nation? Firstly, use of directed energy e.g. laser, radio frequency, etc. from space enables destruction of an adversary's ballistic missiles, hostile aircraft, susceptible sensors and communication links and space-based satellites. Secondly, space-based weapons provide an additional option, which in certain time critical situations may be the only option to take on an adversary's hostile weaponry and destroy it. Thirdly, keeping in mind the battlefield environment, weapon delivery at the intended targets can be risk-prone and problematic, resulting in a higher failure rate. Space-based weapons provide relatively more secure and sure means of striking. Lastly, space-based weapons act like a bolt from the blue, thus, achieving much higher destruction as compared to any other vector. Of course, the effectiveness and destructive potential of space-based weapons will vary, depending on the weather conditions prevailing. Thus, atmospheric targets would be more susceptible to directed energy weapons in clear weather and air targets more vulnerable to energy that can be delivered at wavelengths able to propagate through the weather.

Jointness

Jointness is the integration of the strengths of the different Services of the military towards achieving a common goal. It enables development and execution of integrated operations by optimally using available resources and ensuring achievement of objectives in the shortest time. Today, it is accepted and practised as an essential for success.

Jointness is also compatible with network-centric warfare. Besides that, ideal utilisation of the cyber and space warfare domains is only possible in a joint and integrated scenario wherein the benefits would be shared across the inter-Service spectrum.

Jointness is intra-military in character and is a means that any good higher command organisation must seek to achieve. In its wake, it brings in synergy, optimum use, professionalism, economy of resources and a focussed approach. It avoids duplication and enables better exploitation of fleeting opportunities that so often present themselves in fluid battles. No wonder then that most modern militaries, including those of the US, Russia and China, have shifted to the Theatre Command concept wherein the resources of all the Services are placed at the disposal of the Theatre Commander to accomplish the tasks assigned. It increases the options available to the Theatre Commander to succeed. Unfortunately, the Indian military is still prevaricating on the degree of jointness to be achieved, with the three Services trying to protect their individual turfs. In the long run, this delay in operating in an integrated manner is likely to cost us heavily.

Precision Targeting

With the advent of lasers, radio waves, EMP, shoot and scoot capabilities, etc. precision targeting is likely to be the norm in the future. While battlefield transparency enables recognition and pin-pointing of specific targets, precision targeting ensures its total exploitation. It avoids collateral damage and concentrates on specifically destroying potential

threats. More importantly, it achieves a tremendous psychological advantage over an adversary since his vulnerability gets highlighted and he stands demoralised.

Wither Land Warfare?

The idea of nation-states incorporates the concepts of territorial integrity, land borders and sovereignty. We are as yet too far away from Wendell Willkie's "One World"[6] articulation. Any violation of the concept would be deeply contested at every step, by all means available to the affected nation-state. Thus, warfare is here to stay till as long as nation-states exist. In fact, it is the ultimate means of resolving disputes between nations when all other options have failed.

The notion of land warfare is an inherent and inalienable part of the overall concept of warfare. The fact that almost 75 per cent of the world's current militaries are ground forces, points to land warfare playing a predominant role in conflicts in the foreseeable future. To quote, Michael O'Hanlon posits that "modern war is becoming increasingly lethal and, thus, unforgiving to the unprepared, but it is not making ground combat irrelevant or obsolete".[7] It is the land domain, as compared to other domains of warfare like cyber, space, maritime and air that produces tangible and quantifiable results during conflicts. To which, David E. Johnson argues that the nature of the enemy and his will to continue fighting often can be countered and defeated only by ground forces, given that protracted air operations can be costly, with diminishing returns, while naval power has little effect to overturn enemy seizure or control of land, which also applies to cyber and space.[8] In view of this, the principal opportunity that land forces offer is the ability to impose a decision on adversaries that the other domains cannot: taking and holding ground, destroying enemy forces in detail and controlling and protecting populations.[9] Emphasising the importance of ground forces, Gen Mark Milley, the US Army Chief of Staff, in his address on June 23, 2016, at the Centre for Strategic and

International Studies (CSIS) in Washington, D.C., categorically stated: "I think we are on the cusp of a fundamental change in the character of ground warfare. It will be of such significance that it will be like the rifling of a musket or the introduction of a machine gun or it will have such significance impact as the change from horse to mechanized vehicles".[10]

However, the terrain over which the land forces have to operate can add to complexity and operational friction manifold. Thus, the terrain may vary from plain to riverine to desert to hilly or mountainous, making appropriate planning imperative for achieving success. Additionally, prevailing weather conditions also have a bearing on the outcome. To note, operations in Afghanistan, both now and during the occupation by the Soviet Union, show the effects of complex terrain. In view of this, the absence of roads and mountainous terrain make helicopters important in movement of forces, medical evacuation and resupply. However, the weather and terrain also make flying helicopters much more difficult than in Iraq.[11]

Science and technology are constantly being refined to achieve victory with more sophisticated weapons in the shortest possible time, with the least number of casualties. In fact, the concept of achieving victory by the use of air power and missiles, without committing soldiers on the ground, was tried by the US in the initial stages of the attack on Iraq. However, realisation that victory would not be possible without 'boots on the ground' soon dawned, leading to a subsequent change in the strategy and ultimate victory. In Afghanistan too, somewhat the same pattern was followed.

Of late, as witnessed in the case of the South China Sea, China is engaged in transforming the small islands and reefs into full-fledged military bases with a view to bolster its claims against other Southeast Asian nations. Such actions are also likely to be undertaken by other countries in the Arctic region in the foreseeable future. Although this

extends the spectrum of conflict to the oceans, ground/marine forces will still have a dominant role to play in deciding the outcome since physical occupation would be involved.

Threat Analysis

Three different types of threats, singly or all together, will manifest themselves in the future and would have to be tackled by the military. This can be explained in the following:

Non-State Adversaries

More popularly described as terrorists, this group is characterised by the philosophy of wanting the world to dance to their tune by indulging in acts of death and destruction inimical to mankind. Working individually or in groups, they do not enjoy formal approval of nations of the world for their actions.

They threaten to terrorise the world into submission and acceptance of their demands like ransom, release of prisoners, regime change, etc. while working individually or in small groups. In larger groups, they seek to impose a new world order. Thus, Al-Qaeda, Islamic State (IS), Lashkar-e-Taiba (LeT), etc. fall into this category.

A number of states covertly use such groups to achieve their ulterior designs while professing ignorance about their existence. Thus, the terrorist strike in Mumbai on 26/11, wherein LeT terrorists who attacked a number of installations, causing massive death and destruction, were clandestinely trained, equipped and inserted through the Arabian Sea with covert Pakistani support is a recent example. Despite concrete evidence to the contrary, Pakistan has steadfastly refused to accept its complicity in the Mumbai attack.

State Sponsored Hybrid Adversaries

These are threats posed by forces unleashed by an adversarial state. All

support in terms of planning, training, preparing and inserting hybrid adversaries is provided by the inimical state. Hezbollah in the Middle East, separatists in Crimea and *jihadists* in Jammu and Kashmir (J&K) are current examples wherein Iran, Russia and Pakistan respectively have provided support.

These hybrid adversaries, at the behest of the sponsoring state, work towards regime destabilisation, regime change or altering existing land boundaries. Their degree of success would vary depending on the resources available and the extent of popular support enjoyed by them. Their *modus operandi* is to target government institutions and policies and create conditions of unrest and uprising among the populace.

State Adversaries

When two states have major differences which cannot be resolved by all other available means, war is the ultimate option. While remaining below the nuclear threshold, they often take recourse to conventional war to settle differences, as exemplified in cases such as the Arab-Israeli conflicts, Indo-Pakistan Wars and ongoing conflicts in the Middle East.

In a future threat scenario, conventional war would be combined with the use of non-state adversaries as well as state sponsored hybrid adversaries to achieve rapid success. Simultaneous attacks from multiple directions targeting not only frontline soldiers but also rear and administrative echelons are likely to confuse and demoralise the adversary, ensuring his defeat in detail. This methodology is currently being applied in both Syria and Yemen.

Organisational Changes

With the battlefield environment and nature of land warfare undergoing major changes, it is imperative that organisational transformation takes place in sync with those changes to fight more effectively and efficiently. Integrated task oriented battle groups would be the norm rather than

large division sized formations of World War II mould. Special operations teams to carry out specific tasks for mission accomplishment would form an integral part of the battle groups. Airborne forces, capable of quick insertion into the battle zone to ward off a crisis or exploit fleeting opportunities need to be planned for. Here, shifting of forces from one theatre to another at short notice becomes especially relevant in the case of limited force levels or in the contingency of having to face a two-front threat. Acquisition of the requisite air transport lift capability for such an eventuality is imperative.

There should always be an effort to improve the 'teeth to tail' ratio wherein the logistic tail is reduced to the minimum essential while enhancing the fighting potential of the force. Thus, restructuring of the available force levels to achieve optimum results must be an ongoing process with changes in the organisation brought in on an as required basis. The US carried out specific organisational changes to meet the demands of the counter-insurgency operations in Afghanistan, notwithstanding its ultimate failure which is attributable to a number of other factors.

Land Warfare in the Indian Context

Since India became independent in 1947, it has had to fight a series of wars till date to maintain its territorial integrity, as noted in its wars against Pakistan in 1947-48, 1965, 1971 and 1999. In 1947-48 and 1965, Pakistan tried its best to wrest J&K by force by sending in irregular and regular forces. In fact, in 1965, the conflict took place all along the Indo-Pakistan border besides J&K. Both times, it was roundly defeated by the Indian military.

In 1971, Pakistan rode roughshod over the electoral results wherein Sheikh Mujibur Rahman's Awami League party of then East Pakistan had won an absolute majority in the Pakistan National Assembly. It jailed Sheikh Mujib and to quell the protests which erupted as a result, sent in the Army which indulged in massive plunder, rape and large scale

atrocities on the hapless population. There was worldwide condemnation of the Pakistan Army's reprehensible actions. Sheikh Mujib declared unilateral independence of the new entity, Bangladesh. India supported Bangladesh which resulted in an all out war with Pakistan. In one of the finest chapters in Indian military history, India achieved a huge victory, taking over 93,000 soldiers as prisoners while liberating Bangladesh.

In a clandestine operation, Pakistan attempted to capture Kargil and its surrounding heights in J&K in 1999 with the aim of severing Ladakh from the rest of the state. This attempt too was thwarted in a befitting manner, with the bold actions of the Indian Army and Air Force. Pakistan was forced to withdraw with huge losses.

While against the Chinese, India's ill-equipped Army lost heavily in 1962. However, in subsequent skirmishes at Nathula in 1967 and Wangdung in 1986, it gave an excellent account of itself. In fact, despite an active and tense border, with frequent Chinese transgressions, the Indian Army has been able to keep the territorial integrity of the country intact.

In addition, serious insurgent situations in a number of northeastern states in the second half of the 20th century, aided and abetted by our not too friendly neighbours, kept the Army on its toes. Commencement of insurgency in J&K with Pakistan's active support since 1989 and its containment has further added to the Army's responsibilities.

It would be clear from the above that for the past 70 years, land warfare has dominated the Indian subcontinent. This trend is likely to continue in the foreseeable future. With two recalcitrant neighbours and an unsettled land border of over 7,000 km, the threat of a two-front war looms large over India's horizon. Concomitant with the ongoing insurgencies in J&K and parts of northeast India, the Indian Army certainly has its plate full with commitments.

In this context, the moot question that arises is: what should be done to meet the challenges of the future? A number of issues have already

been discussed in the earlier part of this paper. Some major aspects, including those requiring reiteration, are covered below to enable the Indian military to develop capabilities for performing its tasks creditably in a future battlefield scenario.

Defence Budget

In an era when all modern countries are spending or are increasing their defence expenditure to over 2 per cent of the Gross Domestic Product (GDP), in India we have seen a declining trend for the past 8-10 years. The North Atlantic Treaty Organisation (NATO) nations are all working towards spending 2 per cent by 2024. In fact, President Trump is nudging them towards spending 4 per cent post 2024. Both China and Pakistan, our problematic neighbours, are spending over 3 per cent. On the other hand, during the last 10 years, the Indian defence budget has been gradually coming down from 2 per cent to 1.57 per cent in the current financial year. The Indian defence community has been clamouring for 3 percent defence budget for a long time. As the Parliamentary Defence Committee headed by Gen B. C. Khanduri (Retd) pointed out in its report in March 2018, 68 per cent of the equipment held by the Indian Army is obsolete. While that may have resulted in his being replaced as the Chairman of the committee, it nevertheless points to a serious danger to national security in the long run. The sooner we rectify the situation, the better.

Theatre Commands and Jointness

We have paid lip-service to jointness so far for all the wrong reasons like turf protection, Service loyalties, bureaucratic manipulation, lack of expert domain knowledge in employing other Services, etc. Unless there is an attitudinal change among the three Services towards integration, we are laying ourselves bare to defeat in detail in a future conflict. We can take solace from the fact that the history of integration in all modern

militaries throws up challenges like resistance to change, fear of being swamped by a larger Service, obstacles to individual Service growth, etc. The difference is that while most others have overcome apathy and resistance and gone ahead with integration, we, in India, continue to flounder in unnecessary debate and discussion. Promotion of jointness, and closer integration among the three Services is a strategic necessity. We need to create Theatre Commands, with resources pooled from all the Services to accomplish assigned missions during operations. Employment of all arms and Services by the Theatre Commander in a befitting manner to achieve optimum results will eventually happen only if we work at it from now on. Likewise, integration of Service Headquarters with the Ministry of Defence is imperative to undertake and implement national security issues in a more rational manner.

Higher Defence Organisation

A single point adviser to the Government of India on matters of defence and national security was first recommended by a committee of a Group of Ministers headed by the then Home Minister, Shri L. K. Advani, after the Kargil conflict. This was approved by the Cabinet under the leadership of Mr Vajpayee in 2001. However, 17 years down the line, we have still not implemented it. For informed decision-making in defence matters, the requirement of a Chief of Defence Staff (CDS) is imperative, especially when the political hierarchy as well as the bureaucracy have only limited/ negligible expertise on these matters. Additionally, structured institutionalised interaction between the Service Chiefs and the political hierarchy needs to be laid down in the interest of national security. The current practice of the Cabinet Committee on Security (CCS) summoning the chief only in times of crisis is hardly satisfactory. Perhaps, the crisis would not occur if regular interaction is in place.

Infrastructure Development

With unsettled disputes with our two neighbours China and Pakistan, the need to have good infrastructure to fight a successful defensive battle on two fronts can hardly be overemphasised. A number of our sensitive areas in Arunachal Pradesh, Sikkim, Uttarakhand and J&K are dependent on one single, tenuous road link even today, 70 years since independence. This makes logistics and sustenance as well reinforcement of forces on the front problematic. The situation gets worse if this single lifeline gets disrupted due to enemy action or natural disasters. The Chinese have created excellent infrastructure in Tibet in a much shorter timeframe. Lack of resources, environmental clearances, land acquisition, bureaucratic delays, etc. cannot be justifiable reasons for putting the territorial integrity of the nation in jeopardy. We need to take urgent steps to create suitable infrastructure in the forward areas to enable our soldiers to acquit themselves well in the face of aggression.

Finally, irrespective of the changes envisaged in the future battlefield environment, land warfare will continue to dominate conflicts between nations in the foreseeable future. This assertion is more pertinent in India's case since we have unresolved borders with two of our neighbours. It would, therefore, be important for us to always be prepared to face a two-front threat in our national security interest.

Notes

1. See, Sun Zi, *Art of War* (Mumbai: Wilco, 2009).
2. Darrell M. West, "Brookings Survey Finds Divided Views on Artificial Intelligence for Warfare, but Support Rises if Adversaries are Developing it", August 29, 2018, at https://www.brookings.edu/blog/techtank/2018/08/29/brookings-survey-finds-divided-views-on-artificial-intelligence-for-warfare-but-support-rises-if-adversaries-are-developing-it/
3. Ibid.
4. "Militarisation of Space", Wikipedia, at https://en.wikipedia.org/wiki/Militarisation_of_space.
5. Daniel Wagner, "Why Space Warfare is Inevitable", *International Policy Digest*, July 01, 2018, at https://intpolicydigest.org/2018/07/01/why-space-warfare-is-inevitable/.

6. See, Wendell L. Willkie, *One World* (New York: Simon & Schuster, 1943).
7. Michael E. O'Hanlon, *The Future of Land Warfare* (Washington, D.C.: Brookings Institution Press, 2018).
8. David E Johnson, "An Overview of Land Warfare", *The Heritage Foundation*, 2018, at https://www.heritage.org/sites/default/files/201709/2018_IndexOfUSMilitaryStrength_JOHNSON.pdf.
9. Ibid.
10. Quoted in Dave Majumdar, "Is the US Army Ready for a Shocking Technological Revolution in Land Warfare?", *The National Interest*, June 23,2016, at https://nationalinterest.org/blog/the-buzz/the-us-army-ready-shocking-technological-revolution-land-16703.
11. Mark Thompson, "Why Flying Helicopters in Afghanistan Is So Deadly", *Time*, October 27, 2009, at http://content.time.com/time/nation/article/0,8599,1932386,00.html.

Oil Security and its Impact on India

SCN Jatar

Introduction

Oil as a strategic commodity made its mark from the day it was discovered in 1859. We have now become a "Hydrocarbon Society" as Daniel Yergin claims in his book *The Prize*.[1] Climate change, with 97 per cent scientific consensus has, however, jolted the status of oil, which the world had taken for granted. Realisation has now dawned for the need to find an alternative for oil because it is the largest emitter of Greenhouse Gases (GHG). Efforts to replace oil by alternative sources have affected energy planning entailing a relook at the energy strategies of nations. Of particular significance is the consumption of energy by air and sea transportation because there is yet no alternative for aviation jet fuel, and ocean shipping, carrying 80 per cent of world trade, emits 3 per cent of global GHG. In October 2016, 194 countries, including India, signed the Paris Agreement on Climate Change and agreed to make "Nationally Determined Contributions" (NDCs).[2] Reducing the use of crude oil will make countries self-reliant by making do with domestic production. This will shake the world balance of power. The transition to a post fossil fuel age should be smooth, without affecting energy security.

The timeframe is difficult to predict but it is certain that both fossil fuels and alternative fuels will remain alongside for a considerably long

Major General **SCN Jatar** (Retd) is Former CMD, Oil India Ltd & ONGC Videsh Ltd.

period, with fossil fuels losing their strategic importance gradually. Alternatively, it would mean that crude oil security would not vanish overnight. Climate change has opened a new window for India to be self-reliant in energy security. It would be prudent for India to revisit its energy policy and fuel policy and adopt a new approach to its energy strategy in order to achieve energy independence. As energy security and climate change are intimately entwined, the topic should be dealt with at the highest level in the government and not by the Ministry of Environment, Forests and Climate Change.

The Strategic Importance of Oil

Throughout history, the pursuit of strategic commodities has been intimately intertwined with national strategies, and global politics and power. Centuries ago, salt enjoyed a monopoly over food preservation, which is basic to life and for living. Thus, securing access to salt shaped national strategies. Once the world found alternatives, salt lost its strategic value. Likewise, the importance of oil, discovered in 1859, kept increasing. It was being perceived as an "environment saviour" because the most malodorous environmental challenge facing the world's big cities then was not slums, sewage or soot: it was horse dung. In 1900, London's estimated 300,000 horses and New York's estimated 100,000 horses pulling carriages, omnibuses, carts and all kinds of vehicles left "swamps of manure in their wake".[3] As Daniel Yergin notes, "The cry that echoed in August 1859 through the narrow valleys of Western Pennsylvania [...] set off a great oil rush that has never ceased in the years since. And thereafter in war and peace, oil would achieve the capacity to make or break nations, and would be decisive in the great political and economic struggles of the twentieth century".[4] Although Sir Halford John Mackinder's "Heartland Theory" [5] was never proved, it certainly did influence strategic thinking. As noted, from a "Mackinderian" perspective, the strategic value of the energy sector is immense.[6]

With the advent of technology based on petroleum, energy security and crude oil security became synonymous. The competition for 'mastery over oil', thus, became critical. Transportation fuel consumption accounted for more than 60 per cent of total oil consumption in 2016.[7] The breakdown in per cent is: road 50.21, aviation 7.43, marine 3.4 and rail/domestic waterways 1.7.[8] Resultantly, oil largely controls the global transportation system, giving those who control it disproportionate power on the world stage. Oil is, thus, the very essence for mobility even today.

Oil is a unique commodity. It made the 20th century the hydrocarbon century, so much so that today, oil and its products actually pervade and surround us. Development, security and growth have become synonymous with oil. Oil has become indispensible to life. As the world started taking oil for granted, climate change sounded a warning note.

Climate Change

The main cause of the current global warming trend is human expansion of the "greenhouse effect", according to the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report, 2014[9]—warming that results when the atmosphere traps heat radiating from the Earth toward space. Long-lived gases that remain semi-permanently in the atmosphere and do not respond physically or chemically to changes in temperature are described as "forcing" climate change. Humans have increased atmospheric GHG concentration by more than a third since the Industrial Revolution began. This is the most important long-lived "forcing" of climate change. Hence, there is need to reduce GHG in the atmosphere.

Fossil Fuels and Climate Change

A natural question that comes to mind is: why are fossil fuels being mainly targeted for reducing GHG emissions and help mitigate global

warming? Fossil fuel producers are the main emitters of GHG (mainly carbon dioxide, methane and nitrous oxide). Just 25 fossil fuel producers were responsible for half of global industrial GHG emissions from 1988 to 2015, and 100 active fossil fuel producers have been linked to 71 per cent of industrial GHG emissions since 1988.[10]

The Clash of Epistemology and of Humankind

The reference to the clash of epistemology[11] is because there are naysayers who are denying the existence of climate change and, therefore, working actively against substitution of fossil fuels (e.g. the United States). However, there is a 97 per cent consensus among scientists on global warming and climate change.[12] The effects of climate change include economic loss, changes in atmospheric concentration, and cultural loss.[13] The cultural loss pertains to mankind's "lifestyle" and "quality of life", which is adversely affected due to climate change. There is, thus, a conflict between the proponents of climate change and greenhouse gases, between fossil fuels and renewable resources, and between conservation and exploitation of nature. It is the clash of humankind, the first of its kind.

According to a major survey of opinions on climate change, climate policy and future energy options among over 4,000 people across four countries, completed in 2016, only about one-third of people in Germany, the UK, France and Norway believe that there is a strong scientific consensus on the reality of climate change. The researchers were from the European Perception of Climate Change (EPCC) project.[14] In India, the believers would be much less. As we shall see, international pressure is emerging towards substituting fossil fuels by renewable resources to control global warming.

Effect of Renewable Energy on Energy Strategies

Climate change has entailed development of alternative sources of

renewable energy out of both compulsion and necessity and the need to reduce GHG emissions by burning fossil fuels. On April 01, 2016, 175 parties (174 states and the European Union) signed the Paris Agreement which obligates the signatories to present their national plans to reduce emissions to limit global temperature rise to below 2°C (3.6F) and reduce carbon emissions by almost 60 per cent by 2050. By now, 194 countries have ratified the Paris Agreement. India adopted the United Nations Framework Convention on Climate Change (UNFCCC) at the Conference of Parties (COP-21) in 2015 and made commitments under the NDCs on October 02, 2016. This single act on the part of the 194 countries has affected the basic concept of energy security and, in turn, energy strategy and further national strategies because of the international consensus to substitute oil with alternative sources of energy.

India attaches importance to substituting fossil fuels by alternative sources of energy. This is apparent from the visit of the UN Secretary General Antonio Guterres to India from October 01, 2018 to attend a series of events with a focus on renewable energy. Furthermore, from October 03-05, 2018, India organised the first assembly of the International Solar Alliance, the Second Renewable Energy Ministerial Meeting of the Indian Ocean Rim Association of States (IORA) and the Second Global Reinvest meet and expo.[15]

Air and Sea Transportation

It would be prudent to discuss aviation and marine transportation in a little detail because there is no alternative yet to petroleum in jet aviation and ocean shipping, which moves more than 80 per cent of world trade. Further, both air and sea power are the pillars of security for a nation.

Alternatives have been considered, including nuclear power, hydrogen, and compressed or liquefied natural gas, but not one has proved feasible for aviation. Ethanol and biodiesel blending components are also not suitable for jet aviation.[16] However, research is in progress on Sustainable

Alternative Jet Fuels (SAJF) to characterise a family of drop-in fuels that are intended to lower the net life-cycle carbon emissions of aviation.

Ocean shipping services transport more than 80 per cent of world trade by volume and account for 3 per cent of global greenhouse gas emissions. Oil shipping accounts for nearly a third of global maritime trade.[17] One giant cargo ship emits nearly as much pollution as 50 million cars.[18] Further, world maritime shipping absorbs about 3.4per cent of global oil output. The fuels most commonly considered today are Liquefied Natural Gas (LNG), electricity, biodiesel and methanol, and for the future, are Liquefied Petroleum Gas (LPG), ethanol, Dimethyl Ether (DME), biogas, synthetic fuels, hydrogen, and nuclear fuel.[19] Restrictions on emissions specifically comprise Sulphur Oxide (SO), Volatile Organic Compounds (VOC), Nitrous Oxide (NO) and Ozone Depleting Substances (ODS). Currently, SO is to be reduced to 0.1 per cent from 1 per cent by 2020. However, actual implementation has not commenced, mainly because of the high costs.

Transition of Crude Oil to an Ordinary Commodity

The intention, therefore, clearly is to substitute fossil fuels completely: first oil and then natural gas. The more realistic scenario would be that oil would continue to be used, especially for jet aviation and defence purposes for a considerable period, but countries led by oil importers, would individually attain various stages of substitution in the transition of crude oil into an ordinary commodity by replacing the use of crude oil by renewable and other sources of energy, depending on the advancements in technology. Technology is the key to the transition as it has been in all walks of life, including for external and internal defence and security purposes.

Analogy with Media

The analogy of the print vis-à-vis electronic media would be apt in this

regard. Johannes Gutenberg invented the printing press some time between 1440 and 1450 and it revolutionised book printing. Not unlike Gutenberg's press, the internet has led the Information Age like a locomotive. "[…] Just as printed books nearly eradicated illiteracy, the internet is a portal to a seemingly endless supply of information in digital format."[20] According to Audit Bureau of Circulation data, print publications in India increased average daily circulation of 23.7 million copies from 2006 to 2016. In developed economies such as America, Germany, France, Japan, Australia and Britain, paid print circulation showed yearly drops of up to 12 per cent in some cases.[21] However, as the internet makes strides in rural India, the print media is likely to decline.

Importantly, the print media is no longer the sole repository for opinion making; not even in India because of both the digital news and social media on the internet. A similar situation is likely to arise for crude oil i.e. it will not be eradicated completely but it will no longer be the main driver for energy and certainly not strategically. It is essential to remember that petroleum would still remain in circulation as an ordinary commodity and would still be used, especially for security and defence needs, proving the adage, "The Stone Age did not end for lack of stones".

Timeframe for Transition

Even a guesstimate to predict timeframes to reach the stage when crude oil will lose its tag as a strategic commodity may well turn out to be wild conjecture. This is because there are far too many imponderables such as when unconventional oil will peak or when a crude oil price shock will take place or when oil demand will reach its peak due to the reduction in the use of fossil fuels as a mitigation measure against climate change or a combination of the above factors. Some of these factors are conflicting.

Global demand for crude is likely to "plateau" during the late 2030s, mostly because of the rise of electric cars and trucks, according to British Petroleum's annual outlook published in February 2018.[22] The prediction

is more evidence of a dramatic shift in the appetite for oil.

Importantly, 'technology' may well be the deciding factor if there is a technological breakthrough in finding a replacement for crude oil *per se*. Another critical factor in determining the timeframe is the pressure of public opinion, both international and domestic, because public opinion and pressure can even drive technology, especially in democracies.

In this perspective, it becomes imperative to understand the effect of the above scenario on the national strategies. That is, would it provide an impetus for India to chart an independent course in determining its national strategies in line with its national interest? As witnessed, during times of crisis, none of the Middle Eastern countries stood by India. Once dependence on oil reduces substantially, India would no longer need to play second fiddle to any country, given its oil dependency. This call for deliberations on whether the new geopolitical scenario would change power equations and the current oil importers would emerge as a powerful block. Furthermore, would there be any need for India to worry about Afghanistan and the land route to the Middle East and Central Asia? These relevant queries reflect that there will be a major upheaval in the balance of power.

Crude Oil Security still Relevant

India has drawn up plans to increase renewable power capacity such as solar, wind and other renewable sources to substitute oil. Out of a total of 1, 302, 904 GWh electricity generated as in June 2018, the share of renewable sources was 227, 973 GWh[23]- which equates to 17.5 per cent of the total power.

On the other hand, the share of fossil fuels (oil products and natural gas) in the energy balance[24] for India is still large and increasing. The total Primary Energy Consumption (PEC) for 2016-17 was 540.932 million tonnes oil equivalent (Mtoe). Of which, the share of oil products and natural gas was 235.185 Mtoe, that is, 43.5 per cent. The corresponding

figures for 2015-16 were 519.285 Mtoe and 214.081 Mtoe respectively, that is, 41.2 per cent. Consumption of energy by source is even more revealing to show that dependence on oil is increasing with a marginal increase in the share of natural gas and a marginal decrease in coal, as outlined in Table 1 below.

Table 1: Source-wise Consumption of Energy

Sl. No.	Source	% March 2017	% March 2016
1	Coal	43	45
2	Crude Petroleum	35	34
3	Natural Gas	7	6
4	Electricity *	13	13
5	Lignite	2	2

Source: Ministry of Statistics and Programme Implementation.[25]

Energy Independence

In the current scenario, 'energy security' or 'energy independence' includes 'oil security' or 'oil independence'. Further, 'oil security' is not only about having secure access to oil anymore; it is about how well countries around the world would face the transition of oil from being a strategic commodity to just an ordinary commodity without letting their strategic stance being affected or strength weakened. In other words, alternatives have to be found for oil ensuring that energy independence or energy security is not affected during the transition. Mitigation measures for climate change have given an opportunity to India to attain true energy independence by being self-reliant and not remaining dependent on imports.

The reality is that the US, China, India and other oil importers are engaged in the biggest transfer of wealth in history[26] to the oil exporting countries, thus, providing funds to support countries that may not have their best interests at heart. Hence, India should make do with its own production of oil and develop alternate sources of energy to honour its

global commitment to reduce emissions intensity by 33-35 percent by 2030. This will need intensive research by a committed scientific cadre. India has the talent for this.

Additionally, India should embark on a wide public outreach to ensure social consensus on climate change. The Indian politician does not seem convinced of climate change although more than 97 per cent scientists globally have endorsed it.[27] Unlike the scientific consensus, there is no social consensus in this regard. This is reflected in almost every stance that the elected representatives adopt, such as not encouraging public transport or not preserving rivers, hills and trees. Man-made disasters like in Kerala have become routine in India. These actions send a wrong signal to the public.

Strategic Petroleum Reserves

India requires Strategic Petroleum Reserves (SPRs) to ensure adequate stocks of petroleum during an emergency. SPRs also acts as a hedge against price rise if stocks are adequate. Stoppage of imports in an emergency is a very likely scenario in view of India's experience in both 1965 and 1971 when some members of the Organisation of Petroleum Exporting Countries (OPEC) actively assisted Pakistan and oil imports had stopped.

In Phase I, Indian Strategic Petroleum Reserves Limited constructed underground rock caverns for storage of 5.33 million tonnes (MT) of crude oil: at Visakhapatnam 1.33 MT, at Mangaluru 1.5 MT and at Padur 2.5 MT for 10 days supply of crude oil. The government has approved in June 2018 additional capacity of 6.5 MT SPR facilities at Chandikhol (4 MT) in Odisha, and at Padur (2.5 MT) in Karnataka for an additional 12 days.[28] We are hopeful that proper planning has gone into establishing the quantum of reserves with adequate inputs from the defence Services.

India's Energy Policy

The Draft National Energy Policy (last version as on June 27, 2017)[29] by

NITI Aayog, aims to chart the way forward to meet the government's bold plans in the energy domain: all the census villages are planned to be electrified by 2018, universal electrification is to be achieved with 24x7 electricity by 2022, the share of natural gas in the primary energy basket is to be increased from the current 6.2 per cent to 15 per cent by 2030 and oil imports are to be reduced by 10 per cent from the 2014-15 levels by 2022. Our NDCs, as per the Paris Agreement, are reduction of emissions intensity by 33 per cent – 35 per cent by 2030 over 2005, achieving a 175 GW renewable energy capacity by 2022 from the current 59.555 GW (India's installed capacity as on June 30, 2018, is 71.325 GW), and share of non-fossil fuel based capacity in the electricity mix aimed at above 40 per cent by 2030.

Need for a New NEP

There is no mention in the draft National Energy Policy (NEP) of a national plan for India in terms of the Indian commitment to the Paris Agreement of October 2016. It is essential to have a long-term framework about energy development to include diversifying the energy portfolio, improving energy efficiency, and preparing for changing energy needs due to the obligation to reduce GHG emissions. This would translate into time-bound plans for the substitution of crude oil by renewable resources and other suitable products so that domestic production of oil and natural gas is adequate for critical requirements in an emergency.

National Fuel Policy

The national fuel policy, which evolves from the NEP, should aim at ensuring adequate, secure and affordable fuel supplies to support economic and social development and guarantee strategic and defence needs. It should ensure that transportation fuel contains a minimum volume of renewable fuel. Additionally, it should clearly demarcate the use of each fuel and specify the purpose for which the fuel concerned should be used in the long term, especially with regard to the use of fossil fuels.

New Approach to Energy Strategy

Just as the energy policy of a nation defines its energy strategy, an energy strategy defines the parameters of its energy security. An energy strategy is all-pervasive: it includes economics and politics that concern the citizens, it has external defence implications, and its strategic impact on the internal security of the nation is also immense. It can change the ethos of a people because it influences the very quality of their life. Hence, there is close interweaving of the energy strategy with the foreign and domestic policies.

In the total security and defence strategies of a nation, energy strategy plays a vital role. In fact, ecologically sustainable secure access to energy is a prerequisite for ensuring sound internal and external security. Further, with the advent of climate change, domestic energy policies are not internal concerns alone but are being influenced by global and international pressures to reduce emissions.

There is now even more need for India to change its approach towards an energy strategy. India should quit the old thinking that a national energy strategy is confined to exploiting the country's resource riches; or that a national energy strategy is about promoting specific actions, such as undertaking enhanced oil recovery using the latest technology; or expanding development of renewable energy sources or improving energy efficiency.

India's energy strategy should be a long-term (25 years) one, with an adaptive framework to be prepared at the national level based on which dialogue with stakeholders is essential to decide on energy options and the manner in which the goals set in the NDCs of the Paris Agreement may be achieved. The Government of India should prepare an adaptive framework to make the nation aware of the commitments under the NDCs or the Paris Agreement. Currently, the people at large are unaware of the NDCs. The government should integrate the states and union territories in energy planning centrally under NITI Aayog to finalise 'energy strategy'.

Conclusion

The timeframe for transition away from the fossil age is difficult to predict because of a number of conflicting factors but it is certain that both fossil fuels and alternative fuels will remain in use concurrently for a considerable period, with fossil fuels losing their strategic importance gradually. Looked at another way, it would mean that crude oil security will not vanish overnight and will continue to be an integral part of the energy security of the nation. Mitigation measures that India is to undertake to combat climate change have given a new opportunity to India to attain energy independence for which India should immediately revisit its energy related policies. Considering the strategic repercussions on energy security due to climate change, India should deal with matters pertaining to energy security in the fluid international situation at the highest level in the government. Additionally, as energy security is intimately entwined with climate change, we do not consider the Ministry of Environment, Forests and Climate change as the appropriate ministry to deal with this topic.

Notes

1. See, Daniel Yergin, *The Prize: The Epic Quest for Oil, Money and Power* (New York: Simon & Schuster, 1990).
2. See, United Nations Climate Change (2016), "What is the Paris Agreement?", at https://unfccc.int/process/the-paris-agreement/what-is-the-paris-agreement-0.
3. Amelia H. C. Ylagan, "Climate Change for the Poor Nations", *Business World Online*, January 30, 2017, at http://www.bworldonline.com/content.php?section=Opinion&title=climate-change-for-the-poor-nations&id=139795.
4. Yergin, n.1, p. 787.
5. See, Matt Rosenberg, "What Is Mackinder's Heartland Theory?", September 10, 2018, at https://www.thoughtco.com/what-is-mackinders-heartland-theory-4068393
6. "The New Great Game: Geography, Energy, The Dollar and Gold", *Thunder Road Report*, December 2013, at https://peakoil.com/publicpolicy/tyler-durdens-picture-the-new-new-great-game-geography-energy-the-dollar-and-gold
7. See, The Statistics Portal, at https://www.statista.com/statistics/307194/top-oil-consuming-sectors-worldwide/.
8. Ibid.
9. IPCC (Intergovernmental Panel on Climate Change), "Fifth Assessment Report (AR5)", at http://www.ipcc.ch/report/ar5/

10. Cited at https://www.cdp.net/en/articles/media/new-report-shows-just-100-companies-are-source-of-over-70-of-emissions
11. Epistemology is the branch of philosophy concerned with the "theory of knowledge".
12. See, "Scientists Agree: Global Warming is Happening and Humans are the Primary Cause", Union of Concerned Scientists, at https://www.ucsusa.org/global-warming/science-and-impacts/science/scientists-agree-global-warming-happening-humans-primary-cause#.W6dOThMzYn0.
13. Alicia Wallace, "Culture Clash: The Climate Change Threat We Cannot Afford To Ignore", *Tribune*, 242, September 20, 2017, at http://www.tribune242.com/news/2017/sep/20/culture-clash-the-climate-change-threat-we-cannot/.
14. "Public Still Doubts Scientific Consensus on Climate Change", Economic and Social Research Council Shaping Society, July 13, 2018, at https://esrc.ukri.org/news-events-and-publications/news/news-items/public-still-doubt-scientific-consensus-on-climate-change/.
15. See, 2nd GLOBAL RE-INVEST, at https://re-invest.in/.
16. See, "Sustainable Alternative Jet Fuels", at https://www.nap.edu/read/23490/chapter/8#74.
17. Paige Stewart, "Major Shipping Routes for Global Trade", May 24, 2018, at https://arcb.com/blog/major-shipping-routes-for-global-trade.
18. "Maritime Industry Turns to Alternative Fuels", Fuel Freedom Foundation, July 16, 2015, at https://www.fuelfreedom.org/maritime-industry-turns-to-alternative-fuels/.
19. See, "European Maritime Safety Agency", at http://emsa.europa.eu/main/air-pollution/alternative-fuels.html.
20. Susan Scott Teachey, "Will Digital Media Ultimately Replace Print Media?", *Linkedin*, June 26, 2014, at https://www.linkedin.com/pulse/20140626134201-248825-will-digital-media-ultimately-replace-print-media.
21. "Print Media is Dying? Not in India, Not Yet", *Rediff.com*, May 09, 2017, at http://www.rediff.com/money/report/print-media-is-dying-not-in-india-not-yet/20170509.htm.
22. Matt Egan, "BP: Demand for Oil Could Peak by Late 2030s", *CNN Business*, February 20, 2018, at https://money.cnn.com/2018/02/20/investing/peak-oil-demand-bp-electric-cars/index.html.
23. See, "Renewable Energy in India", Wikipedia, at https://en.wikipedia.org/wiki/Renewable_energy_in_India.
24. Central Statistics Office, Ministry of Statistics and Programme Implementation (2018), *Energy Statistics* (Twenty-Fifth Issue), March 2018, at http://mospi.nic.in/sites/default/files/publication_reports/Energy_Statistics_2018.pdf
25. Ibid., p. 41.
26. Joe Francica, "Destroying Oil as a Strategic Commodity", November 06, 2008, at https://www.directionsmag.com/article/2432.
27. "Scientific Consensus: Earth's Climate is Warming", *Global Climate Change*, at https://climate.nasa.gov/scientific-consensus/.
28. "6.5-mt Strategic Petroleum Reserve to be Set up in Odisha, Karnataka under PPP

Model", *The Hindu: Business Line*, June 27, 2018, at https://www.thehindubusinessline.com/economy/65-mt-strategic-petroleum-reserve-to-be-set-up-in-odisha-karnataka-under-ppp-model/article24270603.ece

29. NITI Aayog, Government of India, *Draft National Energy Policy*, June 27, 2017, at http://niti.gov.in/writereaddata/files/new_initiatives/NEP-ID_27.06.2017.pdf

Civil-Military Relations in The Present Context

P K Chakravorty

Current Perspective

India is a vibrant plural democracy. The Indian armed forces were inherited from the British on attaining independence. The Indian soldier who forms a part of the three Services has been involved in combat right from the formation of the nation, The Indian soldier has always followed the motto stated by Field Marshal Philip Chetwode which states that the honour, safety and welfare of the country comes first always, and every time, the honour, safety and welfare of the men you command comes next; and your own comforts come last, always and every time.[1] Whatever be the situation, the soldiers of the three Services have placed service before self and served the nation, its elected representatives and the nation with humility, courage and fortitude. The soldiers have always risen to the occasion and enabled the nation to grow as the world's biggest and most vibrant democracy. At the current juncture, the Indian armed forces are professional and can execute operations with military profession.

At the outset, it must be clarified that civilian control is thought to be necessary for effective democratic governance. It is the principle of civilian control that differentiates democracies from authoritarian states. The military performs the dual role of making policy and fighting wars in authoritarian states. However, in democracies, there is a clear demarcation

Major General (Dr) **P K Chakravorty** (Retd) is a Senior Fellow at CLAWS.

of civilian and military roles and functions.[2]

A large amount of literature exists on the subject but very little work that has been done on the changing balance between civil-military relations over time.[3] Stephen Cohen's analysis in his book on the Indian Army explains why India's political establishment has never been challenged by the military, while neighbouring countries like Pakistan have frequently been under military rule.[4] This was due to the Indian Army's high degree of professionalism which, as per the author, was due to years of indoctrination, selection and training. Further, civilians in India strengthened their own positions through the use of the Indian Constitution and high levels of party control. The mechanisms used by civilians to exercise tight control over the military as well as the training imparted to the military made the military completely subordinate to them. Of course, post 1960, there has been issues when both sides have politely expressed their points of view.[5]

Military Professionalism, Expertise and Core Issues in the Civil-Military Divide

In a democracy where civilian control exists, there can be two kinds of relationship between the civil authority and the military. In the first case, there is a clear division where the military understands the civilian authority over decision-making and the civilian authority understands the military's autonomy in its own sphere of functioning. The second could be where the division is blurred and there is a marked absence of agreement between civilians and the military on the precise nature of their functions. Samuel Huntington has addressed these issues objectively. He focusses on two issues: military professionalism and expertise, whereas another writer, Peter Feaver, focusses on the issue of military disobedience.[6] Civilian control, as per Huntington exists when there is a subordination of an autonomous profession to the ends of policy.[7] His definition implies two issues: the first is that civilians make policy and all policies

are implemented by other institutions that remain subordinate to civilian policies. The second aspect pertains to the armed forces, in which even if civilians respect the military as an autonomous institution with expertise on issues of strategy, the final decision on military strategy remains the prerogative of the civilians.[8]

It is also stated there are two types of civilian control: objective control and subjective control. Objective control exists where there is a clear separation between civilian and military functions. On the contrary, in subjective control, civilians feel the necessity of exercising greater control over military affairs or the military influence on civilian policy formulation. The next question is: what is military professionalism? Huntington argues that the degree of professionalism exercised by any military is determined by its function of being a war-fighting force and nothing more. Once the military begins to take on different roles such as aiding civilians in military operations or maintaining law and order, then it begins to gradually lose its professional character as its employment takes it beyond strategy and fighting wars. In our case, the Indian armed forces are committed on counter-insurgency operations in Jammu and Kashmir (J&K) as also in the northeastern states. Further, a numerous occasions, the armed forces have been called to maintain law and order as also for Humanitarian Assistance and Disaster Relief (HADR). Consequently, the Indian government policy is influenced by the military's decision in such matters.

As regards military expertise, it pertains to the ability of the military to execute its tasks with military precision without civilian interference. Prior to the Sino-Indian War of 1962, the strategic and tactical interference by the Defence Minister was used to exercise tight control over the armed forces. To signal their dissatisfaction, numerous issues were raised during that period.[9] The end of the war saw the emergence of a new dynamics in the civil-military relationship. The next war took place with Pakistan in 1965 and the political leadership led by Prime Minister Lal Bahadur

Shastri ceded most of the decision-making to the military.[10] The victories in 1965 and 1971 as also the Kargil conflict of 1999 witnessed greater military expertise being ceded by the civilian authority. The surgical strikes launched against Pakistan in 2016, as also the 73-days standoff against China in Doklam saw greater synergy between the civil and military in the field of military operations.

India's Higher Defence Organisation: Need for Military Representation in Decision-Making

Post independence, Lord Ismay, Secretary of the Defence Committee of the British Cabinet and Chief of Staff to Winston Churchill was asked for his suggestions on setting up a structure for India's defence organisation. Based on the experiences gained during partition, he formed separate committees for the civil and military.[11] The final stage of evolution of the higher defence organisation occurred as a result of the nuclear tests in 1998 and the Kargil Review Committee set up after the India-Pakistan Kargil conflict in 1999. The Kargil Review Committee was followed by the Group of Ministers (GoM) which made several recommendations regarding the higher defence organisation. A large number of them have been implemented. The Strategic Forces Command, comprising the Strategic Forces has been formed and is functional. In terms of appointments related to security, the National Security Adviser (NSA) has been appointed. Apart from the National Security Council, the National Security Council Secretariat, National Technical Research Organisation, Strategic Policy Group, National Information Board, National Security Advisory Board and the latest Defence Planning Committee have been constituted. All these, except the Defence Planning Committee, formed in April 2018, mainly comprise civilian officials. The military has very few officials in these committees.[12] All these organisations are subordinate to the supreme body which is the Cabinet Committee on Security which comprises the Prime Minister, Home Minister, External Affairs Minister,

Finance Minister and Defence Minister. This is the supreme body and has no military representation.

The Group of Ministers set up in April 2000 to examine the recommendations of the Review Committee insisted that a Chief of Defence Staff (CDS) be appointed who would be the single point adviser to the government on all military matters. The issue is still hanging fire and can only be resolved by a political decision. In the interim, to ensure a higher degree of jointness amongst the Services and to attempt inter-Service and intra-Service prioritisation, the government set up the Headquarters Integrated Defence Staff (HQIDS), headed by the Chief of Integrated Staff to Chairman, Chiefs of Staff Committee (CISC) to support the Chiefs of Staff Committee and the Chairman. There a definite need of the CDS for undertaking joint operations as also to advise the Ministry of Defence on issues pertaining to defence. At present, the Ministry of Defence is at best moderating issues and there is need for greater integration and jointness.

Nuclear Command and Control System: Need for Intense Civil-Military Cooperation

India and Pakistan conducted the nuclear tests in 1998 and became *de facto* nuclear powers. The Kargil conflict was a limited one as the political leadership in India did not wish to enlarge the conflict as both countries had nuclear weapons. This led to limited use of air power, as this would need a wider area for effective operations. Post the terrorist attack on the Indian Parliament in December 2001, the Indian Army was ready to launch operations. This was termed as Operation Parakram. The Army stated that significant gains would have been made had the offensive been launched under political directions in January 2002. The military felt that they missed an opportunity. The political clearance not forthcoming, Pakistan improved its posture, reducing the chances by March 2002.[13] The political leadership had to adjust to these issues and from the lessons

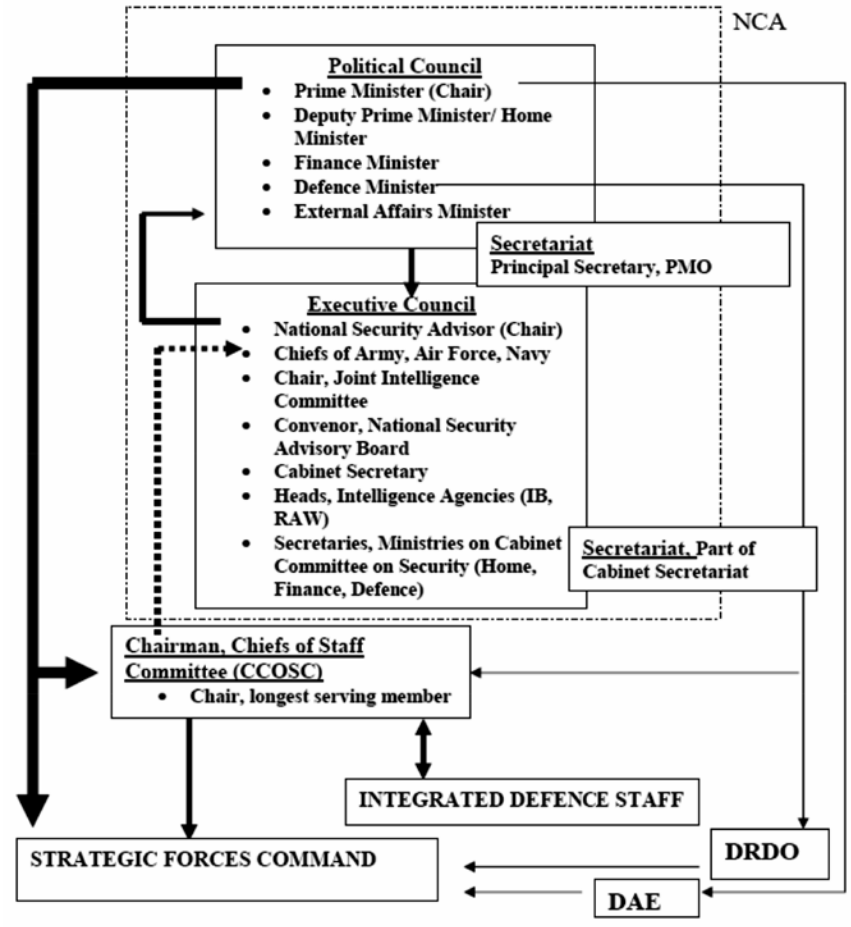
learnt, the Nuclear Command Authority was set up in 2003. The nuclear arsenal is controlled by the Nuclear Command Authority which consists of the Executive Council headed by the NSA and the Political Council headed by the Prime Minister.[14]

India had faced the command and control dilemma ever since the tests were conducted in 1998. Accordingly, a Draft Nuclear Doctrine was prepared which was accepted by the Cabinet Committee Security (CCS) on January 04, 2003.[15] The Indian nuclear chain of command is tabulated below in Figs 1 and 2.

Fig 1: The Leadership Structure of the Indian Nuclear Chain of Command

Civilian Leadership	Bureaucratic Leadership	Military Leadership
Prime Minister	National Security Adviser	Chairman Chief of Staff Committee, in future CDS
Home Minister	Cabinet Secretary and Home Secretary	Chiefs of Army, Navy and Air Force
Defence Minister	Defence Secretary	C-in-C Strategic Forces Command
External Affairs Minister	Foreign Secretary	
Finance Minister	Finance Secretary	

Fig 2



Source: Rakesh Kumar (2006).[16]

As cited above, Figs 1 and 2 clearly bring out the civil, bureaucratic and military leadership. Both these figures lucidly bring out the intense cooperation needed to be undertaken in a scenario of No First Use (NFU) and demated warheads with Permissive Action Launch (PAL).[17] According to Lt Gen Pran Pahwa, such precise issues would need

immense coordination and rehearsals between all members.[18] The next aspect which needs attention is an optimum defence budget.

Optimisation of Defence Budget

India's current defence budget is Rs 2, 95,511 crore which works out to just about 1.5 per cent of the projected Gross Domestic Product (GDP) for 2018-19. Military experts contend that to meet the modernisation requirements, it should be over 2.5 per cent.[19] In its 41st report to Parliament, the Parliamentary Standing Committee on Defence headed by the Bharatiya Janata Party's (BJP's) Maj Gen B C Khanduri explicitly stated that the capital allocations for modernisation of Rs. 21,338 crore will have an adverse impact on its combat capability. The Army has to slash at least 25 of the 125 'Make' projects. Similar is the case with the Navy and Air Force.[20] All three Services are undertaking transformation to reduce the revenue component of the budget to ensure that the impact on capital procurement is reduced. To face a two-front war, a professional armed force needs to modernise and be capable, for which the civilian set-up must provide the funding. This is an important aspect of civil-military relations which needs immediate attention. The civil administration in our set-up, while catering for other sectors of the economy, must look at the security interests. This would be possible when the country has a National Security Strategy and a Long-Term Integrated Perspective Plan (LTIPP) approved by the CCS. The Finance Ministry has stated that funds have been allotted for improving connectivity to the border areas. This could be done, keeping modernisation plans under consideration. Certainly, the civil government needs to be sounded on the strategic interests of the military. This would keep relations between the two on an even keel.

Other Aspects

There are many other aspects which are impacting civil-military relations

currently. In the present dispensation, many of the shortcomings in India's national security framework can be attributed to the civil-military relationship which has not grown and matured to keep pace with the modern-day security challenges. A certain degree of uneasiness between the civil and military is inevitable, and exists practically in all countries. The bureaucracy in India has placed the military firmly in a cage, leaving the latter to fret, fume and flutter against the bars of the cage. This has caused unevenness in military decision-making which certainly does not serve national interests.[21] The politicians must be educated on military matters in the Indian context. A short capsule could be run for members of the executive and Members of Parliament (MPs) as also bureaucrats of the Ministry of Defence on military strategy at the Institute of Defence Studies and Analyses (IDSA) to educate civilians on military affairs.

Another issue which has cropped up recently is protection to the soldier while undertaking duties pertaining to counter-insurgency in the northeastern states and J&K. The armed forces are called in when the police and other civilian agencies have failed. They are operating in areas which are covered by the Armed Forces Special Powers Act. If the actions undertaken by them need to be questioned, it is done after obtaining permission from the central government. However, recently the orders passed by the courts run contrary to this, resulting in investigations under the civil criminal law. Accordingly, 356 personnel have represented before the Supreme Court. Their representation before the court, "A situation of confusion has arisen with respect to their protection from prosecution... while undertaking operations in... proxy war, insurgency, ambushes and covert operations is justified".[22] Their petition pertinently asks "whether they should continue to engage in counter-insurgency operations as per military orders or act and operate as per the yardsticks of the Criminal Procedure Code".[23] The issue is under judicial consideration and there is no doubt that the issue would be resolved. The point to be noted is that the military soldier must be protected by the civilian government.

Important Issues

Civil-military relations are extremely important for national security. Issues which need attention are as under:

- In a democracy, national security is of utmost importance. For civil-military relations to be on an even keel, a National Security Strategy is needed, which clearly outlines the ends and means for harmonious civil-military relations. The government must leave no stone unturned to introduce this document at the earliest. A draft of the document has been placed by the National Security Advisory Board on more than one occasion to former Prime Ministers but has not yet seen the light of the day. The document needs to be revised once in two years due to the change in dynamics.
- The need for an LTIPP which flows out from the National Security Strategy must be approved by the CCS. This would lead to the provision of adequate funds and a planned modernisation of our armed forces. There would be no adhoc measures to modernisation and the armed forces would be able to undertake their tasks with alacrity and military precision.
- The Chief of Defence Staff (CDS) must be appointed by the government. Guarding of turf is inimical to national interests and the time has come for the government to undertake this change. This would synergise all the agencies involved with security.
- India is a nuclear weapon state and has a Nuclear Command Authority. There is a mix of civilians and military officials in the apex body. Our weapons are in a demated state, and the actions commence only after a nuclear attack due to the 'NFU' policy. There is a need for cooperation, a high degree of coordination and rehearsals to ensure precise actions at all level.

- The Army belongs to the nation. The nation must protect the soldier in sensitive situations, particularly during domestic utilisation.
- A capsule must be run at the IDSA for bureaucrats and MPs to educate them on strategy and military affairs.
- The armed forces must do their utmost to make civilians understand their methods and procedures by greater interaction at all levels. They must be given due respect, and cooperation must be effected at all levels, from top to bottom. There must be a total synergy for ensuring national security.

Notes

1. Sudhir Sharma, "The Chetwode Motto", *Salute*, January-February 2016, at www.salute.co.in. Accessed on August 16, 2016.
2. Douglas Bland, "A Unified Theory of Civil-Military Relations", *Armed Forces and Society*, Vol. 26, No. 1, 1999, pp. 7-25.
3. Ayesha Ray, *The Soldier and the State in India* (New Delhi: Sage Publications), p. 4.
4. Stephen Cohen, *The Indian Army in Contribution to the Development of a Nation* (New Delhi: Oxford University Press, 1990).
5. Ibid.
6. Peter Feaver, *Guarding the Guardians: Civilian Control of Nuclear Weapons in the United States* (Ithaca: Cornell University Press, 1992).
7. Samuel Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (Cambridge: Harvard University Press, 1957).
8. Ibid.
9. Ray, n.3,, p. 18.
10. Kotera Bhimaya, "Nuclear Deterrence in South Asia: Civil-Military Relations and Decision Making", *Asian Survey*, Vol. 34, No. 7, 1994, p. 653.
11. S. K. Sinha, "Indian Army Before and After Independence and its Role in Nation Building", *Journal of the United Service Institution of India*, Vol. CXXVI, No. 526, October 1996.
12. Kargil Review Committee, *From Surprise to Reckoning: Kargil Review Committee Report* (New Delhi: Sage Publications, 2000).
13. Praveen Swami, "General Padmanabhan Mulls over Lessons of Parakram", *The Hindu*, February 06, 2004, at https://www.thehindu.com/2004/02/06/stories/2004020604461200.htm, Accessed on August 21, 2018; Ray, n.3, pp. 101-102.
14. "Nuclear Command Authority", at www.quora.com. Accessed on August 21, 2018.

15. Rakesh Kumar, "Indian Nuclear Command and Control Dilemma", Naval Post Graduate School, Monterey- CA, September 2006, p. 80, at www.dtic.mil. Accessed on August 21, 2018.
16. Ibid., p. 26.
17. Ibid., pp. 80-82.
18. Pran K. Pahwa, *Command and Control of Indian Nuclear Forces* (New Delhi: Knowledge World International, 2008).
19. Rajat Pandit, "Budget 2018: Govt Hikes Defence Budget by 7.81%", *The Times of India*, February 01, 2018, at www.timesofindia.indiatimes.com. Accessed on August 22, 2018.
20. Ashok K. Mehta, "Our Armed Forces Unfit for War with 2018 Defence Budget Allocation", *The Quint*, March 22, 2018, at www.thequint.com. Accessed on August 22, 2018.
21. See Ministry of Defence, Report of the Standing Committee on Defence (2009-10), March 2018, at http://164.100.47.193/lsscommittee/Defence/15_Defence_4.pdf. Accessed on August 22, 2018; D. K Palit (1991), *War in the Himalayas* (New Delhi: Lancer International, 1991), pp. 420-421.
22. Arun Prakash, "Who Defends the Defenders", *The Indian Express*, August 23, 2018, at www.indianexpress.com. Accessed on August 23, 2018.
23. Ibid.

The Dragon Bares its Fangs: Modernisation of PLARF to Support an Expansionist Policy

Balraj Singh Nagal

Introduction

On December 31, 2015, China elevated the status and stature of its nuclear and missile forces by making the People's Liberation Army Rocket Force (PLARF) a fourth military Service alongside the Army, Navy and Air Force. Since then, the pronouncements and directions of Chinese President Xi Jinping and press releases have bolstered and further enhanced the importance that China attaches to its PLARF.

Owing to China's increasing attention on the PLARF, it becomes imperative to understand the Chinese approach to the modernisation of the PLARF and its future role. The pertinent query lies in understanding of how this capability will be instrumental in actualising China's role in the future. Keeping this context, the assessments will be drawn from a context and content analysis of the official papers and documents of press releases to determine if there is a genuine commitment to the official word or there is an asymmetry in the theory and practice. In doing so, the paper seeks to examine two key issues: first, application of the proposed thoughts and ideas; and second, evaluation of the consonance between professing and practice.

Lieutenant General **Balraj Singh Nagal** (Retd) is former Director of CLAWS.

The Duality in China's Approach: Professing Versus Practice

The 2015 White Paper on *China's Military Strategy* stated: "China will unswervingly follow the path of peaceful development, pursue an independent foreign policy of peace and a national defense policy that is defensive in nature, oppose hegemonism and power politics in all forms, and will never seek hegemony or expansion. China's armed forces will remain a staunch force in maintaining world peace".[1] However, Chinese actions, as witnessed in its artificial island build-up activities in the South China Sea, rejection of the ruling by the International Court of Justice which was against China, unilateral establishment of the Air Defence Identification Zone (ADIZ) over the East China Sea, support to North Korea, the Doklam intrusion into Bhutanese territory and others run contrary to its own propositions, as noted in the above White Paper. On the contrary, these actions exemplify China's non-conformist attitude, further suggesting that as China grows more powerful, it will become more unpredictable in its behaviour and approach. This asymmetry in theory and practice reflects the duality in the Chinese approach. This can be further assessed under a thematic perspective, as evident from the 2015 White Paper.

With respect to the application of the Revolution in Military Affairs (RMA), the White Paper notes: "The world Revolution in Military Affairs (RMA) is proceeding to a new stage. Long-range, precise, smart, stealthy and unmanned weapons and equipment are becoming increasingly sophisticated. Outer space and cyber space have become new commanding heights in strategic competition among all parties. The form of war is accelerating its evolution to informationization".[2] China has emphasised on the shift towards informationised warfare, and, in the past two decades, and more so, in the last five years, China has also made strident progress in the development and deployment of the strategy of "dual deterrence and dual operations" enunciated by Jiang Zemin post the first Gulf War. China learnt important lessons from the Gulf War on the use of precision

and guided weapons, standoff capability of weapon platforms and the power of network-centric warfare synergised by satellites. China has made a concerted effort to improve the capability of the PLARF by the induction of new technologically advanced missiles and technical enhancement of the existing missiles which has improved its precision strike and manoeuvrability of missiles. To enable the informationised (network-centric operations), China has focussed on growth in the space and cyber domains. The RMA effect on the PLARF and space capabilities will be examined later.

On the missions of the PLA, the White Paper states, "China's armed forces mainly shoulder the following strategic tasks: To deal with a wide range of emergencies and military threats, and effectively safeguard the sovereignty and security of China's territorial land, air and sea. To resolutely safeguard the unification of the motherland. To safeguard China's security and interests in new domains.To safeguard the security of China's overseas interests. To maintain strategic deterrence and carry out nuclear counterattack. To participate in regional and international security cooperation and maintain regional and world peace".[3] In comparison to the past papers, this one exhibits a new departure as the scope of China's threat perception is broadened and there is an emphasis on China's larger role in the international order. This is indicative of China's growing interest as well as the possibility of its playing a role beyond the Chinese borders. Such behaviour can be played out by active or forced participation in maintaining peace outside China, addressing military threats proactively, or even preemptive action, and development of new military capabilities in the emerging domains, specifically, space and cyber. In view of this, the way China defines its overseas interests is driven by its own interpretation that serves its own interest. This further indicates an increase in China's muscle flexing behaviour, thus, calling for great power competition.

The concept of 'active defence' needs analysis, which as the White Paper posits "is the essence of the CPC's military strategic thought. From the long-term practice of revolutionary wars, the people's armed forces

have developed a complete set of strategic concepts of active defense, which boils down to: adherence to the unity of strategic defense and operational and tactical offense".[4] To note, the initial term is defined as "unity of strategic defense", while, the second half is defined as that of "operational and tactical offense". The counter-attack actions in such a situation will result in preemptive actions to stall an offensive by the opponent. This reflects a dichotomy: if the operational and tactical aspects are offensive in nature, then it remains indisputable that the overall strategy cannot be defensive, as stated above. In view of this, all Chinese actions in war and peace should be regarded as offensive, as perceiving these otherwise results in a faulty assessment. This is evident in terms of China's behaviour towards India, as witnessed in the 1950s, 1962 or 1967, the episodes of transgressions in the past decade and, most recently, the Doklam standoff in 2017: all these clarify the duality in the Chinese interpretation of their strategy. To justify its offensive actions and intent, China portrays itself as the wronged party, even distorting historical facts to legitimise its claims.

China has transformed its strategic outlook from "winning local wars in conditions of modern technology, particularly high technology" in 1993 to that of "winning local wars under conditions of informationization" in 2004 to that of "winning informationized local wars" in 2015. As the White Paper mentions, "[t]o implement the military strategic guideline of active defense in the new situation, China's armed forces will adjust the basic point for [Preparation for Military Struggle] PMS. In line with the evolving form of war and national security situation, the basic point for PMS will be placed on winning informationized local wars, highlighting maritime military struggle and maritime PMS".[5] Furthermore, China seeks to expand its role in the maritime domain as the White Paper clearly states that the PLA Navy (PLAN) "will gradually shift its focus from 'offshore waters defense' to the combination of 'offshore waters defense' and 'open seas protection'"[6]—making a shift from defence to offence. This strategic shift is witnessed in China's increasing maritime activities

such as the setting up of a naval base at Djibouti and gaining an island at Maldives, along with access to ports such as Gwadar (Pakistan) and Hambantota (Sri Lanka), which are clear and unambiguous indicators of its intentions. In addition, the concept of maritime PMS is being addressed by increasing the PLAN's capability in terms of its amphibious and marine forces strength; acquisition of a carrierborne aircraft and long range bomber and precision missile developments. Thereby, these factors quantify the changing nature of China's strategy which is directly related to the growth of its military power.Hence, this four-fold assessment of China's approach reflects the duality in its intentions and actions vis-à-vis its proposition.

Contexualising PLARF in China's Dualist Approach

The reconstitution of the PLARF in 2015 as a military Service indicates the importance China puts on maintaining a modern missile force.In the words of Xi, the force is a "core of strategic deterrence, a strategic buttress to the country's position as a major power, and a cornerstone on which to build national security".[7] Emphasising the "irreplaceable role" played by the PLARF in containing war threats, ensuring China's strategic posture and maintaining global strategic balance and stability, Xi underlined the need to "increase its sense of crisis and strengthen its strategic ability" for the purpose of securing a safe strategic security environment for China.[8]

In this regard, the current agenda for China lies in enhancing its strategic containment capacity, combat preparedness and application of strategy. In doing so, the PLARF seeks to: strengthen the trustworthy and reliable nuclear deterrence and nuclear counter-attack capabilities; intensify the construction of medium and long range precision strike power, and, reinforce the strategic check-and-balance capability.[9] This further explains that the role of China's missile force has evolved significantly from being a nuclear deterrent force based on intermediate and medium-range missiles to becoming a force with

intercontinental- and medium-range capabilities, combined with a powerful conventional missile arm capable of conducting precision attacks at a medium range.

What is noteworthy is that despite the PLARF being upgraded, the functional objectives of the missile force are still rooted in the directions of the erstwhile Second Artillery Force. This is exemplified in the 2015 White Paper, which provides a three-fold perspective. That is, first, the aim of the PLARF is to transform itself in the direction of informationisation, press forward with independent innovations in weaponry and equipment by reliance on science and technology, enhance the safety, reliability and effectiveness of missile systems, and improve the force structure, featuring a combination of both nuclear and conventional capabilities.[10] In this regard, the PLARF will strengthen its capabilities for "strategic deterrence and nuclear counter-attack, and medium- and long-range precision strikes".[11]

Secondly, the PLARF will act as the strategic cornerstone for safeguarding national sovereignty and security, wherein, China has pursued a policy of no first use of nuclear weapons and adhered to a self-defensive nuclear strategy that is defensive in nature. China seeks to keep its nuclear capabilities at the minimum level, as required for maintaining its national security. However, there is a clear proposition that China will optimise its nuclear force structure, improve strategic early warning, command and control, missile penetration, rapid reaction, and survivability and protection, and deter other countries from using or threatening to use nuclear weapons against China.

And, finally, the PLARF will continue to keep an appropriate level of vigilance in peace-time, which will perfect the "integrated, functional, agile and efficient operational duty system".[12]

In this perspective, what demands attention is China's "No First Use" (NFU) policy. As the 2015 White Paper notes, China will "unconditionally not use or threaten to use nuclear weapons against non-

nuclear-weapon states or in nuclear weapon-free zones, and will never enter into a nuclear arms race with any other country".[13] This statement, if analysed in the context of active defence and the above context, makes the NFU limited, and not applicable to states with nuclear weapons such as the US, Russia and India. That is, to explain that if active defence is seen at the operational and tactical levels, then it implies offensive actions by the nuclear forces. Given the lack of clarity, the 2018 US Department of Defence (DoD) report states, "There is some ambiguity, however, over the conditions under which China's NFU policy would no longer apply." Some PLA officers have written publicly of the need to spell out conditions under which China might need to use nuclear weapons first; for example, if an enemy's conventional attack threatened the survival of China's nuclear force or of the regime itself. There has been no indication that national leaders are willing to attach such nuances and caveats to China's NFU policy. China's lack of transparency regarding the scope and scale of its nuclear modernisation programme raises questions regarding its future intent. PLA writings express the value of a "launch on warning" nuclear posture, an approach to deterrence that uses heightened readiness, improved surveillance, and streamlined decision-making processes to enable a more rapid response to an enemy attack. These writings highlight the posture's consistency with China's nuclear "No First Use" policy, suggesting it may be an aspiration for China's nuclear forces. To augment it further, China is working to develop a space-based early warning capability that could support this posture in the future.

What is noteworthy is that China's approach to nuclear deterrence and changes in its nuclear forces have not received much attention. It becomes imminent that developments in China's nuclear deterrent should not be ignored, given that China's nuclear weapons play an important role in the areas of potential conflict, which correlates to China's actions to push its claims. The PLARF capability has allowed China to have a strategic advantage against its opponents. At the foremost, the PLARF

has supported the thought of providing a secure and favourable strategic posture: as the power of the PLARF and the reach of its missiles increases, China will be able to support power projection capability further from the mainland and deny access to the interventionary forces of other powers. The idea of containing "war threats" is reflected in greater capability of deterrence and to punish interventionary forces, if the situation demands. Strategic stability maintenance is seen by China in the inability of the US to prevent China from continuing the militarisation of the South China Sea at the expense of the smaller nations.

Capabilities and Force Development

With the PLARF, the key query lies in understanding that if China adheres to its declared "no first use" policy and "self-defensive nuclear strategy", then can its nuclear arsenal survive a first strike? The answer to which can be traced in the way China has successively modernised its rocket forces. Elevating the PLARF's stature to that of a separate Service and given Xi's emphasis on calling it the "core of strategic deterrence" significantly indicates the direction China seeks to take to propel its actions. That is, it is indicative of China's willingness to invest in growth, modernisation and expansion of the rocket forces by strengthening capabilities, improving force structure, informationisation and innovation. This is evident in the PLARF's growth in both strength and size in the past decade in all spheres: it holds approximately 1,800 missiles, both nuclear-tipped and conventional. More specifically, the 2018 US Department of Defence Report suggests the strength to be 1,491 to 1,930 missiles of various types and launchers of 456 to 585 different types.[14]

Furthermore, in recent times, as China officially claims, the PLARF has strengthened its nuclear counter-attack and medium-long range precision strike capabilities with multiple new types of missile systems put into service.[15] This claim was advanced with the induction of the DF-26 with a probable range of 4,000 km into the PLARF—deemed

to play an important role in the killer weapons of the PLA combat troops. In addition, the PLARF is heavily invested in modernising its nuclear forces by enhancing its silo-based Intercontinental Ballistic Missiles (ICBM) and adding more survivable, mobile delivery systems. As reported, China's ICBM arsenal to date consists of approximately 75-100 ICBMs, including the silo-based CSS-4 Mod 2 (DF-5A) and Multiple Independently Targeted Reentry Vehicle (MIRV)-equipped Mod 3 (DF-5B); the solid-fuelled, road-mobile CSS-10 Mod 1 and 2 (DF-31 and DF-31A); and the shorter range CSS-3 (DF-4). The CSS-10 Mod 2, with a range in excess of 11,200 km, can reach most locations within the continental United States.[16] China is also developing a new road-mobile ICBM, the CSS-X-20 (DF-41) capable of carrying MIRVs.[17]

In the event of the PLA's 90th Anniversary Parade, China displayed, for the first time, two nuclear-capable ballistic missiles—the DF-26 and DF-31AG—providing an insight on its future nuclear deterrent. The DF-26 is an Intermediate-Range Ballistic Missile (IRBM) which is capable of conducting conventional and nuclear precision strikes against ground targets.[18] While the DF-31AG is a modified version of the DF-31A road-mobile ICBM with the primary difference of the Transporter Erector Launcher (TEL) vehicle that transports and fires the missile. The upgrades indicate that the DF-31AG is capable of making off-road launch in most kinds of terrain, with a very short preparation time.[19] With this, the PLARF now operates at least three types of ICBMs for its nuclear deterrence system: the DF-31A, DF-31AG and DF-5B.

In addition to the DF-31AG, another ground-to-ground missile that emerged for the first time at the parade was the DF-16G Medium-Range Ballistic Missile (MRBM). The DF-16, as China claims, features high accuracy, short preparation time, and an improved manoeuvrable terminal stage that can better infiltrate missile defence systems.[20] Adding further to the inventory of short range missiles, China's conventional

missile force includes the CSS-6 Short-Range Ballistic Missile (SRBM) with a range of 725-850 km; and the CSS-7 SRBM with a range of 300-600 km. This force is complemented by road-mobile, solid fuelled CSS-5 Mod 2 and Mod 6 (DF-21) MRBMs and DF-26 IRBMs for regional deterrence missions".[21] These are land-attack and anti-ship variants of the CSS-5 MRBM, and the conventionally-armed CSS-5 Mod 5 Anti-Ship Ballistic Missile (ASBM) gives the PLA the capability to attack ships, including aircraft carriers, in the western Pacific Ocean.

The DF-26, first fielded in 2016, is capable of conducting conventional and nuclear precision strikes against ground targets and conventional strikes against naval targets in the western Pacific and Indian Oceans, and the South China Sea.[22] China has developed cruise missiles in the air, land and sea variants, with ranges from 500 to 3000 km, with some of the cruise missiles carrying nuclear warheads. The land version is the CJ-10, and the sea variants include the YJ-83 series, YJ-62 ASCMs, YJ-18 (with a supersonic terminal sprint), the long range supersonic YJ-12 Anti-Ship Cruise Missile (ASCM) for the H-6 bomber. The air-launched Land Attack Cruise Missiles (LACMs) include the YJ-63, KD-88, and CJ-20 [the air-launched version of the CJ-10 Ground Launched Cruise Missile(GLCM)]. [23]

In effect, China is also developing an effective class of SSBNs (Ship, Submersible, Ballistic, Nuclear), as evident in China's *Jin*-class SSBN, with four commissioned and at least one other under construction. The *Jin*-class (Type 094), which carries the JL-2 Submarine-Launched Ballistic Missile (SLBM), marks China's "first credible at-sea second-strike nuclear capability".[24] The construction of China's next-generation Type 096 SSBN, reportedly to be armed with the follow-on JL-3 SLBM, likely is begin in the early 2020s. In addition, the PLAN's nuclear arsenal comprises up to three *Han*-class (Type-091) SSNs(Nuclear Powered Attack Submarines), two *Shang* I-class (Type-093) SSNs, and up to four improved *Shang* II-class (Type-093A) SSNs/SSGNs (Ship, Submarine, Guided, Nuclear).[25]

China is working to develop ballistic missile defences consisting of kinetic-energy exo-atmospheric and endo-atmospheric interceptors. The media has confirmed China's intent to move ahead with land- and sea-based mid-course missile defence capabilities. The HQ-19 mid-course interceptor was undergoing tests in 2016 to verify its capability against 3,000-km class ballistic missiles, and an HQ-19 unit may have begun preliminary operations in western China. Indigenous radars, including the JY-27A and JL-1A – the latter advertised as capable of the precision tracking of multiple ballistic missiles – reportedly provide target detection for the system. China has fielded SA-20 PMU2 Surface-to-Air Missiles (SAMs) and future S-400 SAMs may have some capability to engage ballistic missiles, depending on the interceptors and supporting infrastructure.[26] China is developing technologies that are necessary to counter ballistic missile defence systems, to include Manoeuvrable Reentry Vehicles (MaRVs), MIRVs, decoys, chaff, jamming, thermal shielding, and hypersonic glide vehicles. Deployment of more sophisticated Command and Control (C2) systems and refining C2 processes is in progress in view of the deployment of mobile ICBMs and future SSBN deterrence patrols.[27]

Given these developments in China's nuclear arsenal, another significant development that adds to China's growing capabilities is its development of space capability. As the 2015 White Paper reflects, "[o]uter space has become a commanding height in international strategic competition. Countries concerned are developing their space forces and instruments, and the first signs of weaponisation of outer space have appeared. […]. China will keep abreast of the dynamics of outer space, deal with security threats and challenges in that domain, and secure its space assets to serve its national economic and social development, and maintain outer space security".[28] The Congressional U.S.-China Economic and Security Review Commission reports of 2016 and 2017[29] have listed out the developments and progress by China in the fields of space support

capabilities such as space-based communication; position, navigation, and timing; space-based Intelligence Surveillance and Reconnaissance (ISR); ballistic missile warning, space launch detection, and characterisation; and environmental monitoring, offensive systems such as direct-ascent anti satellite missiles, co-orbital systems, and ground-based directed energy weapons. China's Anti-Satellite (ASAT) capability is now well established. Its first ASAT test was conducted in May 2005, however, a 2007 test destroyed a redundant Feng Yun 1C weather satellite owned by China, leaving over 3,000 dangerous pieces of debris in space.[30] The test was conducted in Low Earth Orbit (LEO), at 865 km above the Earth. A 2013 test by Beijing involved its new missile, the DN-2 or Dong Neng-2, and the test was conducted in "nearly geosynchronous orbit," where most of the ISR satellites are located.[31] While in October 2015, China tested the DN-3 exo-atmospheric vehicle, reported to be able to destroy US satellites.[32]

Along with direct-ascent ASAT weapons, China is also believed to be developing other space weapons: in June 2016, China launched the Aolong-1 or Roaming Dragon spacecraft on a Long March 7 rocket, which is equipped with a robotic arm to remove large debris such as old satellites, and is a dual-use ASAT weapon.[33] The Aolong-1 is believed to be the first in a series of spacecraft that will be tasked with collecting man-made space debris. Beijing's recent space activities indicate that it is developing co-orbital anti-satellite systems to target US space assets. To note, co-orbital anti-satellite systems consist of a satellite armed with a weapon such as an "explosive charge, fragmentation device, kinetic energy weapon, laser, radio frequency weapon, jammer, or robotic arm".[34] In addition to the "hard-kill" methods, Beijing is also testing soft-kill methods to incapacitate enemy satellites. For instance, China has been acquiring a number of foreign and indigenous ground-based satellite jammers since the mid-2000s. These jammers are designed to disrupt an adversary's communications with a satellite by overpowering

the signals being sent to or from it.[35] The PLA can use these jammers to deny an adversary access to the Global Positioning System (GPS) and other satellite signals. Directed energy lasers are also a soft-kill method that could be used in an anti-satellite mission. China has been committing resources to the research and development for directed energy weapons since the 1990s.[36]

In view of these developments, it is to suggest that criticising others and following through with similar actions and programmes is indicative of China's deceit and duality. China's progress in the space domain is spectacular to say the least and now, with the creation of the PLA Strategic Support Force (PLASSF), the military-related space missions will get a boost in both the space support and offensive missions.

Conclusion

Given this perspective, an analysis of China's officially documented strategy and policy provides a clear and concise view of China's future trajectory in international affairs and military strategy to support the enhanced and expansionist role that China visualises for itself in world affairs and regional dominance. China has asserted its claims in disputed areas by force and coercive actions, which run counter to the stated policy in the White Papers issued by the state. China also wishes to establish international rules and a world order on its own terms as articulated in the 2017 Asia-Pacific White Paper,[37] as the present liberal world order does not comply with China's political model. The revisionist approach of China is witnessed in the economic policies as demonstrated in the Belt Road Initiative (BRI). Financial and economic policies are being integrated into China's overall strategic approach to world affairs. Its participation in regional and international security cooperation and maintenance of its regional and world peace role that China visualises for itself is a clear indication that military power will be used when required. Protection of overseas interests too will involve power projection and deployment of

maritime resources at various places in the world. The enhanced role in international affairs that China has articulated will see power projection into India's maritime domain in the Indian Ocean Region (IOR) under the garb of energy security, security of the Sea Lanes of Communication (SLOCs), military assistance to countries, humanitarian assistance or anti-piracy operations.

The PLARF is being modernised, technically enhanced, qualitatively improved, structurally upgraded and quantitatively augmented for a role in containing war threats, ensuring China's strategic posture and maintaining global strategic balance and stability. The PLARF is now capable of action in the conventional missions regionally upto 4,000 km and in nuclear missions across the globe. The A2/AD (Anti-Access/Area Denial) strategy is also effective regionally and, in the future, this reach may include the Indian Ocean besides the Bay of Bengal and Arabian Sea. The PLARF is on the path laid down in the White Paper and directions given out by President Xi Jinping in the past three years, a modern and informatioanized capable missile force, ably supported by the space and cyber domains. The strategic direction to the PLA of "winning informationized local wars" refers to the periphery of China, and the disputes with India, Vietnam and Japan form the basis of the strategic directive. India, being one of the countries with territorial disputes with China, will do well not to trust China on published policies, and take appropriate actions to counter it on the violation of a rule-based world order, and coercion. The situation demands that India build capability and capacity to challenge China in case of a crisis or emergency, and work with other stakeholders to build partnerships to block its unilateral actions.

China has articulated an offensive military strategy under the façade of strategic defence, India must understand the duplicity and pretense in the wording, and plan to undertake measures and a strategy to negate active defence. While trade and economic cooperation between India

and China has increased and China has allowed India's entry into the Shanghai Cooperation Organisation (SCO), on the crucial entry to the Nuclear Suppliers Group (NSG) and the UN Security Council, China remains staunchly opposed to India. In view of this, in the future, China will see India as a challenger and competitor in the regional context. This therefore, makes it imperative for India to prepare for the desired military capability for regional competition and dominance, if and when the need arises.

Notes

1. The State Council of the People's Republic of China (2015), "China's Military Strategy", May 27, 2015, at http://english.gov.cn/archive/white_paper/2015/05/27/content_281475115610833.htm. Accessed on October 05, 2018.
2. Ibid.
3. Ibid.
4. Ibid.
5. Ibid.
6. Ibid.
7. Ministry of National Defence of the People's Republic of China, "President Xi Expects Strong, Modern Rocket Force", September 26, 2016, at http://eng.mod.gov.cn/services/2016-09/26/content_4778833.htm. Accessed on October 06, 2018.
8. Ibid.
9. Ministry of National Defence of the People's Republic of China, "China Establishes Rocket Force and Strategic Support Force", January 01, 2016, at http://eng.mod.gov.cn/DefenseNews/2016-01/01/content_4634924.htm. Accessed on October 06, 2018.
10. n.1.
11. Ibid.
12. Ibid.
13. Ibid.
14. Office of the Secretary of Defence, "Annual Report to Congress: Military and Security Developments Involving the People's Republic of China, 2018", May 16, 2018, p. 138, at http://www.ustaiwandefense.com/tdnswp/wp-content/uploads/2018/08/2018-Military-and-Security-Developments-Involving-the-People%E2%80%99s-Republic-of-China.pdf.
15. Ministry of National Defence of the People's Republic of China, "China's Rocket Force Embraces new Medium-long Range Ballistic Missile", April 16, 2018, at http://eng.mod.gov.cn/news/2018-04/16/content_4809589.htm. Accessed on October 07, 2018.
16. Office of the Secretary of Defence, Annual Report to Congress: Military and Security

Developments Involving the People's Republic of China 2016, April 26, 2016, at https://dod.defense.gov/Portals/1/Documents/pubs/2016%20China%20Military%20Power%20Report.pdf. Accessed on October 06, 2018.

17. See US Government Policy, at http://www.usago https://dod.defense.gov/Portals/1/Documents/pubs/2016%20China%20Military%20Power%20Report.pdfvpolicy.com/tag/chinese-military-developments/. Accessed on October 07, 2018.
18. Eric Gomez, "Meet the DF-31AG and the DF-26: The Big Ballistic Missiles at China's Military Anniversary Parade", CATO Institute, August 08, 2017, at https://www.cato.org/publications/commentary/meet-df-31ag-df-26-big-ballistic-missiles-chinas-military-anniversary-parade. Accessed on October 07, 2018.
19. Zhao Lei, "New Missile a More Mobile Deterrent", *China Daily*, August 05, 2017, at http://www.chinadaily.com.cn/china/2017-08/05/content_30348716.htm. Accessed on October 07, 2018.
20. n. 14, p. 36.
21. Ibid.
22. Ibid.
23. See, Dennis M. Gomley et al., "A Potent Vector: Assessing Chinese Cruise Missile Developments", *JFQ 75*, at https://pdfs.semanticscholar.org/eba3/5a3fb4507dea058f1345660f76e9b4a73f17.pdf. Accessed on October 08, 2018.
24. See, "The PLA Navy: New Capabilities and Missions for the 21st Century", at https://www.oni.navy.mil/Portals/12/Intel%20agencies/China_Media/2015_PLA_NAVY_PUB_Interactive.pdf?ver=2015-12-02-081058-483. Accessed on October 08, 2018.
25. See, "China's Submarine Force: An Overview", at https://www.iiss.org/blogs/military-balance/2017/10/china-submarine-force. Accessed on October 07, 2018.
26. n. 14, p. 60.
27. Ibid., p. 77.
28. n. 1.
29. See, "U.S.-China Economic and Security Review Commission", at https://www.uscc.gov.
30. Mark Williams Pontin, "China's Antisatellite Missile Test: Why?", *MIT Technology Review*, March 08, 2007, at https://www.technologyreview.com/s/407454/chinas-antisatellite-missile-test-why/. Accessed on October 10, 2018.
31. Harsh Vasani, "How China is Weaponizing Outer Space", *The Diplomat*, January 19, 2017, at https://thediplomat.com/2017/01/how-china-is-weaponizing-outer-space/. Accessed October 08, 2018.
32. Ibid.
33. Stephen Chen, "Is China Militarising Space? Experts say New Junk Collector Could be Used as Anti-Satellite Weapon", *South China Morning Post*, June 28, 2016, at https://www.scmp.com/news/china/diplomacy-defence/article/1982526/china-militarising-space-experts-say-new-junk-collector. Accessed on October 08, 2018.
34. Bill Gertz, "New Details of Chinese Space Weapons Revealed", *The Washington Times*, October 14, 2015, at https://www.washingtontimes.com/news/2015/oct/14/inside-the-ring-details-of-chinese-space-weapons-r/. Accessed on October 08, 2018.

35. Vasan, n. 31.
36. Ibid.
37. The State Council of the People's Republic of China (2017), "China's Policies on Asia-Pacific Security Cooperation", January 2017, at http://english.gov.cn/archive/white_paper/2017/01/11/content_281475539078636.htm. Accessed on October 08, 2018.

Artificial Intelligence in Armed Forces: An Analysis

P K Mallick

Introduction

Today is the age of the Fourth Industrial Revolution. The current period of rapid, simultaneous and systemic transformations driven by advances in science is reshaping industries, blurring geographical boundaries, challenging existing regulatory frameworks and even redefining what it means to be human. Artificial Intelligence (AI) is the software engine that drives the Fourth Industrial Revolution. AI is creating targeted marketing, safer travel through self-driving cars, smarter weapons and new efficiencies in manufacturing processes, supply chain management and agricultural production. It holds the promise of solving some of the most pressing issues facing society, but also presents challenges such as inscrutable "black box" algorithms, unethical use of data and potential job displacement.

Artificial intelligence comprises machine programmes that can teach themselves by harnessing High Power Computing(HPC) and big data, and eventually mimic how the human brain thinks, supports and enables nearly every sector of the modern economy. Corporations and governments are fiercely competing because whoever is the frontrunner in AI research and applications will accrue the highest profits in this fast

Major General **P K Mallick** VSM (Retd) was a Senior Directing Staff (SDS) at the National Defence College, New Delhi.

growing market and gain a military technological edge. AI itself will not manifest just as a weapon. It is an enabler that can support a broad spectrum of technologies.[1]

These technologies are starting to have a transformative effect on defence capability. AI will have digital, physical and political security implications, expanding existing threats, introducing new threats and changing the character of threats and of war. These changes could include the automation of social engineering attacks, vulnerability discovery, influence campaigns, terrorist repurposing of commercial AI systems, increased scale of attacks, and manipulation of information availability. This has caused countries around the world to become increasingly aware of the impact of AI. There has been tremendous activity concerning AI policy positions and the development of an AI ecosystem in different countries over the last 18 to 24 months. To cite a few examples, the US published its AI report in December 2016; France published its AI strategy in January 2017 followed by a detailed policy document in March 2018; Japan released a document in March 2017; China published its AI strategy in July 2017; India published a Task Force report in August 2017, and the UK released its industrial strategy in November 2017.

Global investments in artificial intelligence for economic and national security purposes are increasingly being described as an arms race. The character of AI technology, like robotics, makes many countries well-positioned to design and deploy it for military purposes. In Southeast Asia, Singapore is on the cutting edge of AI investments (both military and non-military). In the military domain, South Korea has developed the SGR-A1, a semi-autonomous weapon system designed to protect the demilitarised zone from attack by North Korea and others.

This explains that AI is increasingly becoming a key component of national security. As India's 2017 Task Force report states:[2] "AI can be a force-multiplier for several national security missions. Potential applications include Autonomous Underwater Vehicles (AUVs) and

Unmanned Combat Aerial Vehicles (UCAVs) for underwater and aerial defence operations as well as coastal and border surveillance; robot mules for unburdening soldiers; robots for counter-IED and counter-terrorism operations and close-in-protection systems against cruise missiles and similar aerial threats […]".[3] In view of this, national security imperatives require that technology-based force multipliers be developed. In doing so, some areas where AI-based systems could be usefully deployed are: autonomous surveillance and combat systems, adaptive communications systems, AI-based cyber attack mitigation and counter-attack systems and, multi-sensor data fusion-based decision-making systems.

Changing Nature and Character of War

Military professionals swear by the maxim given by Carl von Clausewitz that "war's nature does not change—only its character". The former describes 'what war is' and the latter describes 'how it is actually fought'. From a Clausewitzian perspective, that war is human fundamentally defines its nature.[4] In view of this, war's nature is violent, interactive and fundamentally political. However, the character of war describes the changing way that war as a phenomenon manifests in the real world. War's conduct is undoubtedly influenced by technology, law, ethics, culture, methods of social, political, and military organisation and other factors that change across time and place.[5] The character of warfare changes in "concert with the tools that become available and how they influence the ways militaries organise themselves to fight wars".[6]

There is an argument that AI has the potential to go beyond shaping the character of war and change the nature of war itself. The key query posed is: can AI alter the nature of war itself because wars will be fought by robotic systems, not people, and because of AI's potential to engage in planning and decision-making that were previously human endeavours?[7] To which, US Defence Secretary James Mattis speculated in February 2018 that AI is "fundamentally different" in ways that raise questions

about the nature of war.[8] Former US Deputy Secretary of Defence Robert O. Work said, "Rapid advances in artificial intelligence and the vastly improved autonomous systems and operations they will enable are pointing towards new and more novel war-fighting applications involving human-machine collaboration and combat teaming".[9] The role of educated humans will begin to concentrate on the higher cognitive tasks of processes such as mission analysis, operational planning, and assessments. More specifically, in relation to future conflict, as ambiguity will increase despite interconnectedness, the velocity and scale of activity will make it difficult to discern the important from the unimportant and the real from the fake. In this scenario, adversary spoofing, deception and data manipulation and corruption will create a common operational picture that is part fact, part fiction. This uncertainty in situational awareness will feed decision cycles that will be compressed by pervasive data and near instantaneous communications.

With these systemic changes, the character of warfare will clearly change, and these changes could significantly influence the Clausewitzian elements that frame our understanding of war's nature. However, autonomy will change the nature of war in several ways, as suggested:[10] (a) It could weaken the role of political direction by forcing response delegation to lower echelons for faster forms of attack. (b) Autonomy can lessen the ability of governments to gain the support and legitimacy of their populations, while making it easier for foreign governments to manipulate their adversary's populations. (c) Deep learning forms of AI will augment the intuition and judgment of experienced commanders. (d) Automated technologies could reduce popular support for professional military institutions, which, paradoxically, could free governments to employ force more readily since the political consequences are reduced. (e) As with the earlier ages, friction and uncertainty will endure. (f) The age of autonomy can introduce new forms of friction while reducing human factors in tactical contexts. To which, the most significant elements of

"war, violence, human factors, and chance, will certainly remain", and "so too, will fog and friction".[11] War's essence as politically directed violence will remain its most enduring aspect, even if more machines are involved at every level. As technology advances at a rapid pace, the nature and character of war will be changed. In the upcoming military revolution of autonomy, we will have to consider new sources of combat power and assess how they impact each level of war.[12]

Given this changing nature of warfare, the US Department of Defence (DoD) has developed a multi-decade strategy for applying a suite of advanced technologies to nearly every facet of its operations. In the first phase, the DoD will create a more intelligent force, using AI to enhance platforms, munitions and decision processes. As these technologies mature, the US aims to create a more autonomous force, pairing AI enabled systems with human military personnel to accentuate the strengths of each, enabling faster decisions and better combat outcomes. In the more distant future, "swarms" of advanced cognitive robots may redefine combat operations in the battle space, as explained in Fig 1 below.

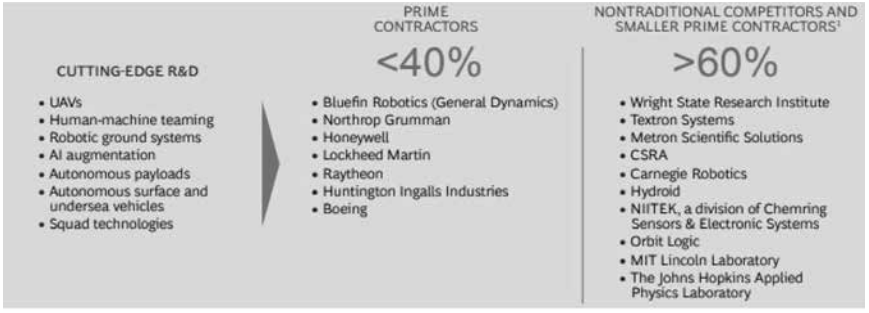
Fig 1: Assessment of the Impact of AI and Robotics on Future US Military Operations

		SAMPLE APPLICATIONS				
		LAND	SEA	AIR	SPACE	CYBER
US battle network	Sensors	• Sensor-laden robotic ground vehicles	• Long-endurance autonomous surveillance	• Sensing distributed to "attritable," or unmanned, wingmen	• AI-enhanced situational awareness in space	• AI-enabled cyber-monitoring and triage
	Command, control, communications, and intelligence	• Autonomous AI processing • Cooperative human-machine interfaces and augmented decision making				
	Effects	• Armed ground vehicles • Intelligent nonkinetic engagement	• Autonomous "swarms" of small robotic platforms • Systems to counter UAVs, surface swarms	• Attritable wingmen capable of conducting air-to-air combat	• Autonomous antisatellite counter-measures	• AI-enabled cyberoffense and cyberdefense
	Logistics	• Autonomous support (for example, pack robots, resupply systems, and aerial refueling UAVs) • Modernized distribution centers optimized with warehouse robots, industrial Internet of Things, and big data				
Force delivery (for example, training)		• Physical or virtual autonomous systems for use in training • Greater demand for simulation equipment and services				

Source: Eric Gons et al. (2018).[13]

The DoD is bringing in key technologies from commercial industry, increasing the scope of competition that prime contractors face. Prime contractors may be tempted to cede the AI and robotics market to small niche players or sub-contractors. More than 60 per cent of the robotics focussed contracts in the President's Budget for Fiscal Year 2017 were awarded to non-traditional defence players or small prime contractors, as shown in Fig 2 below.

Fig 2: Estimated Share of Programmes for Unmanned, or Autonomous Technologies



Source: Eric Gons et al. (2018).[14]

What makes AI significant is the fact that it can operate in several dimensions, such as:

- It can be used to direct physical objects, such as robotic systems, to act without human supervision. Whether in tanks, planes or ships, AI can help reduce the need to use humans, even remotely, or as part of human machine teams. Swarm techniques generally involve the creation of supervised algorithms that direct platforms such as drones.
- AI can assist in processing and interpreting information. Image recognition algorithms can be used for tagging. Project Maven is a US military programme that seeks to develop algorithms to automate the process of analysing video feeds captured by drones.

- Overlapping narrow AI systems could be used for new forms of command and control, operational systems, including battle management, that analyse large sets of data and make forecasts to direct human action or action by algorithms.
- Future AI systems offer the potential to continue maximising the advantages of information superiority, while overcoming the limits in human cognitive abilities. AI systems, with their near endless and faultless memory, lack of emotional investment and potentially unbiased analyses, may continue to complement future military leaders with competitive cognitive advantages.

Given the multi-dimensional nature of AI, its emerging significance will be played out in the following areas:[15]

First, military exploitation of AI and autonomous systems is inevitable. The challenges and realities of big data, complex networks and systems, uncertain environments, ubiquitous and intense peer competition are drivers in both the commercial and military spaces and steer each toward a common set of solutions. Once advanced AI is achieved, it will quickly spiral into almost every area of the commercial, governmental and military domains.

Second, early adoption of AI enabled technology is critical because potential adversaries will develop and field capabilities without constraint. These leap ahead capabilities could be so game changing that the difference between finishing first and finishing next could mean years of decisive advantage in every meaningful area of warfare. The legacy combat systems, even with version improvements and upgrades, may well be rendered outmatched and ineffective by AI-enabled unmanned autonomous systems, cyber dominance and swarms.

Third, significant acquisition, budget, and cultural inertia exists which could impact the Army's ability to gain advantages with AI technologies. The armed forces currently take a risk adverse approach to acquisition and

requirements, waiting for technologies to mature before prototyping and experimentation. In order for the armed forces to become an innovative organisation, they must promote an innovative culture, accept risk and leverage new ideas, while collaborating and partnering on experiments to enhance creativity.

Fourth, leader development for AI technologies must begin now. The current Army leadership requirements model addresses leader development focussed on human-to-human relationships, but the future will challenge leaders with more human-machine relationships.

Fifth, the moral considerations of AI technologies should be addressed before the technology matures. AI technologies increasingly remove the soldier from the conflict. The Army must begin to mitigate the potential harmful impacts of these technologies now. Operators of unmanned and semi-autonomous systems must understand how the AI processes moral dilemmas, the potential ethical shortcomings of these decisions, and how to ensure ethical decisions are made.

This explains that by distancing the human from conflict, technology lowers not only the costs and risks associated with war, but the political bar to initiating hostilities as well. Legacy attributes of the Army such as flexibility, mobility and expeditionary skills may be replaced by new attributes such as predictive, continuously learning, unknowable, decentralised and compelling. These AI technologies have the potential to change the character of conflict.

Effect of AI Technology on Warfare

Sophisticated AI programmes can now manipulate sounds, images and videos, creating impersonations that are often impossible to distinguish from the original. Deep learning algorithms can, with surprising accuracy, read human lips, synthesise speech and, to some extent, simulate facial expressions. Given the emerging role of AI technologies, their effect is most potent in the field of warfare, wherein the areas to witness the impact are:

- **Intelligence, Surveillance, and Reconnaissance:** Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) are reaching new heights of efficiency that enable data collection and processing at an unprecedented scale and speed. AI is useful in intelligence due to the large data sets available for analysis and helps automate the work of human analysts who currently spend hours sifting through videos for actionable information.
- **Military Drones for Surveillance:** Military units across the world are employing drones to: (a) channel remote communication, both video and audio, to ground troops and to military bases; (b) track enemy movement and conduct reconnaissance in unknown areas of a war zone; (c) assist with mitigation procedures after a war by searching for lost or injured soldiers and giving recovery insights for a terrain and; (d) aid with operations like peace-keeping and border surveillance. While drones help in guarding aerial zones, robots can be deployed on land to assist soldiers in ground operations. Robot fleets function like soldier units and carry out collaborated armed activities using multiple techniques. They are self-reliant, adaptable, and have their fault tolerant systems, all of which contribute to their ability to make and execute decisions swiftly and competently.
- **AI-Assisted Decision-Making:** AI assisted decision-making could help leaders at all levels rapidly design, plan and evaluate operations. Through a continuous deliberative planning process, the AI could update and evaluate the plans against the operational environment. The AI would continuously monitor the environment and warn planners when assumptions are no longer valid or if there is an opportunity to improve the plans. The true power of AI will be in the teaming of the human mind with the AI mind. This type of man-machine teaming will combine human strengths of goal setting, creativity, and ethical thinking with AI strengthening the rational thought through self-taught experience, intuition and deep forecasting.

- **AI-Assisted Common Operating Picture (COP):** AI would catalogue and display a disposition of friendly and enemy forces, automatically built and updated through a big data approach. Despite incomplete intelligence, an AI supported COP could tell where an enemy should be with a corresponding level of confidence. In real time, the AI would continuously interpret the situation, explore multiple lines of effort and determine which is most likely to meet the given success criteria. Based on this, the COP would recommend the next actions and predict likely enemy responses.[16]
- **Cyber Space:** AI systems play a powerful role in cyber space for both defensive and offensive measures. AI systems can perform predictive analytics to anticipate cyber attacks by generating dynamic threat models from available data sources that are voluminous, ever-changing and often incomplete. These data include the topology and state of network nodes, links, equipment, architecture, protocols and networks. AI may be the most effective approach to interpreting these data, proactively identifying vulnerabilities and taking action to prevent or mitigate future attacks.
- **Logistics:** AI is expected to play a crucial role in military logistics and transport. The effective transportation of goods, ammunition, armaments, and troops is an essential component of successful military operations. AI has the potential to help the larger Army reshape its tooth-to-tail ratio and free up additional soldiers for critical areas like combat arms and intelligence, surveillance and reconnaissance.
- **Intelligence:** The Intelligence Community (IC) faces daunting challenges of volume and velocity as well as an everincreasing complexity of variety of data.[17] This results in an inability to fuse data to create multi-sourced intelligence as early in the intelligence cycle and as close to the point of collection as possible. In this regard, AI and machine learning will be instrumental in increasing the effectiveness of the future intelligence analyst workforce, improving the odds of

gaining and sustaining a competitive or temporal advantage. Digital transformation, methodical multi-domain data integration, and algorithmic warfare will be the heart of the intelligence enterprise's role in sustaining a long-term competitive advantage.[18] In doing so, intelligence challenges should be addressed in a two-fold way: embracing machine-learning algorithms that can parse data, learn from the data, and then respond and, encouraging creativity and deep thinking by intelligence professionals.[19]

- **Autonomous Weapons Systems (AWS):** AWS offer potential advantages in future warfare but also present many legal and ethical challenges in addition to the inherent risk in turning over decision-making to machines. Queries such as, if an AWS engages and kills civilians, then who is responsible? What role does the military perform in making ethical decisions if machines and algorithms are executing them? In this regard, the ethical question of whether or not Lethal Autonomous Weapons Systems (LAWS) should be permitted to make life and death decisions is receiving much attention. Several countries continue to develop LAWS that would be capable of completely independent operation if desired. In view of this, the Vice Chairman of the Joint Chiefs of Staff, US Air Force, Gen Paul Selva, has argued that humans should be kept in the decision-making loop. The UK's Foreign Office did not support an explicit prohibition on the use of LAWS because it felt International Humanitarian Law (IHL) provided sufficient regulation. The UK armed forces, however, only operate weapons systems that are subject to human oversight and control.
- **Drones:** The recent drone attack on Venezuelan President Nicolas Maduro has brought to the fore a new aspect of terror attack by unmanned aircraft. This incident suggests how easy drones are to use and how difficult they are to defend against. The use of weaponised drones by lone individuals and small groups, some acting as proxies of nation-states, is no longer just a concern for the future, but also

very much for the present.[20] Countries are now using armed drones in combat—Nigeria, Pakistan, and Turkey have recently done so—and the chances for sophisticated drone technology getting into the wrong hands increases exponentially.[21] If a terrorist group can steal or purchase a drone from a rogue state or corrupt military or intelligence officials, then they could rely on the myriad online videos posted that essentially demonstrate how these unmanned systems may be used to conduct an attack.[22]

- **Swarms:** Specifically, with the armed forces, the advantage lies in adopting a 'swarm mindset'. To argue, such a change would largely be seen in the movement away from the single, exquisite weapons platforms to those that are small, cheap, unmanned, expendable and fast. There are many operational advantages of swarms in terms of autonomy, quantity and speed. Unmanned systems can take greater risks by reducing survivability while maintaining lethality and increasing deployability.

AI in Indian Context

At the event of the DefExpo on April 11, 2018, Indian Prime Minister Narendra Modi categorically stated that "[n]ew and emerging technologies like AI and robotics will perhaps be the most important determinants of defensive and offensive capabilities for any defence force in the future. India, with its leadership in the information technology domain, would strive to use this technology tilt to its advantage".[23] This reflects India's inclination to develop artificial intelligence-based weapon and surveillance systems for future use.

Owing to the emerging role of AI in national security, the 2017 Task Force report has made some significant propositions:[24] First, a consortium of Micro, Small and Medium Enterprises (MSME) industries to be created for the development of autonomous systems such as Unmanned Aerial Vehicles (UAVs) and Underwater Unmanned Vehicles

(UUVs), including sub-systems and components. Second, provision of grants, realistic data and cyber security tools to develop methodologies for protecting digital assets and data from external cyber threats and attacks. Third, existing infrastructure, including the National Intelligence Grid (NATGRID), Human Intelligence (HUMINT), Signal Intelligence (SIGINT), Communication Intelligence (COMINT), imagery data and video surveillance from aircraft, Closed Circuit Television (CCTV) data from urban areas and critical infrastructure locations, and radar data and satellite imagery to be integrated on a unified platform. This suggests that India seeks to embed AI-based techniques in the backbone of the platform to provide need-based real-time information to various security agencies involved in threat mitigation.

Although there is no official military strategy document on the usage of AI in the battlefield, there are several potential applications in the "low-hanging fruit." Among these applications are logistics and supply chain management, cyber operations, intelligence and reconnaissance.[25] Furthermore, Research and Development (R&D) on defence applications of AI is conducted under the Centre for Artificial Intelligence and Robotics (CAIR), established by the Defence Research and Development Organisation (DRDO) in 1986. Over three decades, CAIR has worked on building integrated, networked information systems, data mining tools, robotics, and other AI-enabled products for the Indian military.

For India, AI would significantly help improve the ability of Indian forces to secure the 8,600 miles of land border it shares with other countries. For instance, the Border Security Force (BSF) is working on a pilot programme called the Comprehensive Integrated Border Management System (CIBMS), which would put in place an electronic surveillance system monitored by BSF personnel. Similarly, integrating AI-enabled image recognition and automated alerts into the system would greatly aid in the speed and efficiency of a BSF response.

Another practical application of AI is in improving battlefield operations using all-terrain reconnaissance. In February 2018, the DRDO successfully tested the Rustom 2 UAV, and is reportedly developing a "Multi-Agent Robotics Framework" (MARF), a system that will enable the Indian Army's many battlefield robots to collaborate with each other on surveillance and reconnaissance. Likewise, the DRDO is also developing Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) UAVs to detect radiation, as well as Remotely Operated Vehicles (ROVs) for surveillance and Improvised Explosive Device (IED) disposal.

In order to fully exploit their potential, the Indian military needs to build a close working relationship with the vibrant private technology sector in India, and especially with start-ups working in the AI domain. However, this will involve handing over potentially sensitive data to private firms so as to enable the building of AI systems that can meet the specific needs of the Indian armed forces. This is entirely an uncharted territory. In view of this, to assuage the valid concerns that may arise with sensitive data being in private hands, a unique legal 'trust model' needs to be built that accounts for the needs of the military and technological innovation. While the development of such a model may, in fact, prove to be a tougher task than the simple integration of AI technologies, it needs to be done if the Indian military is to prepare itself for warfare in the 21st century.[26]

Conclusion

Big-data analysis and machine-learning algorithms are already available and vastly expand information processing capabilities. AI is already a military reality. Automated decision-making will play an increased role at every level of the command and control process, from swarming miniature UAVs to the national command authority. Genuine AI in the scientific sense may still be years away, but it is not too early to begin establishing normative limits for LAWS through IHL and military rules of engagement, in anticipation of this eventuality.[27]

In addition to these battlefield roles, AI will transform other military activities, including logistics, intelligence and surveillance and even weapons design. Collectively, these activities, mostly tactical in nature, will have a transformative effect on the strategy of those states employing them. This is because militaries that can successfully develop and utilise them will experience a dramatic increase in fighting power relative to those that cannot.

At present, many pertinent AI technologies are immature. Modern unmanned aircraft in service can operate autonomously, but cannot yet execute the sorts of complex missions that manned equivalents can achieve. Land robots are clumsy on uneven terrain. Sceptics rightly point to previous bursts of enthusiasm for AI, followed invariably by disappointment and stagnation as concepts fail to deliver significant breakthroughs in autonomous decision-making. There is considerable wariness that the hype and publicity surrounding deep learning will not pan out as dramatic breakthroughs. Nevertheless, the rapid progress in AI research, especially of hybrid approaches that utilise multiple AI techniques, along with increasingly powerful hardware on which to run algorithms, suggests the potential for AI to significantly affect existing military activities in the short to medium term, even if it falls short of simulating human level cognition any time soon.

Technological innovations could have large scale consequences for the global balance of power and international conflict. Yet their impact is generally determined by how people and organisations use the technology rather than by the technology itself. Militaries around the world will have to grapple with how to change recruiting and promotion policies to empower soldiers who understand algorithms and coding, as well as potential shifts in force structure to take advantage of AI-based coordination on the battlefield. It is too early to tell what the impact of AI will be, but technology development suggests it will have at least some effect.

Notes

1. Manju Bansal, "AI is the New Black," *MIT Technology Review*, February 27, 2017, at https://www.technologyreview.com/s/603748/ai-is-the-new-black/.
2. Department of Industrial Policy and Promotion, "Report of the Artificial Intelligence Task Force", August 2017, at http://dipp.nic.in/whats-new/report-task-force-artificial-intelligence.
3. Ibid., p. 6.
4. Michael E. Howard and Peter Paret, eds., *On War: Carl von Clausewitz* (Princeton, NJ: Princeton University Press, 1989).
5. F. G. Hoffman, "Exploring War's Character and Nature: Will War's Nature Change in the Seventh Military Revolution", *Parameters*, Vol. 47, No. 4, 2017, p. 23, at https://ssi.armywarcollege.edu/pubs/parameters/issues/Winter_2017-18/5_Hoffman.pdf
6. Michael C. Horowitz, "Artificial Intelligence, International Competition and the Balance of Power", *Texas National Security Review*, Vol. 1, No. 3, May 2018, pp. 46-47, at file:///C:/Users/JASH/Downloads/TNSR-Vol-1-Iss-3_Horowitz.pdf.
7. Ibid., p. 47.
8. Ibid.
9. Robert O. Work and Shawn Brimley, "20YY: Preparing for War in the Robotic Age", Centre for a New American Security, January 2014, at https://fortunascorner.com/wp-content/uploads/2014/05/cnas_20yy_workbrimley.pdf.
10. Kareem Ayoub and Kenneth Payne, "Strategy in the Age of Artificial Intelligence", *Journal of Strategic Studies*, Vol. 39, No. 5-6, 2016, pp. 793-819.
11. Hoffman, n. 5, p. 31.
12. Ibid.
13. Cited in Eric Gons et al., eds., "How AI and Robotics will Disrupt the Defense Industry", *The Boston Consulting Group*, 2018, p. 2, at http://k1.caict.ac.cn/yjts/qqzkgz/zksl/201804/P020180426375927121069.pdf.
14. Ibid., p. 3.
15. See "The Operational Environment and Changing Character of Future Warfare", at http://www.arcic.army.mil/App_Documents/The-Operational-Environment-and-the-Changing-Character-of-Future-Warfare.pdf.
16. Sean Kimmons, "With Multi-Domain Concept, Army Aims for 'Windows of Superiority'", U.S. Army, November 14, 2016, at https://www.army.mil/article/178137/with_multi_domain_concept_army_aims_for_windows_of_superiority.
17. The IC is challenged to acquire, manage, correlate, fuse, and analyse ever increasing amounts of data across agencies. Data in the IC are generated in too many diverse formats, in too many disconnected or inaccessible systems, without standardised structures and without overarching agreed upon ontology. This situation risks wasted collections, lack of timeliness, missed indications and warnings and lack of relevance for decision-making.
18. Cortney Weinbaum and John N.T. Shanahan, "Intelligence in a Data-Driven Age", *Joint Force Quarterly*, Vol. 90, 2018, at http://ndupress.ndu.edu/Portals/68/Documents/

jfq/jfq-90/jfq-90_4-9_Weinbaum-Shanahan.pdf?ver=2018-04-11-125441-307.

19. The following actions need to be taken: intelligence analysts need to be trained on how to recognise attempts by an adversary to use altered or manipulated data, including understanding how to use AI to maximum advantage to prevent even the more sophisticated influence operations from affecting the desired operational outcomes. Data should not be treated as an IT problem; instead, IT systems should be framed by the operational problems they solve. Rapid data access requires effective data management, which calls for new skill sets and expertise, such as data architects and data scientists. Network access across all security domains, access to all relevant data types and agile integration of disruptive technologies are key to achieving and sustaining decision advantage. Publicly available information and open source information will provide the first layer of the foundation of our intelligence knowledge.
20. Lone actors or small cells of terrorists, criminals, or insurgents can effectively harness the tactical flexibility of a small drone to wreak havoc, including potentially using a drone to take down an airliner. State sponsorship of terrorist groups also increases the likelihood of drone attacks, since states can provide the necessary equipment and training, ensuring that terrorist attacks featuring weaponised drones is a near fait accompli in the not so distant future.
21. Colin P. Clarke, "Approaching a ;New Normal': What the Drone Attack in Venezuela Portends", Foreign Policy Research Institute, August 13, 2018, at https://www.fpri.org/article/2018/08/approaching-a-new-normal-what-the-drone-attack-in-venezuela-portends/
22. A scenario universally feared by law enforcement and security services is the use of a small drone to deliver chemical or biological agents in an attack.The possibility that drones could be used to disperse deadly agents or viruses over a sports stadium or public gathering place is a harrowing prospect. See Ibid..
23. Quoted in "India Looking to Step up its AI Game in Defence", *Dailyhunt*, July 06, 2018, at https://m.dailyhunt.in/news/india/english/business+world-epaper-bizworld/india+looking+to+step+up+its+ai+game+in+defence-newsid-91709767.
24. n. 2.
25. R. Shashank Reddy, "How AI can Help the Indian Armed Forces", *Livemint*, March 05, 2018, athttps://www.livemint.com/Opinion/EzKziDVFvruJ0KLJF7ySQM/How-AI-can-help-the-Indian-Armed-Forces.html
26. Amber Sinha et al., "AI in India: A Policy Agenda", The Centre for Internet and Society, September 05, 2018, athttps://cis-india.org/internet-governance/blog/ai-in-india-a-policy-agenda.
27. Kenneth Payne, "Artificial Intelligence: A Revolution in Strategic Affairs?", *Survival: Global Politics and Strategy*, Vol. 60, No. 5, October–November 2018, pp. 7-32, at https://www.iiss.org/publications/survival/2018/survival-global-politics-and-strategy-octobernovember-2018/605-02-payne.

Quest for Nagalim: Mapping of Perceptions Outside Nagaland

Pradeep Singh Chhonkar

Introduction

The Nagas of Nagaland could always identify themselves with the Naga identity due to being in a state named after their own collective identity. However, the Naga tribes outside Nagaland, especially those of Manipur and Assam, always had a strong reason to reassert their Naga-ness. The response to the idea of a separate Nagalim has been wide-ranging across the entire region affected by Naga insurgency.

A Framework Agreement was signed between the Government of India and the National Socialist Council of Nagaland (NSCN-IM) on August 03, 2015. The agreement affected four states and approximately 35 Naga and other ethnic tribes inhabiting the traditional Naga areas. The agreement set three crucial parameters for the detailed settlement. First, it recognised that the Naga 'history and situation' was unique. Second, it proposed that sovereign powers would be shared between the Centre and the Nagas through a division of competencies, that is, through renegotiating the Union, State and Concurrent Lists of competencies of the Indian Constitution. Third, the two sides would strive for a mutually acceptable and peaceful settlement.

While details of the accord are still shrouded in secrecy, it has been indicated that there will be no modification to the state boundaries. There

Brigadier **Pradeep Singh Chhonkar** SM, VSM, is former Research Fellow at IDSA and presently commanding a Brigade in Northeast India.

are indications about facilitation of cultural integration of the Nagas through special measures, and provision of financial and administrative autonomy of the Naga dominated areas in other states.

Response from Naga Tribes in Manipur

There is speculation among the Nagas of Manipur with respect to the likely solution that may emerge out of the ongoing negotiations. The range of possibilities include: (i) greater autonomy only for the Nagas within the state of Nagaland with a statutory pan-Naga body with legislative, budgetary and negotiating powers for all the Naga inhabited areas; (ii) pending the integration of the Naga areas outside Nagaland into a single administrative unit, creation of Regional Autonomous District Councils for the Naga-inhabited districts of Manipur, Arunachal Pradesh and Assam, with greater autonomy for the Nagas only within the state of Nagaland; (iii) Special Naga Law (may be named as the Naga Constitution) incorporated in the Indian Constitution, with division of competencies between the Centre and the Nagas, with full rights to exploit all the natural resources by the Nagas within the Naga dominated areas. The Naga tribes of Manipur maintain the stance that the integration of all the Naga inhabited areas outside Nagaland into a single unit with an alternate system of administration is a non-negotiable factor in any resolution roadmap for the Nagas. At the same time, they are also apprehensive of the loss of land and property in the event of the imposition of the socialist ideology of the NSCN (IM) after a possible change of regime post successful conclusion of the ongoing negotiations. The responses of the major Naga tribes inhabiting the Naga areas of Manipur are given in the succeeding paragraphs.

The Mao

The Mao tribe inhabits the northern hills of Manipur bordering the areas of Nagaland. Not a single Mao village in Manipur participated in the

Naga plebiscite of 1951. The participation of people from the Mao tribe was led by one Beshikho Chaumai who joined the Naga National Council (NNC) in 1955. In the ensuing years, after the split within the NNC and later within the NSCN, the support of people from the Mao tribe also got divided.

Today, a majority of the Mao people believe the NSCN (IM) to be the sole voice of the Nagas in their quest for a separate Nagalim or Greater Nagaland. They support the ongoing peace talks between the Government of India and the NSCN (IM) and aspire for greater Naga unity through territorial integration of the Naga inhabited areas. The Maos are not in favour of centralised codification of their existing customary laws and practices as they prefer a federal structure for the Nagas, giving greater socio-political and cultural autonomy at the tribe / village level.

The Poumais

The Poumais were one of the largest Naga tribes before the colonial intervention. In 1950, people belonging to the Poumai tribe decided to pay tax to the Kohima administration, and live together with the Naga tribes of Nagaland. However, the Meitei King forced them to pay tax to the state of Manipur. This was opposed by the Poumais, and resulted in large scale violence in the region. Consequently, the administrative boundaries of the Poumai inhabited areas were redefined. This resulted in the fragmentation of Poumai territory and marginalisation of the tribe. Their traditional territory is now divided into three different administrative divisions viz, Phutsero in Nagaland, Somsai (Ukhrul) and areas of Senapati district in Manipur. They seek to integrate their territory as part of the proposed Nagalim. There is also rift between the Poumais and the Tangkhuls over the allegation of conversion of the people of Thiwa Poumai village into the Tangkhul tribe against the wishes of the people. In the past, there were indications of fissures between the people of the Poumai tribe and the NSCN (IM).

The Poumai community demands immediate withdrawal of the bifurcation of Shepoumaramth region allegedly created by the NSCN(IM) for so-called 'administration convenience'. The Poumais feel that certain quarters of the NSCN are working against the natural rights of the tribe behind the silver lining of the peace process. This makes the community feel betrayed.

The Poumai tribe stands for the territorial integration of the Naga inhabited areas. They support the ongoing Naga peace talks and seek greater integration between the NSCN(IM) and the tribal leaders under the aegis of the Naga People's Organisation (NPO) as part of the peace negotiations. They are opposed to the idea of centralised codification of Naga customary laws and practices, and believe that the same should be left to respective tribes to decide.

The Thangals

The Thangal population is divided in five constituencies in Manipur, which include Karong, Tadubi, Kangpokpi, Saitul and Saikul. They resent the division of traditional Thangal territory due to intervention by the NSCN(IM). The Shepou-Maram Administrative Region of the NSCN(IM) for the Naga tribes of north Manipur discounts the presence of the Thangal tribe in the Maram circle, and recognises their habitation only in the areas of the Shepou circle. This has resulted in the marginalisation of the Thangals in Manipur. The Thangals aspire for a distinct identity and prefer a centralised system of administration for the Nagas as against a federal system. Thangal leaders seek territorial integration of all the Naga inhabited areas under a single administration.

The Marams

The Marams believe that the current peace negotiations stand a greater chances of success as they appear more consultative and inclusive in nature. The review and consultative meetings involving apex Naga tribal

bodies and the NSCN(IM) are held on a regular basis as against the earlier days when the peace negotiations were restricted to a chosen few. They prefer a centralised system of administration for the Nagas. They want the jurisdiction over the customary practices to remain with individual tribes and seek greater involvement of tribal organisations in the Naga peace process.

The Tangkhuls

A civil society body known as the Manipur Naga Council was formed in 1956, merging with the NNC in 1957. Soon, the Tangkhuls started calling themselves Nagas and took the role of leadership in the Naga politics in Manipur. They felt the necessity of a common identity with a broad based foundation as part of the democratic set-up of government. They found a better alternative in the form of the Naga identity. The great awakening among the Tangkhuls for the 'Naga' identity aroused the spontaneous response from other tribes in Manipur to accept the term 'Naga' as their common identity. It is in this process that the Naga groups have united under the Naga identity, with each tribal group maintaining its separate entity in Manipur.[1]

The Tangkhul extremists were not willing to become part of the numerically dominant Meitei society and, hence, they decided to join the revolution for Greater Nagaland. Ukhrul and Kamjong districts, with their overwhelmingly Tangkhul Naga population, support the call by the NSCN (IM) for the "integration of Naga-inhabited areas outside Nagaland into a single political unit of Greater Nagaland / Nagalim". Tangkhul dominance in the NSCN (IM) top leadership is a cause for concern amongst the other Naga tribes in the outfit from Nagaland and Manipur.

The Tangkhuls look for greater emphasis on centralised governance for the Nagas as the existing arrangement under the Village Authority Act has proven to be ineffective. To them, integration of the Naga areas is

essential as it would result in bringing all the Naga tribes and areas under centralised governance. Mere cultural integration without territorial integration will not accrue major gains.

Tangkhul civil society leaders believe that codification of Naga customary laws and practices needs to be undertaken for all the tribes, based on consensus. However, they do not see the necessity of incorporating tribal organisations into the framework of the ongoing peace talks as they are confident of the present NSCN (IM) leadership working for their interests and aspirations. They are extremely upbeat and hopeful of an early resolution to the Naga issue.

The Tangkhuls in India still maintain close affinity with their Tangkhul brethren in Myanmar and continue to remain in touch with them through various civil exchange programmes and social obligations like festivals, etc. They aspire for a unified Nagalim, which includes the Naga inhabited areas of Myanmar.

The Zeliangrongs

The Heraka cult created by Jadonang was the first serious contest between the new social and religious order of the Naga Hills and the old beliefs.[2] The followers of Heraka amongst the Zeme tribe were sceptical of the intentions of the NNC (in the initial years of the Naga revolution) and later the NSCN-IM, for openly advocating a Christian ideology while suppressing other religious traditions. The Herakas say that the Naga claim for independence should be based solely on the common ethnic links and not on religious affiliations. While there is a conscious revival among the Christians to promote the idea of 'Nagaland for Christ' extending to all Naga inhabited areas, the Zeme Herakas respond with their own set of arguments. They suggest that, first of all, 'Nagaland for Christ' is touted only by fundamentalists, and, second, that the notion of 'Zemehood' is intrinsically linked with the reform message of the Heraka and, therefore, inseparable from the identity of a Zeme Naga.

While fighting for the cause of the Nagas, Zeliangrong land and resources have been facing threats at the Ntangki Reserve Forest in Nagaland, and Sadar Hills and Tousem Areas in Manipur. A large chunk of Zeliangrong land in the North Cachar (NC) Hills (Assam) was bartered away to appease the Dimasas. Many Zeliangrongs were killed and their properties destroyed by the Dimasas in the NC Hills and there was no one to defend them. Considering the situation at hand and taking cognisance of all the challenges, the Zeliangrong United Front (ZUF) was formed in 2011 with the aim of fulfilling the cherished dreams of the Zeliangrong people and other kindred tribes.[3]

The Zeme Naga tribe, part of the Zeliangrongs, in the North Cachar Hills district of Assam, has a sizeable population and they also form part of the greater Nagalim project of the NSCN (IM).[4]A large population of the Rongmei and Liangmai tribes of the Zeliagrongs have also been supporting the NSCN (IM). Hence, there are two militant factions, with contesting agendas, amongst the Zeliangrongs.

Response from Naga Tribes in Assam

In the North Cachar Hills, the first recognisable outside 'religion' to come into contact with their world was Christianity, brought about by the Calvinistic Methodist Church of Wales (later known as the Presbyterian Church of Wales) missionaries in 1904.[5] However, in the Zeme inhabited areas of the North Cachar Hills, Christian conversion was slow for various reasons; the progress was actively opposed by the Heraka. Two revivals in 1948 and 1978 strengthened the growth of Christianity in the region. The Baptist mission from Manipur had its first Zeme 'convert' from the Presbyterian Church. Over the years, Baptist churches gained popularity in the North Cachar Hills. The association of the NSCN (IM) with Baptist churches attracted the Baptist converts to support the insurgent outfit. However, there remains a parity between the Herakas (Zeme Nagas) and the followers

of Christianity (the later converts) in support for the issue of Nagalim in the areas of North Cachar Hills in Assam.

Response from Naga Tribes in Arunachal Pradesh

There is lot of scepticism amongst the tribes inhabiting Longding, Tirap, Changlang and part of the Lohit district of Arunachal Pradesh against the growing influence of Naga underground factions in the region. Longding district is predominantly inhabited by the Wanchos who have ethnic affinity with the Konyaks of Mon district. Over the years, the district has witnessed the influx of the NSCN(K), the NSCN (IM) and NSCN(R).Tirap district (Khonsa town, in particular), inhabited by the Noctes, has always been the traditional bone of contention between the NSCN(IM) and NSCN(K). The area of Changlang district is inhabited by the Tangsas and Tutsas. The NSCN(K) and NSCN(R) dominate most of the Changlang district, however, in the recent years, the NSCN(IM) has also been making inroads at a rapid pace.

In December 2012, a forum representing three Naga inhabited districts of Arunachal Pradesh submitted a memorandum to the Union Home Minister urging him to book the NSCN(IM) General Secretary, Th. Muivah, for all the alleged excesses committed by the outfit's cadres in the three districts. The memorandum alleged that apart from the miseries heaped on the people by the majority non-Nagas of Arunachal Pradesh, the people of Tirap, Changlang and Longding have to bear the brunt of the atrocities of the NSCN(IM) cadres,. The memorandum further cautioned that "if the Government of India is incapable of assuring safety of the people, the time is not far when people of the region will rise and prepare to defend themselves".

The NSCN(IM), in recent years, launched the Operation Salvation scheme with the intent to propagate Christianity among the Nocte, Wancho, Tutsa and Tangsa tribes. In view of the ban on the entry of Christian missionaries, the underground outfits use their own cadres as

pastors and priests to freely circulate, and propagate the religion among the tribes of the state. The tactics being used are to, first, convert the people to Christianity, and then, through the Church, engage in a sustained campaign to achieve the goal of changing their identities; once these small tribes declare themselves as Nagas, the territorial claim over their land as Greater Nagalim would follow.[6]

The Meiteis and the Nagas

The Meiteis assert that their culture is a fusion of Naga and Meitei cultures. The Meiteis are disillusioned by the discourse of a separate identity and historical exclusivity of the Nagas. They emphasise upon the pluralistic culture of their state and maintain the stance that the Nagas of Manipur are integral to the state's history and evolution. The term Naga, according to the Meiteis, has never been applied to the hill tribes of Manipur by the Ahoms and the British, as the same was limited to the Naga tribes of present-day Nagaland. As per the states' narrative Raja Pamheiba belonged to the hill tribe (Naga), and was conferred the title of *Gharib Nawaz* by the Meitei Pangals (Muslims) for his benevolence.

In the real sense, the relationship between the Nagas and the Meiteis is, firstly, due to geographical proximity, both in terms of historical interpretations as well as its claimants in modern-day politics, and politicisation.[7] Historically, there has been socio-economic as well as cultural interaction between the two communities. Markets located in Manipur valley were visited by the Angamis for commercial purposes. The Meiteis interacted with the people from the Mao tribe through the Marams by way of trade relationships. The perspective of the Meiteis on the Zeliangrong movement and their historical relations were closely interrelated[8].

However, after the advent of the British, the relationship between the two communities had been deteriorating steadily. In recent times, the existing bitterness between the Nagas and the Meiteis is fuelled by

capitalisation of ethnic politics and hegemony that prevails in the region. The Meiteis perceive the movement for Naga integration as a 'dangerous' game of ethnic politics and conflict. A controversy erupted between the two communities over the issue of the ceasefire area coverage as part of agreement between the Government of India and NSCN(IM) in 2001. The Meiteis, including the Meitei Pangals (Muslims), were united in a mass movement against the decision to extend the Naga ceasefire to the Naga-dominated hill districts of Manipur (Chandel, Ukhrul, Senapati and Tamenglong).

The Naga demand for the creation of a separate state adversely affects the territorial boundary of Manipur. The Meiteis are deeply apprehensive that the current peace process could end up in balkanisation of Manipur. Geographically, the hills constitute 70 per cent of Manipur's territory and any further slicing of territory would leave Manipur at a disadvantage. Even the Manipur State Legislative Assembly has resolved to protect Manipur territorial integration. The Meiteis are apprehensive of the demand raised by the Nagas under the aegis of the United Naga Council (UNC) for an alternate arrangement of administration, and introduction of the provisions of the Sixth Schedule of the Indian Constitution in the Naga inhabited districts of Manipur.

In December 2016, the creation of seven new districts, including Sadar Hills, was declared by the Manipur government. This further fragmented the Naga inhabited areas and resulted in dilution of Naga majorities in the hill districts of Manipur. The declaration was strongly opposed by the Nagas under the aegis of the UNC. The protests resulted in the longest ever economic blockade in the state in 2016-17. The issue is presently being discussed trilaterally between the Government of India, the Manipur state government and the UNC.

The Kukis and the Nagas

The Kuki-Naga hostilities go back to the 1917 Kuki revolt against the

British in which the Kabuis, Thangkuls and Koms suffered from violent attacks by the Kukis during these clashes. The Kukis claimed the refusal of the hill and valley people to join the Kuki rebels in attacking the British, as the main reason for attacking the other groups during their revolt against the British.

The history of the inter-ethnic relationship between the Kukis and the Nagas reached a tipping point with the breaking out of ethnic clashes between the two in 1992.[9] Although the physical violence has ceased, the wounds of past miseries are apparently yet to be healed. To restore peace and normalcy between the two, the Kuki groups put forward two important demands to the Nagas and the Government of India. First, the Kuki Inpi Manipur (KIM), want the NSCN-IM, to make an formal apology for their heinous crimes, and perform Kuki customary rites such as paying *Luongman* (corpse price) and doing *Tol-theh* (cleaning the house for shedding human blood). Second, the Kukis demand that the Indian government should compensate for the loss of lives and properties to thousands of displaced victims. The growing mistrust, if allowed to continue, may result in sowing the seeds of war between the Kukis and Nagas.[10]

Since the early 1970s, the Sadar Hills District Demand Committee (SHDDC), predominantly from the Kuki tribes, demanded the separate revenue district of Sadar Hills.[11] The Manipur government gave an assurance to the Kukis about the upgradation of the Sadar Hills (mainly comprising the Kuki inhabited areas of Senapati district) into a full-fledged revenue district by signing a memorandum of understanding with the SHDDC on October 31, 2011. In December 2016, the Manipur government declared the creation of seven new districts, including the Sadar Hills district in the state. Though the declaration satisfied the Kukis, the same was opposed by the Naga bodies under the aegis of the UNC who vowed to intensify their movement against the declaration.[12]

The rebellion in the hill district amongst the Kukis has been specifically to resist the NSCN-IM and Tangkhul domination. Any move of the Indian state favouring the NSCN-IM is typically construed by the Kukis as going against their interests. They accuse the Indian government of holding high-level talks with the NSCN-IM, which the Indian government once labelled as a 'terrorist organisation', while ignoring the Kuki Inpi Manipur (KIM) leaders' repeated requests for personal interviews with successive Indian Prime Ministers.[13] The KIM and Kuki Organisation for Human Rights (KOHR) see the constitution of a High Level Committee (HLC) on an 'alternative arrangement' for the Nagas in Manipur as sowing the seeds of communal disharmony, ushering in the divide and rule policy amongst the people of Manipur and aiming to revive violence against innocent people.[14]

The Kuki tribal leaders believe that any new arrangement for the Nagas consequent to the ongoing peace talks will adversely impact the non-Nagas and may disturb the prevailing peace in the region. It may aggravate simmering disputes over the areas of jurisdiction claimed by the respective ethnic groups in Manipur. The Kukis fear that the demand for Naga integration, if accepted and approved by the Government of India, may result in the Kukis becoming minorities in their own areas. They seek parallel talks with the Government of India before the resolution of the Naga issue. The declaration of seven new districts in the state of Manipur has led to bifurcation of all the Naga dominated districts in the state. Noney district has been carved out of Tamenglong district, resulting in increasing the population parity of Naga vs Kuki inhabitants in the newly created Noney district. The slicing of Kamjong out of the earlier Naga stronghold of Ukhrul district has diluted the Naga dominance in Kamjong district; the split of Tengnoupal and Chandel has resulted in marginalisation of the erstwhile Naga domination in the region; and the creation of a full-fledged district of Sadar Hills out of Senapati has further infuriated the Nagas. Given these major unresolved issues, tensions between the two ethnic groups continue.

Non-Naga Tribes within Nagaland and Their Response to the Naga Issue

The Kacharis and Kukis of Dimapur and Peren share a number of common features. Their traditional strongholds are located in southwestern Nagaland, sandwiched between Assam and Manipur. This area contains most of the fertile plain area of Nagaland and, thus, attracts Naga tribes from the hills. Consequent to the fear of isolation, many Kacharis sold their land and migrated to Assam. The Kukis too had to abandon their land surrounded by the Naga areas.

These tribes are located close to Dimapur and Kohima, which are important urban centres, providing excellent scope for business as well as political activities. However, this location advantage has not translated into better infrastructure and economic gain for these tribes. Both the tribes are underrepresented in government jobs. The underrepresentation of the Kukis is surprising because they are Nagaland's second most literate community. Moreover, these tribes have remained unrepresented in the State Assembly since the late 1980s.

However, factors other than small size explain the marginalisation of these tribes. First, each of them belongs to a larger tribal conglomeration, a majority of whose population is located outside Nagaland. While the bulk of the Kukis are located in Manipur, the Kacharis are concentrated in Assam. Second, their kin outside Nagaland have been demanding separate Dimasa (Kachari) and Kuki states that would include parts of southwestern Nagaland.

The Dimasas claim Nagaland's most important town Dimapur, which was the capital of the medieval Kachari kingdom. If the Nagalim vision becomes a reality, the Dimasa population, represented by militant groups, and premised on the ideology of carving out a separate Dimasa homeland, the "Dimaraji Kingdom" comprising the Dimasa-inhabited areas of North Cachar Hills, Karbi Anglong, parts of Nowgaon district in Assam, and parts of Dimapur district of Nagaland, is likely to launch a

violent reactive movement. This will surely recreate a situation of ethnic violence and tension.

The Ahoms and the Nagas

In the recent times, the Assam government has been totally against parting with its territory in the territorial designs of Greater Nagaland / Nagalim. The all Assam Students Union (AASU) maintains the stance that the territory belonging to the state of Assam will not be allowed to form part of any of the Naga areas territorial councils. One of the most active and dreaded Assamese insurgent outfits, the United Liberation Front of Assam (ULFA), despite receiving its initial training at the time of its raising from the NSCN(IM), also maintains a stance that the latter's claim of eight Assam districts as part of Nagalim has "neither credibility nor any historical basis". They have asked NSCN(IM) to remove all Assamese districts from the map of the proposed Nagalim.

Nagas of Myanmar and the Quest for Nagalim

The ancestral territory of the Nagas in Myanmar reaches Kalaywa on the far south, Daung Thone Lone (Three Hills) on the east and Tanai of Kachin state, presently on the north. But while drafting the Constitution in 1974, the Naga territory was sliced into a smaller one that included only one district i.e. Khamti district, with five townships: Khamti, Homlin, Layshi, Lahe and Namyung. The Naga territory was again shrunk in the 2008 drafting of the Constitution, according to which, only the hill towns of Layshi, Lahe and Namyung were marked as the Naga territory, called Naga Self-Administered Zone (NSAZ), but without including Khamti and Homlin, the two important towns of the Nagas. This has created a lot of resentment among the ten Naga tribes and put them into confrontation with the Government of Myanmar.

Territorial Claims by the Neighbours

The Chins, who are the southern neighbours of the Nagas in Myanmar, say that the Nagas are a tribe of the Chin family and claim that Mt. Saramati (which is located in the Naga Hills district) is the highest peak in Chinland. They count the Nagas as Chins and claim the Naga territory to be part of Chinland. This has created a lot of resentment among the Naga tribes, as the Chins lay claim on nearly one-third of the Naga territory in Myanmar. Several Naga organisations like the NNLD (Naga National League for Democracy), despite clarifying their stance on this issue, are apprehensive of its potential to create destructive chaos among the neighbours and its adverse impact on peaceful coexistence in the future.

In the northern part of eastern Nagaland, the Tanai township is presently under the Kachin state and, thus, based on the status quo. The Kachin neighbours claim that it belongs to the Kachin people, as part of Kachinland. But, according to the Nagas, this claim is historically incorrect, as the claimed territory belongs to the ancestral land of the Nagas.

In the Framework Agreement signed between the Government of India and the NSCN(IM), there is no mention of what the Nagas call Eastern Nagas or the Naga inhabited areas inside Myanmar. Yet, both the NNC and NSCN, before and after the split, had discarded the division of the Naga homelands by the Anglo-Burmese Yandabo Agreement of 1826, and, later in 1953, under the Indo-Burmese demarcation in Kohima on the Naga territory by Pandit Nehru and U Nu, the then Prime Ministers of the two countries.

Conclusion

The idea of a solution for the Naga issue is different among different tribes. Some tribes favour a centralised administration for all the Nagas, whereas others prefer a federal arrangement, with greater autonomy to the Village Authorities. Besides, tribes such as the Poumai and Thangal aim to unify their traditional territory as part of the new arrangement,

which, at a later stage, may become the cause for a inter-tribal rift among the Nagas. Since the areas of some of these tribes extend into other states, it may further complicate the issue.

The Tangkhuls' dominance and diktats are clearly discernible in their version of the solution for the Nagas. Seemingly, they tend to undermine the role of the Village Authorities in the administration of individual villages / tribes. The Zeliangrongs, on the other hand, are further divided on the issue of religious practices, besides a parallel demand for a separate Zeliangrong homeland.

The issue of centralised codification of the customary laws is also contested by a majority of the Naga tribes of Manipur, except the Tangkhuls. Only the issue of territorial integration of the Naga inhabited areas under a single administration finds a united stance by all the Naga tribes of Manipur. The Nagas of Manipur completely support the ongoing peace negotiations between the Government of India and the NSCN(IM).

The association of the NSCN(IM) with the Baptist churches attracted the Baptist converts to support the insurgent outfit. However, there remains parity between the Herakas (Zeme Nagas) and the followers of Christianity (the later converts) in support for the issue of Nagalim in the areas of the North Cachar Hills in Assam.

The people of the three Naga inhabited districts of Arunachal Pradesh are completely against the presence of the NSCN(IM) and its activities in the state. The tribal leaders perceive a huge disparity between the aspirations of the NSCN(IM) and the inhabitants of the three districts. They demand that the these districts combined be granted the status of a Union Territory under the direct control of the central government as they are not willing to part with either the state of Arunachal Pradesh or with Nagalim.[15]

The existing bitterness between the Nagas and the Meiteis is fuelled by the capitalisation of the ethnic politics and hegemony that prevails

in the state of Manipur. The Meiteis perceive the movement for Naga integration as a 'dangerous' game of ethnic politics and conflict. The Kukis fear that the demand for Naga integration, if accepted and approved by the Government of India, may result in the Kukis becoming minorities in their own areas. They seek parallel talks with the Government of India before resolving the Naga issue. Even if they settle the simmering land dispute and reconcile over other differences among themselves, the Meiteis are likely to oppose any attempt to break up Manipur.[16]

If the Nagalim vision becomes a reality, the Dimasa population, represented by militant groups, and premised on the ideology of carving out a separate Dimasa homeland, the "Dimaraji Kingdom" comprising the Dimasa-inhabited areas of the North Cachar Hills, Karbi Anglong, parts of Nowgaon district in Assam, and parts of Dimapur district of Nagaland, is likely to launch a violent reactive movement. This may recreate a situation of ethnic violence and tension in the region.

There has been lot of resentment and feeling of marginalisation among the Naga tribes based in Myanmar. This has put them into confrontation with the Government of Myanmar and has strengthened their support for the bigger Naga movement.

Notes

1. M. Banerjee and R. P. Athparia, "Emergent Ethnic Crisis: A Study of Naga Kuki Conflict in Manipur", *The Journal of Anthropological Survey of India*, Vol. 53, No. 1, 2004, pp. 77-90.
2. Arambam Nari and Kangujam Sanatomba, *Colonialism and Resistance: Society and State in Manipur*, 1st edition (New Delhi: Routledg, 2015).
3. "A Brief Account of Zeliangrong Movement (1920s-2015)", *The Sangai Express*, November 28, 2015, at http://www.thesangaiexpress.com/a-brief-account-of-zeliangrong-movement-1920s-2015/.
4. Vasundhara Sirnate Drennan, "The Naga Conflict: Can an Accord End an Insurgency?", The Hindu Centre for Politics and Public Policy, August 07, 2015, at https://www.thehinducentre.com/the-arena/current-issues/article7511878.ece
5. Banerjee and Athparia, n. 1.
6. Tanweer Fazal, *Minority Nationalism in South Asia*, 1st edition (London: Routledge, 2013)

7. Naga Population and Integration Movement: Documentation by UA Shimray
8. "Perspectives on Zeliangrong Movement", at http://shodhganga.inflibnet.ac.in/bitstream/10603/23812/11/11_chapter%205.pdf'
9. Nari and Sanatomba, n.2.
10. "Kukis' Missive to Home Minister Opposing Nagas' Demand", *Security Risks Monitor*, February 28, 2014, available at http://www.security-risks.com/security-trends-south-asia/india-north-east/kukis-missive-to-home-minister-opposing-nagas-demand-2496.html. Accessed on April 03, 2018
11. Thongkholal Haokip, "The Kuki–Naga Conflict in the Light of Recent Publications", *South Asia Research*, Vol. 33, No. 1, pp. 21–38.
12. Ibid.
13. Nehginpao Kipgen, "Politics of Ethnic Conflict in Manipur", *South Asia Research*, Vol. 33, No. 1, 2013, pp. 21–38.
14. Drennan, n.. 4.
15. "Penalise Th Muivah, Demands Naga Body of Arunachal Pradesh", *The Sangai Express*, December 10, 2012, at http://e-pao.net/GP.asp?src=14..111212.dec12
16. Kipgen, n. 13.

Strategic Relevance of the Indo-Pacific: An Assessment

Gautam Sen

Introduction

At Davos in 2016, John Chipman, Director General (DG) and Chief Executive of the International Institute for Strategic Studies (IISS) while participating in a discussion on world affairs, stated that the world during the 20th century had lived tactically but in the 21st century, the world will have to learn to live strategically. What does that mean and how is it relevant in understanding the strategic relevance of the Indo-Pacific?

The Indo-Pacific region[1] as a whole is witnessing major shifts in terms of economics, strategic behaviour, and diplomatic manoeuvring among the major powers. Especially, as each nation competes with the other in order to create its own sphere of influence to exploit the potential of the region as a whole. The creation of a single strategic system in the Indo-Pacific region by combining accelerated economic and security connections becomes the fulcrum between the western Pacific and the Indian Ocean. Will the concept of 'Indo-Pacific' region help in integrating and uniting the major powers into one single strategic system?

This paper is adapted from an address at a Round Table Conference on the Indo-Pacific Region: Emerging Geopolitical Scenario at the UGC Centre for Southeast Asian and Pacific Studies, Sri Venkateshwara University, Tirupati, on August 28, 2018.

Gautam Sen is Distinguished Visiting Fellow at CLAWS as well as Editor-in-Chief of *CLAWS Journal*.

Theoretically, both India and China realise that the normative and institutional architecture of the Indo-Pacific will shape the future international order. Ultimately, India's engagement in the western Indian Ocean must not only protect its own economic, energy, and diaspora interests but also cohesively link with its "Act East" policy to preserve a rules-based order in the Indo-Pacific.[2] There is something Mahanian in the way China is building up its maritime power and increasing its influence over trade in the region. Alfred Thayer Mahan, a 19th century American naval strategist who viewed the domination of maritime routes for both commercial and strategic gains, has become obligatory reading among Chinese naval thinkers. Tracing the logic identified by Mahan a hundred years ago, the Chinese moves look very hegemonic in design, adding the supplemental development twist as bait. This strategy seeks to safeguard and control vital the Sea Lanes of Communication (SLOCs), bringing trade and energy from Europe and the Middle East. In doing so, China also seeks to contain India's rise and stop it from dominating its own 'near abroad', the height of hypocrisy considering the US' support for its own rise and its own strategy in the South China Sea. However, Australian advocates of the so-called 'Quadrilateral Security Dialogue' (QSD—also known as the QUAD) (which brings together the United States, Japan, India and Australia) must now feel as if the wind is well and truly in their sails.[3]

In this perspective, the paper seeks to examine the theoretical moorings to assess the emerging consensus on a geostrategically important region under the label of Indo-Pacific.

Genesis of the Term 'Indo-Pacific'

On June 01, 2018, addressing the keynote address at the Shangri-La Dialogue in Singapore, Indian Prime Minister Narendra Modi stated that India would work with the Association of Southeast Asian Nations (ASEAN) to promote a "rules-based order" in the Indo-Pacific region.[4]

The term Indo-Pacific is not a new concept. Japanese Prime Minister Shinzo Abe first proposed the Quadrilateral Security Dialogue in 2007 during his failed first term, which then fell apart after it was opposed once Australia's Labour Party-led government assumed power. However, the idea of an Indo-Pacific region endured and the notion has constantly resurfaced in the international arena. To say so, as in former US President Barack Obama's Administration, during its pivot to Asia.[5] Most recently, former US Secretary of State Rex Tillerson and National Security Adviser H.R. McMaster began using the term Indo-Pacific instead of Asia-Pacific.[6]

From 2010 onwards, the term Indo-Pacific acquired salience within the Indian context and has since been used often by India's apex political leadership. 2011 onwards, the term has been used frequently by strategic analysts and high-level government and military leadership in Australia, Japan and the US to denote the said region. However, an official documented articulation of the term first appeared in Australia's 2013 *Defence White Paper*.[7] It has been argued that the concept of the Indo-Pacific may lead to a change in the popular "mental maps" of how the world is understood in strategic terms. Lately, US officials have begun using the term "Indo-Asia Pacific". This will enable America to maintain its geographic inclusiveness in the new coinage of 'Indo-Pacific'.[8]

The term's profile was raised when it found mention in the joint statement issued by the Indian Prime Minister Narendra Modi and the United States' President Donald Trump after the former's state visit to the White House on June 26, 2017.[9] In their statement, both sides agreed that a close partnership between the United States and India is central to peace and stability in the region.[10] In marking 70 years of diplomatic relations between India and the United States, the leaders resolved to expand and deepen the strategic partnership between the countries and advance common objectives. Above all, these objectives include combatting terrorist threats, promoting stability across the Indo-Pacific region, increasing free and fair trade, and strengthening energy linkages.

The US vision of the Indo-Pacific strategy was first set out by former Secretary of State Rex Tillerson when talking about US-India relations: "Defining our Relationship with India for the Next Century," at the Centre for Strategic and International Studies (CSIS) in October 2017.[11] Tillerson mentioned the Indo-Pacific region 19 times and stressed, "The Indo-Pacific, including the entire Indian Ocean, the Western Pacific and the nations that surround them, will be the most consequential part of the globe in the 21st century," and that "[t]he world's center of gravity is shifting to the heart of the Indo- Pacific".[12] Tillerson heavily criticised China's provocative actions in the South China Sea as a direct challenge to international law and norms and emphasised that the US is already "capturing the benefits of our important trilateral engagement between the US, India, and Japan. As we look ahead, there's room to invite others, including Australia, to build on the shared objectives and initiatives".[13] In his remarks to the Asia-Pacific Economic Cooperation's (APEC's) Chief Executive Officers (CEOs) Summit at Da Nang, Vietnam, on November 11, 2017, US President Donald Trump defined the strategic scope of the Indo-Pacific as covering both the Pacific and Indian Oceans, including Japan, Australia, and India.[14] However, Trump did not clearly propose the contents of his Indo-Pacific strategy or any goals, potential partners, or its relationship with China.

To note, in linking the Indian and Pacific Oceans into a single geographical space, most scholars and analysts have discussed the vaguely defined Indo-Pacific concept within a geostrategic or geopolitical frame. The flurry of analytical articles (47,000, one link has over 193 other links to the same subject) over the past years, often contain common themes such as: containment, militarisation, and rebalancing vis-à-vis China's rise and assertiveness. Yet, there is more to gain from a geoeconomic perspective. Further, from a non-traditional security dimension, enhanced Indo-Pacific cooperation will yield significant benefits.

Geopolitics on the Asian continent is organised around the numerous seas, bays and lagoons that fringe its expansive oceans. The Indo-Pacific

idea simply expands the conceptual region of Asia-Pacific to include India and the Indian Ocean. The QSD translates this geopolitical understanding into strategy, envisaging the two oceans as a single security space, which includes India and Japan, is bridged by Australia, and is undergirded by US maritime dominance. The impetus for such a reconceptualisation is simple: Japan and India, isolated as they are in their own oceans, want to balance against the western Pacific's rising power, China, by uniting under a single geopolitical sphere. While Trump's National Security Adviser, General HR McMaster argued that the "term better captures the new regional dynamic", as he stated: "The idea of the Indo-Pacific and the proposition that India must be involved in shaping the Asian balance of power go well back in time. Before we trace the recent evolution of the concept, it is important to note that oceanographers use the term 'Indo-Pacific' to describe the bio-geographic region comprising the warm tropical waters of the Indian Ocean and the western and central Pacific Ocean".[15]

The Problematics

The Indo-Pacific region is undergoing a dramatic transformation and has been in a state of flux. This is witnessed in the undergoing shifts in the Indo-Pacific region, which is far from reaching a settling point. The trends that underscore the dramatic shift in power relativities are as follows: first, China is predicted to overtake the United States by 2030 as the world's largest economy in market exchange rate terms. Second, for its part, India is the fastest growing big economy in the world and is expected to become the world's third largest economy in US dollar terms by 2030. Third, it is predicted that by 2050, Indonesia will leap from the 16th largest economy today into the top 10 economies; Vietnam may be one of the fastest growing large economies; and established economies like Japan, South Korea and Australia will drop in relative Gross Development Product (GDP) rankings. Given these trends at play, though there are speculations over the decline of the US, it is very likely that US primacy in the region will continue for some

time yet. The US is predicted to remain amongst the top three economies by 2050. Furthermore, its military and technological investments provide it a sizeable edge in the future, which is also supported by its immense soft power and influence in the region. In view of this flux, 'uncertainty' has become the defining feature of the region.

China's actions in the South China Sea are adding to the uncertainty and we are again seeing a rise in tensions on the Korean peninsula given North Korea's attempts to conduct nuclear tests, prompting a strong response from the US. Separately, China has protested the deployment of the Terminal High Altitude Area Defence (THAAD) anti-missile system in South Korea. In reaction to the growing uncertainty, and with a shift of economic weight, to and within the Indo-Pacific, it is resulting in the rise of military capabilities.

By 2020, combined military budgets in the Indo-Pacific will probably exceed US$600 billion, matching military spending in North America for the first time. According to the 2016 Defence Outlook by Deloitte[16]:

- The Indo-Pacific is expected to drive 60 per cent of the global increase in defence acquisition, research and development.
- Nineteen countries in our region will account for one-third of global defence budgets by 2020; and, specifically:
- China will build 30 new submarines and another new aircraft carrier.

The threat of terrorism[17] is pervasive, unpredictable and highly adaptive. Prime Ministers Modi and Turnbull acknowledged in their joint statement that terrorism constitutes one of the most serious threats to peace and stability. It preoccupies nearly every government. The same technologies that have enabled greater connectivity, access, communication and economic opportunities have also contributed to the spread of terrorism and radicalisation, particularly among the youth.

Climate change is bringing significant impacts as sea levels rise and weather patterns change, affecting agriculture, industry and critical

infrastructure. Policies to address climate change, for example, expanding renewable energy sources, will also drive changes in the structure of economies in the Indo-Pacific. The pace of technological change and the internet have political and social effects, as well as economic ones. News just travels faster. World leaders communicate by mobile phone, text message and Twitter. Information is more fragmented. People are less likely to be influenced by large institutions, the government or the mainstream media, and political outcomes are less predictable.

In view of this, the two key strategic observations are: first, a secure, stable and connected Indo-Pacific region is crucial for the security and prosperity of all the countries in the region. Creating an order that is flexible, resilient and nimble will be vital to secure our collective future. Second, a comprehensive American-Indian strategic partnership seems unlikely, and a formal alliance comparable to the one that the US has with Japan and Australia is not on the cards. With its long history of non-alignment and traditionally close ties with Russia, India's policy-making elites are loath to compromise its strategic autonomy.

Major Actors in Indo-Pacific

Japan

The Indo-Pacific strategy comprises threat-driven security cooperation among like-minded maritime countries to promote a rules-based regional order. This is in response to the rapid strategic and power structural changes characterised by China's assertive behaviour in the region, which pose increasing challenges to the US and its allies in the Pacific and Indian Oceans. In view of this, Japan has been vigorously promoting the QUAD cooperation in carrying out the Indo-Pacific strategy largely to facilitate and institutionalise Japan's maritime security cooperation with the surrounding nations and allow Japan to play a leading role in the region. In addition to bilateral security ties with the US, Australia, India and other countries,

Japan's strategic choice to network with more strategic partners in the region implies a hedging stance to avoid the dilemma of both abandonment and entrapment. A major power struggle between the US and China would allow Japan with more diplomatic and security manoeuvrability. It will also largely decrease Japan's time and the cost pressure of regional security burden-sharing demanded by the US and simultaneously call for higher US engagement in the region, with collective structures. Thus, the Indo-Pacific strategy is not about forming an anti-China alliance of nations but a trilateral, functional and regional coalition against China's provocative actions, by joint exercises and training, capacity-building, and promoting regional communication platforms.

In this perspective, it is necessary to examine the role that Japan seeks to play in the Indo- Pacific Region. As outlined in the "Priority Policy for Development Cooperation FY 2017",[18] Japan seeks to contribute in three key areas, which are: first, in developing an environment for international peace, stability and prosperity and sharing universal values. Second, addressing global issues to achieving Senstainable Development Goals (SDGs) and promoting human security. And third, promoting economic diplomacy that aims at "quality growth," together with the developing countries, and contribute to regional revitalisation.

China

So far, China has not been able to adopt the concept of 'Indo-Pacific' formally. However, at the same time, the use of the term 'Indo-Pacific' is being seen in most of its scholarly writings and analyses. To a greater extent, such usage of the term will pave the way for China to develop an Indian Ocean strategy. China has been completely preoccupied with the disputes on its eastern maritime edge. Such preoccupation has led it to enhance its presence, and reflect its strategic ambitions in the Indo-Pacific region. China's overwhelming capabilities and its larger aspiration to become unipolar in Asia in a multipolar world have created competition

among the major powers. China's signalling to the rest of the world about its aggressiveness through its military posturing has fuelled a lot of debates regarding challenges to the successful building of the Indo-Pacific security architecture.

Watching with increasingly alarm, Tokyo and New Delhi pushed hard to resurrect the US-Japan-India-Australia QUAD – as an 'alternative' to the Belt and Road Initiative (BRI). Thus far, the talks have focussed more on the importance of keeping the Indo-Pacific region "free and open",[19] especially with regard to "maritime safety and security", only hinting at an alternative infrastructure strategy; however, this is rapidly changing. This Great Game is less about 'containing' China as Beijing would have us believe, and more about diversifying choices available to countries in the region. Naturally, there is a geostrategic 'balancing' element to this as well. Canberra, bullied by Beijing in a domestic scandal involving Chinese interference in its domestic affairs, has pushed for closer relations with both the United States and the Association of Southeast Asian Nations (ASEAN) as a way of balancing China's interference in its domestic affairs.[20] It is beginning to find the true cost of having China as its largest trading partner, and has begun a national debate on how to respond to this, racked by cynical accusations of racism. While the Trump Administration considers possible policy options in a 'free and open strategy' – see Eric Sayers excellent prescriptions here—Japan and India are already moving forward on their own infrastructure diplomacy.[21]

As countries begin to realise the implications to Beijing's 'debt diplomacy', there's definite scope for Delhi and Tokyo to make headway as an alternative type of development pact. While Sri Lanka has been seeking increased investment from Tokyo and Delhi in recent months to unburden itself from the Chinese loans[22], the two need to be more forward-reaching in what they can offer. They also need to design a broader strategy, rather than merely reacting to China's development plans on an ad hoc basis. This reactive strategy has already cost them the

'race' in countries like Nepal and the Maldives. Due to their geographic locations, both countries have historic ties to India, however, both have aligned with China over infrastructure investment. The BRI is financing a fibre optic network throughout Nepal (with a command centre in Kathmandu), ending the country's dependence on India for internet bandwidth.[23] The Maldives Ambassador to China, Mohamed Faisal, noted that though India was offered "a number of projects", they "did not receive the necessary finance" to be brought into the development stage.[24] Now, India is facing a security problem in the region, as China's 'string of pearls' strategy ties up countries right on India's doorstep.

To note, the Indo-Pacific is swiftly becoming the locus for a reemergence of geopolitics, writ large, and all the professions of "win-win" are fading into the background as Chinese merchants and bankers are increasingly being followed by Chinese Navy vessels.[25] This new Great Game sees India and Japan competing with China for SLOC security in the Indo-Pacific and may see a reemergence of gunboat diplomacy if we're not careful. Robert Zoellick once called for China to become a "responsible stakeholder", and while Beijing claims it is not a status quo challenger, the fact is that it is redrawing the rules of the game.[26] While there is some justice in this, China's authoritarian regime type makes the prospect of a Chinese-led order an untenable one for liberal democracies. How the new Great Game plays out in the Indo-Pacific depends on the willingness of Asia's other great powers to defend a system, rather than contain a new empire.[27]

India

In the recent years, New Delhi has purposefully intensified its engagement with countries in the Asia Pacific region. Having secured support from the US and some countries in the region, India is now looking to expand its presence in the Asia-Pacific. While for years, India's position towards the region has not attracted much attention, this is gradually changing. The development also reflects the wider canvas of changing strategic equations

in the region with the rising of China and India. The main argument set forth in this study is that as India carries out its own pivot to Asia-Pacific policy, a role transformation is underway. India is not satisfied with being identified as a mere regional power confined to South Asia. Instead, over the last few years, India has signalled a willingness to play a greater strategic role in the Indo-Pacific, building up partnerships with the US, Japan and Vietnam. India also tries to be a security provider as New Delhi is carefully following developments in the South China Sea. There is a widespread perception that India's role in the region will continue to grow. Beijing will remain alert to the risk of India's Act East policy.

India's efforts to step up its influence in the Asia-Pacific region have been increasingly discernible in recent years. The Act East policy reflects the rapidly changing geopolitical realities in the Asia-Pacific, mainly defined by the rise of China and India, and increased convergence of interest between India and the US. India's eastward maritime attention has been complemented by unprecedented role changes. India is conceiving a new and more ambitious role for itself in the Asia-Pacific. There is a widespread perception that India's role in the region will continue to grow. Meanwhile, India also tries to be a security provider. New Delhi is carefully following developments in the South China Sea though it is not a direct participant in the South China Sea bilateral security discussions with countries, including the US, Japan and Vietnam. Today, there is a conscious effort by the Modi government not only to "Look South China Sea"', but also 'Act South China Sea'. As part of its Act East policy, India is helping Vietnam build up maritime capacities. No matter whether Beijing likes it or not, India has emerged as one of key players in the Asia-Pacific strategic landscape. India is well aware of the implications of confronting China, and souring relations with Beijing is not in its economic interest. So, New Delhi will not meddle in the disputes directly. India will adopt a more prudent policy towards the South China Sea in a bid to pressure China while avoiding provocations. Even so, India has

already achieved some success. New Delhi is welcomed in the region by Washington and its partners. With its growing power, India will strive to expand its influence in the South China Sea. There is still plenty left in the tank.

India is 'pushing back' on China's expansion of influence in the Indian Ocean in a number of ways, but each comes with its own challenges, such as: first, India aims to selectively challenge China's infrastructure projects with Indian alternatives, including economic support, port and energy development. These include Indian investments for port projects in Bangladesh, Sri Lanka and Iran, and access to an Omani port; the Iranian project is unlikely to be implemented due to US-Iran tensions. Second, India has made a point of appearing as one of the first contributors to humanitarian and disaster relief operations in its neighbourhood. A key unspoken message of these missions is of India's proximity and preparedness to step in vis-à-vis China. Third, New Delhi has sought to expand bilateral maritime-security and defence cooperation with the island and littoral states, including the provision of defence-related lines of credit, and has overseen the launch of a coastal surveillance radar project in the Seychelles; it plans construction and upgrading of an airstrip and jetty on the Mauritian Island of Agaléga and Assumption Island in the Seychelles for surveillance purposes.[28]

United States of America

One of the new dynamics of the gathering geopolitical turbulence in Asia and its waters is the growing use of the term 'Indo-Pacific'. During his extended visit to Asia in November 2017, US President Donald Trump defined the region as 'Indo-Pacific' rather than the customary 'Asia-Pacific'. Concepts of geopolitical space are never static, and Trump's emphasis on the Indo-Pacific underlines the rise of India, China's assertiveness and its expanding footprint in the Indian Ocean, as well as Washington's plans to elevate its strategic partnership with New Delhi. It involves America's

strategic bet on India's future role in shaping the security architecture in the eastern hemisphere. Actively promoted in recent years by Japanese Prime Minister Shinzo Abe, the Indo-Pacific conception can be traced back to the decision of the ASEAN to invite India as a founding member of the East Asia Summit in 2005. The durability of the Indo-Pacific dynamic, however, will depend essentially on New Delhi's willingness to work with the US and its allies in the region.

From the end of 2017, the US, too, has been adopting the theme of a free and open Indo-Pacific. In his speech in October 2017, US Secretary of State Rex Tillerson called for a hundred-year partnership in the Indo-Pacific between the US and an India that was 'rising responsibly', given that the centre of gravity is shifting to the heart of the Indo-Pacific. As Tillerson noted: "The US and India – with our shared goals of peace, security, freedom of navigation, and a free and open architecture – must serve as the eastern and western beacons of the Indo-Pacific. As the port and starboard lights between which the region can reach its greatest and best potential".[29] That is to say, Washington has put the 'Indo-Pacific' firmly in the American strategic lexicon.

Conclusion

For the Indo-Pacific concept to gain traction in the region, it has to move away from the rhetoric of military competition and a zero sum game. Rather, it should move towards a more constructive, cooperative, and inclusive framework. As a geoeconomic entity, there is boundless potential in the Indo-Pacific. Linking the two oceans into one cooperative geographical space is not inconceivable, especially because it is not a new concept in this region. ASEAN has long led the way with its multilateral and inclusive platforms of ASEAN Regional Forum (ARF) since 1994 and East Asia Summit (EAS) since 2005. The Regional Comprehensive Economic Partnership (RCEP), even though it is still undergoing negotiations, is another key effort to deepen economic partnership and

integration among countries that fall within the scope of an Indo-Pacific region. The US-China trade war is a great destabiliser and disrupter globally. Amid this atmosphere of uncertainty and fear, cooperation and hope are needed more than ever. A development-driven cooperative framework can bring more optimism and stability to the region.

Japan's quality control methods in manufacturing and product safety are well known globally. However, given its declining domestic workforce, Japan could join forces with the growing ASEAN's young population to expand Japan's manufacturing strength in ASEAN. Together, they could potentially create the next manufacturing miracle – guaranteeing Japanese quality and workmanship at a competitive ASEAN price.

All the major and smaller players in the region have a stake in the stability, growth, and success of the Indo-Pacific region, and it does not make sense economically to prefer containment over cooperation. Furthermore, the perception of whether a country is a partner and whether a country is a competitor is not static, and can change over time. The US-Japan alliance has been relatively stable and strong since the end of World War II. Nevertheless, when Japan was at its economic peak in the late 1970s and early 1980s, there was talk in the US over whether it should be contained. In fact, Japan's economic expansion was described as 'uncontrolled and unbalanced', and hurting American interests. Fast forward 20 years later, China is now perceived as the competitor. And 20 years from now or even earlier, India could be the next rising power, with its economic growth potential. By then, does it mean that India then will become the next competitor, to be contained? Certainly not, as otherwise the region will be in a perpetual cycle of containment.

Notes

1. The Indo-Pacific can be divided into three zones viz. Central Indo-Pacific, Eastern Indo Pacific and Western Indo-Pacific. It stretches from the African east coast in the west to southeastern Polynesia to Easter Island and Hawaii in the east. It is habited by 61 percent of the world population, has 15 of the 30 megacities of the world, 7 of the top 15 US

trading partners operate in this region and also 5 US security treaties are embedded in this region. The Indian Ocean is now the world's busiest trade corridor, carrying two-thirds of the world's oil shipment and a third of its bulk cargo, mostly to or from East Asia.

2. Samir Saran and Abhijit Singh, "India's Struggle for the Soul of the Indo-Pacific", May 03, 2018, at https://www.lowyinstitute.org/the-interpreter/india-struggle-soul-indo-pacific.
3. Japish S. Gill and Ryan Mitra, "India's Indo-Pacific Strategy: Understanding India's Spheres of Influence", *Sigma Iota Rho Journal of International Relations*, July 05, 2018, at http://www.sirjournal.org/research/2018/7/5/indias-indo-pacific-strategy-understanding-indias-spheres-of-influence
4. See, Ministry of External Affairs, Government of India, "Prime Minister's Keynote Address at Shangri La Dialogue (June 01, 2018)", June 01, 2018, at https://www.mea.gov.in/Speeches-Statements.htm?dtl/29943/Prime+Ministers+Keynote+Address+at+Shangri+La+Dialogue+June+01+2018. In his speech, Modi also stated that India will engage with the world in peace, with respect, through dialogue and absolute commitment to international law. India will promote a democratic and rules-based international order, in which all nations, small and large, thrive as equal and sovereign.
5. "Debunking the Myth of the Pivot", https://worldview.stratfor.com/article/debunking-myth-pivot
6. "The Indo-Pacific: Defining a Region", *Stratfor*, November 15, 2017, at https://worldview.stratfor.com/article/indo-pacific-defining-region.
7. See, Australian Government, Department of Defence, *Defence White Paper 2013*, at http://www.defence.gov.au/whitepaper/2013/docs/WP_2013_web.pdf.
8. See, Mercy A Kuo, "The Origin of 'Indo-Pacific' as Geopolitical Construct", *The Diplomat*, January 25, 2018, at https://thediplomat.com/2018/01/the-origin-of-indo-pacific-as-geopolitical-construct/
9. See, Ministry of External Affairs, Government of India, "Joint Statement—United States and India: Prosperity Through Partnership", June 27, 2017, at https://mea.gov.in/bilateraldocuments.htm?dtl/28560/Joint_Statement__United_States_and_India_Prosperity_Through_Partnership.
10. Ibid.
11. "Defining Our Relationship with India for the Next Century: An Address by U.S. Secretary of State Rex Tillerson", Centre for Strategic and International Studies, October 18, 2017, at https://csis-prod.s3.amazonaws.com/s3fs-public/publication/171018_An_Address_by_U.S._Secretary_of_State_Rex_Tillerson.pdf?798XbQxRNjtNhQb_upOY383BCt7hQTvV.
12. Ibid.
13. Ibid.
14. See, "Remarks by President Trump at APEC CEO Summit", Da Nang, Vietnam, November 10, 2017, at https://www.whitehouse.gov/briefings-statements/remarks-president-trump-apec-ceo-summit-da-nang-vietnam/
15. Quoted in C. Raja Mohan, "Donald Trump's 'Indo-Pacific' and America's India Conundrum", *ISAS Insights*, No. 476, November 13, 2017, at https://www.isas.nus.

edu.sg/wp-content/uploads/media/isas_papers/ISAS%20Insights%20No.%20476-%20Donald%20Trump's%20'Indo-Pacific'%20and%20America's%20India%20Conundrum.pdf.

16. Delloitte, "Global Defense Outlook 2016: Shifting Postures and Emerging Fault Lines", at file:///C:/Users/JASH/Downloads/ca_en_ps_global_defence_outlook_2016_interactive_AODA.PDF
17. See, Australian Security Intelligence Organisation, ASIO Annual Report 2016-17, October 03, 2017, at https://www.asio.gov.au/sites/default/files/Annual%20Report%202016-17.pdf.
18. See, Ministry of Foreign Affairs of Japan, "Priority Policy for Development Cooperation FY 2017", May 25, 2017, at https://www.mofa.go.jp/files/000259285.pdf.
19. "India Hosts Trilateral Talks with Japan and Australia", *SP's Land Forces,* December 15, 2017, at http://www.spslandforces.com/news/?id=255&h=India-hosts-trilateral-talks-with-Japan-and-Australia
20. "Australia's Balancing Act Between US and China will Prove one of its Greatest Challenges", *South China Monitor*, December 27, 2017, https://www.scmp.com/comment/insight-opinion/article/2125701/australias-balancing-act-between-us-and-china-will-prove-one.
21. Eric Sayers, "15 Big Ideas to Operationalize America's Indo-Pacific Strategy", *War On The Rocks*, April 06, 2018, at https://warontherocks.com/2018/04/15-big-ideas-to-operationalize-americas-indo-pacific-strategy/
22. Iain Marlow and Anusha Ondaatjie, "Sri Lanka Seeks India and Japan Cash to Balance China", *The Economic Times*, March 27, 2018, at //economictimes.indiatimes.com/articleshow/63478006.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
23. "Nepal-China Optical Fibre Link Operationalised", *Himalayan Times*, January 12, 2018, at https://thehimalayantimes.com/nepal/sino-nepal-cross-border-optical-fibre-link-starts-operations-today/
24. John Hemmings and Genevieve Hull, "The New Great Game in the Indo-Pacific", *E-International Relations*, April 20, 2018, at https://www.e-ir.info/2018/04/20/the-new-great-game-in-the-indo-pacific/.
25. Ibid.
26. Ibid.
27. Ibid.
28. Rahul Roy-Chaudhury, "Debate: India's 'Inclusive' Indo-Pacific Policy Seeks to Balance US, China", *The WIRE*, July 05, 2018, at https://thewire.in/diplomacy/indias-inclusive-indo-pacific-policy-seeks-to-balance-relations-with-the-us-and-china
29. n. 11.

"Reflections on American Grand Strategy in Asia" By Ash Carter, October 2018

Aditya Singh

If the ground is soft, dig deep.

— Old Chinese proverb.

Ash Carter, an academic with considerable experience in the Pentagon as also United States (US) Secretary of Defence from February 2015 to January 2017, is a strategic thinker. This is evident from his treatise on "Reflections on American Grand Strategy in Asia"[1] which is easily one of the better essays on US President Barack Obama's 'rebalance' and what should be done for its implementation. It is logically presented and charts the course to be followed to fulfil the medium and long-term interests of the US.

Whether the Administration of President Donald Trump follows it is not the question, however, what it seeks to put forward are the *"benefits of peace"* and how it can be achieved in Asia by *"the strategy of a principled,inclusive network"*. While written from an American perspective, the arguments are cogent and relevant for the growth and development of the continent. His considerable knowledge of Chinese thinking and actions leads him to conclude that there must be every

Lieutenant General **Aditya Singh** (Retd) is Former General Officer Commanding-in-Chief in Andaman & Nicobar Command and in Southern Command. He was also Member of the National Security Advisory Board.

effort at engagement. He argues that there are two competing strains in Chinese strategic thinking: one that values partnership and increased integration in global security structures and the other that leans toward unilateral action and refuses to acknowledge global norms when they are seen to inhibit China's interests. With China's continued growth and success, it is this second strain which now tends to dominate, hence, its actions of pushing forward and *'digging deep'*. In view of this, Carter argues that if this be so, it needs to be confronted, and balance needs to be ensured by a network of nations. To which, Carter pointedly notes that the US so far, has been pacifist in this regard.

Given the systemic changes at play, the key concern is attributed to China's concept of the rejuvenation of the Middle Kingdom and demonstration that there is a proven alternative system to Western democracies to usher in a new world power. In addition, with centralisation of power, Chinese President Xi Jinping has acquired an 'emperor' status in the current times. However, unlike the USSR that wished to impose Communism, the Chinese are convinced that they can demonstrate to the world that their system, in which the state supersedes the individual, is the best. In doing so, the Chinese draw their assessments based on their great strength from history, and tyranny, which was intrinsic, and is glossed over. It is an autocratic system, far removed from liberal thinking which the most of the developed world follows. History has shown that it is such regimes that generate conflict, hence, the need for a 21st century approach to ensure peace.

This is more so as China is arming at a pace unseen in history. The People's Liberation Army (PLA) has been reorganised and the scope of changes is far greater than in the Germany of the 1930s. While the Chinese profess a 'peaceful rise', the capabilities they are acquiring will give them an offensive capacity across all domains—a cause of worry for their neighbours. Also their growing power and confidence exhibit a regular show of strength which smaller neighbours cannot counter. This

acquiescence too, can be compared to what happened during the rise of Nazi Germany.

Carter clarifies that the cornerstone of America's defence is deterrence, which is ensured in Asia by 400,000 personnel of the US Pacific Command. The carrier groups are intrinsic to this and will remain so in the near future. According to him, the US has no objection to China's rise. However, what is worrisome is its needless struggle for supremacy and the fact that it undermines the principles of peace and stability which have brought growth since 1945. He, thus, stresses on adherence to these principles, primarily freedom of navigation and the rule of law.

While the US can take a detached view, this holds equal relevance for India. Free trade, which is essential for India's growth, needs open sea lanes. In this regard, any unilateral restrictions to the internationally accepted order, which then becomes unacceptable, must be countered. However, this does not appear to be so. There is a further paradox in that while Ash Carter seeks this, the US has still not ratified the United Nations Convention on the Law of the Sea (UNCLOS). This suggests that the statements ring hollow and reflect the reality that powerful nations operate according to their own vested interests.

It is this truth that India must contend with. China's phenomenal rise and philosophy will drive it to push for benefits in every sphere. To which, an accommodative response will only encourage it further with resultant increase in tensions. While acting alone, no nation can face up to China; it is also true that except for North Korea and Pakistan, China has no allies. This, then, creates ground for other countries to get together and form a network, as Carter proposes. For a partnership or a network allows for greater flexibility than an alliance, more importantly, it can work towards the larger objective of the common good.

Ash Carter advocates that rather than deterrence by hard power alone, peace and stability can be ensured by multiple means and

highlighting other aspects such as the cost of conflict. The world is more interconnected than ever before and it is China which has much to lose from any unilateral or unprincipled action. Any change in the status quo is bound to invite reaction and approbation. It will also make other nations apprehensive in their dealings. India, with its size, shared border and history, thus, stands uniquely placed to exploit this aspect. The benefits of engagement far outweigh the negatives of war. This argument has to be presented from a position of strength and, with the support of others, could be most convincing.

Advantage could be taken, given recent examples of economic coercion by China such as those in Sri Lanka, Maldives and Eritrea. There is also a growing realisation that China's Belt and Road Initiative (BRI) is likely to tie up countries in debt. All this has made countries wary and conditions for this network to ensure that everyone works in partnership are more favourable than ever before.

There is a further argument that initiators of conflict in the past century have never succeeded and given the complications, it has only resulted in further disharmony and mayhem. With an ever present media, even a small incident can drive negative perceptions and, hence, a nation has to be careful of even a spark. Conditions in some ways are similar to 1914 when one assassin's bullet started World War I. Larger nations, with disparate elements, must ensure greater control. That is, the logic of 'non-state actors' or 'radical anti-establishment elements' has run its due course and cannot be accepted, at least not in India.

China's development and prowess in the cyber domain too, have made the situation even more complicated. There is now the danger of 'non-contact war' which could also cover the financial and social spheres. The ramifications of this would be unpredictable and could lead to escalation and conflict. It must further be appreciated that this has the potential to create uncertainty in the nuclear realm. Half the world's nuclear powers are in Asia and the two most unpredictable ones, Pakistan

and North Korea, are China's allies. While Carter does not mention the nuclear aspects, it is a concern that countries in Asia must take note of. Given the tensions, any cyber uncertainty also runs the risk of a nuclear conflict, the effects of which will transcend borders.

An additional aspect that needs to be considered is that the re-balance, along with the Trans-Pacific Partnership (TPP) was put forward by the previous US Administration. President Trump has a different market-driven view. Under him, the US could become more isolationist. As mentioned by Carter, the sheer numbers of Asia will drive growth in the coming years. Hence, the current US leadership has to be convinced that for America's continued 'greatness', peace and stability of Asia require its continued involvement. Also historically, no civilisation can continue in greatness. Any neglect of the US security role in Asia will only hasten its demise as a superpower and allow China's rise in an earlier timeframe. There is also the possibility of an even closer Russia-China axis. All this constitutes a looming danger which the US and rest of the world need to take note of.

What lessons can India learn from all this? First and foremost, peace and stability of the region is foremost and the 21st century requires a new approach to ensure *Vasudhaiva-Kutmabakam*. Non-alignment must give way to partnership and a larger goal. This needs to be set down as a White Paper or national security strategy. It would not only tell the world what India seeks, but lay down guidelines for the defence forces and every other organ and institution of the state. A clear statement of intent could drive policy. Such a paper will set down the process of engagement and benefits of mutual cooperation as also how each nation, big or small, can play a part.

Next, within its stated policy of protecting its territorial integrity and sovereignty, India must strengthen its conventional and strategic deterrence. This must extend to the unconventional and emerging domains such as cyber. The shrinking of the defence budget needs to be

reversed. For a country with unsettled borders and two nuclear armed neighbours, which work in collusion, there remains no option. Border infrastructure has to be built up on priority.

Along with this, India must proactively work with every nation for the common goal of peace and stability and engage them at every fora. Given China's importance, it must engage it as a partner in a spirit of mutual benefit. It must support China's actions which are open, transparent and for the common good. At the same time, it must firmly oppose any unilateral violation or change in the status quo. To this extent it can stress on its historic legacy and outreach to Asia and how, for eons, it always spread the message of peace. This should include the Indian Ocean Region (IOR). Building of trust, especially between the defence forces, is a must. It must continually and increasingly engage in bilateral and multilateral exercises with all nations. The potential of the QUAD needs to be exploited, and partners need to be built upon, such as Indonesia, which is missing, and will sooner rather than later, have to be taken alongside. As has been accepted, India must seriously work on building self-sufficiency in defence hardware and seek technology for developing modern weapon systems. There is no option. Further, given the fractured polity, any acquisitions from abroad will always invite mudslinging and consequent delays.

In keeping with the importance of ensuring open sea lanes for all, it must develop its Navy and work with other nations for freedom of navigation in the Indian Ocean. This must also extend to disasters and humanitarian missions. Development of carrier groups, in both the eastern and western seaboards, is necessary as deterrents for the immediate future. Some will argue that given new weapon systems, these constitute vulnerabilities in any future conflict and may go the way of battleships. The fact, however, remains that in keeping with its location and size, such forces are a necessity. The budget for the Navy needs to be enhanced manifold.

India must take a principled stance in keeping with international norms and seek compliance. China respects only strength, and the recent draw down on the Dalai Lama will only encourage it to further pressurise India. It must also fulfil any obligations and commitments in this regard. This must extend to all aspects of the global commons, including space.

India must remain wary of the fact that in international relations, nothing is permanent and thereby, be prepared to adapt to changing scenarios. The policy of non-alignment was suitable during the Cold War. Since then, India's economic strength and stature have changed. It has to now adapt to be an equal partner. However, China will not like this, but it should be given no other option.

All actions should be driven from a position of respect and mutual benefit. The leadership must recognise that no nation has ever become great without sacrifice. If India has to be a part of the Asian story and achieve its rightful destiny, then firm resolve and action on its part are called for. The political leadership must understand that while there can be security without growth, there can be no growth without security. This change is needed now.

Notes

1. Ash Carter (2018), "Reflections on American Grand Strategy in Asia", Belfer Centre Report, October 2018, pp. 1-33, at https://www.belfercenter.org/sites/default/files/files/publication/ReflectionsonAmericanGrandStrategyinAsia_1.pdf.

Book Reviews

Ours Not to Reason Why: With the IPKF in Sri Lanka

Brigadier RR Palsokar (Retd)
(Second Edition Published by
Sunidhi Publishers, 2017)
ISBN: 978-93-85262-16-6 pp 260 Rs 300

Following the signing of the Indo-Sri Lanka Accord on July 29, 1987, India embarks on a peace-keeping mission in Sri Lanka to facilitate the implementation of the accord. On October 09, 1987, the Liberation Tigers of Tamil Eelam (LTTE) in a breach of peace, turns on its mentors, the Indian Peace-Keeping Force (IPKF). This results in severe fighting of a conventional nature between the two sides. By the end of October, the IPKF rids the Jaffna peninsula, in the Northern Province, of the LTTE. Thereafter, it secures the Eastern Province. The Sri Lanka Army is a non-participant: sidelined, a silent spectator, secure and 'sulking' in its camps. The LTTE, bruised but unbowed, clandestinely regroups in a redoubtable bastion in the jungles in the southeastern portion of the Northern Province.

It is here, in the Vanni, and more particularly the district of Mullaittivu that 7 Infantry Brigade of 4 Infantry Division of the IPKF finds itself in December 1987. *Ours Not to Reason Why: With the IPKF in Sri Lanka* is their story, warts and all, over the next two years, as told to us by their Commander, Brig RR Palsokar. He terms it the "most challenging" phase of his life.

This is a story of success and failure; of elation and despair; of courage and cowardice; of professionalism and the lack of it. Above all, it is the story of the remarkable resilience, endurance, commitment and sense of duty of the Indian soldier in battle.

Ravi Palsokar empathises with his command: his fondness for his 'Garhwalis' – he had three fine battalions serve under him – is apparent. Critical of the higher command, there is not a trace of malice or ill will in the book. He is self-effacing, concerned and analytical. He writes with remarkable clarity, honesty and sense of purpose. Despite the unfair hand fate deals him, he bears no grudges.

The book has 12 chapters, all in logical sequence. To the reader unfamiliar with the politico-military aspects of India's intervention in Sri Lanka, I would recommend reading "The Layman's Guide to the Tamil-Sinhala Conflict" at the Appendix and the excellent foreword by Brig Vivek Sapatnekar before moving any further.

In the opening chapter, the author is severe on the disorganised induction of his formation; bemoans the poor standards of training of the infantry; and is unhappy with the lack of clarity in his tasking. As a first step, he deems it necessary to relocate his headquarters and position himself near one of his isolated units, virtually, in the tiger's lair. In Chapter II, he analyses the LTTE. He acknowledges their superb commitment and iron discipline; exceptional fighting qualities; and skill in the use of Improvised Explosive Devices (IEDs) and suicide attacks. He explains how the local Tamil population views the LTTE with a mixture of "admiration, fear and helplessness" and refers to the surreal situation where the foe finds "succour in our country" (Tamil Nadu) even as they engage the Indian Army in combat on the island. Chapters III and IV describe the formation's attempts to get to grips with the environment and their efforts to improve the standards of training on the job. Chapters V and VI describe the conduct of major operations to search and clear the jungles of suspected LTTE bases. The latter chapter also includes a brief

analysis of the performance of various "arms". Chapter VII describes continued fighting in the jungle and refers to the operations of Special Forces often placed under the command of the author. Chapter VIII helps reset the backdrop in the continuously evolving politico-military situation in Sri Lanka. In Chapter IX, the author recounts the less than fortunate initiation of one of his new units – 6/8 GR—into battle in the unforgiving jungle and how the unit quickly recovers its equilibrium. Chapter X is devoted to logistical matters and the final 'pull-out' of the IPKF and the inglorious homecoming: a sad commentary on our political leaders and people. In virtually the last chapter, the author reflects on the operations in Sri Lanka. He spiritedly responds to the unfair criticism of the conduct of his formation.

Finally, to the question, the author asks, and leaves unanswered: "Did the IPKF fail in its task?" I would unhesitatingly say, 'No.' The fact that a grateful Sri Lanka graciously erected, of its own free will, a war memorial to commemorate the Indian fighting man killed in action on Sri Lankan shores in Operation Pawan is proof enough.

The book brings out several 'lessons learnt'; however, not all are that new in perspective. The key takeaways are:

- Expeditionary intervention operations are intensely complex. They involve the three Services and various arms of the civil government. They invariably have to be launched quickly. They demand that special civil-military structures, organisations, procedures, knowledge and skills including language are properly in place.
- One of the foremost responsibilities of a senior military commander is to ensure that one's command is prepared mentally, physically and logistically for the task. Notwithstanding the constraints of time, the 'approach to battle' – reconnaissance, logistical preparation, preparatory training, planning, concentration and familiarisation – must be sound. For a commander to be stampeded into an operation for which he is not adequately prepared is to fail his command.

- Commanders and staffs must remember that the cohesion of a formation and even more so a unit in battle is vital. Added numbers do not necessarily mean greater effectiveness. A unit with four integral sub-units is invariably more effective than a unit with six assorted sub-units.
- The infantry (and armour and mechanised infantry) needs time and opportunity to train repeatedly under its unit and sub-unit commanders to continuously improve their individual, group and sub-unit fighting skills and techniques. These objectives cannot be achieved through the medium of training competitions and formation exercises.
- Realisation must dawn on formation commanders and staffs that in war (indeed, in peace, too) they are on the same side as their units! Their task is to facilitate and find ways to assist their units in accomplishing assigned tasks NOT to simply find fault and criticise.

Throughout the book, anecdotes, examples and quotes by participants enliven the narrative. The book is remarkably free of error. However, the binding is of poor quality – the book tends to fall apart easily. Also, a few maps and extra sketches, particularly of the major operations, would have added value.

This is a book that should be discussed as a case study on senior command (and leadership) courses of instruction for budding formation commanders.

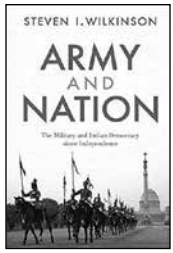
Ours Not to Reason Why is a poignant tale. Brig RR Palsokar is an Infantryman and Guardsman to boot. A second generation officer with an impeccable record of service, he enjoys an enviable professional reputation amongst his peers. His leaving the Service prematurely was a loss to the Army but understandable under the circumstances.

RK Nanavatty (Retd)

Lieutenant General **R K Nanavatty** (Retd) is an officer of the 8th Gorkha Rifles who retired as the General Officer Commanding-in-Chief Northern Command

Army and Nation

Steven I Wilkinson
(Published by Harvard University Press)
pp. 304



Army and Nation by Steven I. Wilkinson is a good read. Painstaking research has gone into it, and the book is copiously annotated. Facts, as quoted, leave no scope for doubts. The graphic presentation of the statistical analysis is attractive, and most, but not all, of the conclusions are valid. It is flattering for a former soldier like me that the Indian Army, in which I served for over 37 years, has attracted the attention of one more scholar from the First World.

The author has gone into the most minute details of the ethnicity of the soldiers who had been recruited by the Army raised by the East India Company, and how and when the British introduced the concept of mixing ethnicities at the unit level as a protective device. After the Army had been hit by the Mutiny in 1857, in which some units had revolted, and others had not, cause and effect relationships between ethnicities and loyalty to the British Raj were established. As a result, significant changes were brought about in the class compositions of the units by the percipient British masters. A revolt by a unit of mixed ethnicities was considered unlikely; the differences in ethnicities were expected to act as firewalls. Single-class units, from the most 'reliable' sections of the population of the subcontinent, based on the part that they had played in helping the British in quelling the Mutiny, were also raised. The Gurkhas, Sikhs, Muslims from the Punjab, and some Muslim tribesmen from the border region made the grade. But even they were not fully trusted, and a certain proportion of British units was retained in the Army in India. Their presence promised swift retribution for those who revolted. With

few exceptions, as in the case of the Mountain Artillery batteries, Indians were not trusted with guns until 1935. The regiments of the Royal Artillery were also meant to act as a deterrent against another revolt. As far as the British political leadership and the bureaucracy in India were concerned, they had reasons to conclude that the measures taken by them after the Mutiny had been effective in preventing a blowback. Except for the formation of the Indian National Army by the late Netaji Subhas Chandra Bose, there had been no major breaking of bounds. In the twilight hour, a lot had changed and the imperial power had also thrown in the towel.

In the wake of the 1857 Mutiny, a strong correlation between reliability and mixed class units had firmly been established in the minds of the British rulers. *Divide et Impera* was a strange policy to follow within the Army that was trusted to fight loyally against the enemies of Great Britain. Over a period of time, the British political class and bureaucracy came to believe that their balancing acumen had produced the desired results. The truth seems to have eluded them: it was neither the balancing act, nor the presence of British troops that had ensured the loyalty and fighting efficiency of the Indian units. It was the devotion of the British leadership at the unit level that had achieved the desired results. They had won the hearts of the Indian troops.

The Mutiny in 1857, principally, was by the native soldiers against their British officers rather than against the Raj *per se*, although that motive was also present in some cases. Good regimental soldiers in the then ruling class rightly concluded that it was the failure of leadership at the unit level that had mainly led to the revolt; the penny-wise policies of the East India Company had also added the fuel to the fire. They concentrated on improving the quality of leadership at the unit level. They sent some of their best officers to India who totally identified themselves with the ethnicities and religions of the troops they commanded, and trained them well. Unlike before the Mutiny, the new lot was professionally competent,

and went about setting a fine example to the Indian officers and soldiers of good military leadership. Many of them forgot the colour of their skin, led from the front, and inculcated in their troops the fighting spirit and the will to win.

The internal tensions within the sub-units and ethnicities were turned into competition to achieve professional excellence. The example set by the officers created the value system that motivated the units to fight to the last man and the last round. Wages and allowances were pushed into 'lesser considerations', and the upholding of the 'name and the *izzat*' of the unit became the sole purpose of their lives. The response of the troops was sincere and overwhelming.

The machinations of checks and balances, and the exercises in the creation of firewalls had been rendered irrelevant. The units, in defiance of the suspicions harboured against them by the policy-makers, proved to be fully cohesive. There were a few incidents of insubordination or refusal to obey orders but the swift corrective action rather than the firewalls prevented large scale mutinies.

The Indian units gave a good account of themselves in many frontier actions, but the real test came in the Great War when the performance of Indian soldiers was startlingly impressive. It became a matter of honour for the Indian soldiers to fight shoulder to shoulder with the regimental officers. The concept of honour pushed pay and allowances into the background. The performance in World War II was excellent except for the defection of some prisoners of war to the Indian National Army (INA). Those who joined it, belonged to all the ethnicities. The so-called checks and balances had fallen. The notion that the mixing of ethnicities was a necessary and sufficient condition for ensuring loyalty of the Indian the soldiery was not borne out. The author mentions the book *A Matter of Honour* by Philip Mason in the bibliography, but his conclusions make one wonder if he absorbed the spirit of the book.

The first Prime Minister of independent India had doubts if at all India needed the Army it had taken over from the British. The Army's *raison d'être* was a matter of doubt for him. It seems that he did not look upon the Army as one of the national assets for ensuring the security of the newly independent country. He had persuaded the then Army Chief, Gen Thimayya, to withdraw the resignation that he had submitted to the government as a result of friction between him and the Defence Minister. Later, he thought it fit to show the Army Chief in poor light in the Parliament. The entire Army had felt belittled.

Taking a cue from him, the main concern of the political class seemed to have been to keep the Army in its place so that its demands on resources were reduced, rather than keeping it in prime condition so that it could perform its role. With the willing assistance of the bureaucracy, they began the exercise by lowering the status of the Army officers. As a good measure, their pay was reduced. Poor remuneration was expected to bring about the lowering of living standards, and, in turn, the prestige of the Army. In due course, the Army would be reconciled to being on the lower rungs of the hierarchy. The inherited suspicions about the reliability of the Army could well have been the reasoning for continuing with the self same policies governing the class compositions of single class and mixed units. The partition did call for adjustments in class compositions; therefore, some unavoidable changes had to take place. We have no reason to believe that the political class or the bureaucrats feared the possibility of coups *per se*. But their disdain did produce an adverse impact on the morale of the Army. No wonder that the Army suffered from neglect. But for the jolt of 1962, things would have continued in much the same vein until a bigger disaster struck.

The author gives credit to the political class and bureaucracy for having preempted the possibility of a *coup d'état* in India. For someone like me, this is nothing short of blasphemy. Such facile conclusions subsume an abiding intent in the minds of the rank and file and the

leadership to execute a coup, or coups for that matter. We do not know what led the author to believe that the senior leadership of the Army ever thought on these lines. There has never been even a whiff of the likelihood of a coup in India except in the minds of some imaginative and overzealous bureaucrats, and a 'gifted' journalist. But even those fears were quickly dispelled. Certainly, these 'non-happenings' did not warrant a conclusion that the Indian Army was prevented from undertaking a coup by a vigilant political leadership and astute bureaucracy. There is no need for a counter-balancing Border Security Force (BSF) to keep the Army in its place. The BSF has its own role, and it performs it well. It is a ludicrous idea to believe that the Army is held in check by the BSF in the same manner that the British battalions had kept the 'native' units away from mischief. No, it is the value system, which is the life-breath of the Indian Army, that keeps it going even in adverse conditions. Remaining within the constitutional bounds is an integral part of this value system. It has never been different.

There are two anecdotes that best illustrate the spirit of the senior leadership of the Army. Towards the end of the emergency, when there were signs of political instability, the Prime Minister had asked the late Gen TN Raina about what the Army would be doing in those circumstances. He replied that he would abide by the Constitution. The late Field Marshal SHFJ Manekshaw was asked a comparable question by the same Prime Minister. He reportedly replied that he would not do anything improper, not because it was impossible to do so, but because he had no such intentions.

One wonders why the author presumes that coups did not take place in India on account of the vigilance of the civil authority? Are coups normal unless made impossible or prevented by a slew of measures? Does he think that it is normal for all Third World Armies to seize power as a matter of course? Or is he equating India with Pakistan? If that is so, it would explain quite a lot of his speculation. Yes, there is a lot between

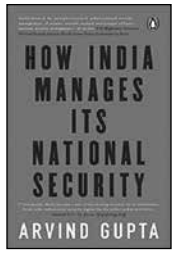
India and Pakistan that is alike, and yet there are fundamental differences. All Indians, including its defence forces, firmly believe in both democracy and the Constitution. The notion of a *coup d'état* in India is absurd. For the Indian Army, the Service is both a matter of faith and honour: faith in the Constitution, and honour in upholding the traditional values of the Army at all costs.

The Indian Army would be within its rights to say to the doubters, "O ye, of little faith".

Ashok Joshi (Retd)

Lieutenant General **Ashok Joshi** (Retd) is former Director General of Military Training and first Chhatrapati Shivaji Chair at Savitribai Phule Pune University.

How India Manages Its National Security



Arvind Gupta

(Published by Penguin Random House, 2018)
ISBN 978-0670090686, pp. 410
Rs. 599

Theoretical Construct

Arvind Gupta's choice of the book title *How India Manages Its National Security* underlines the basic philosophy and method incorporated while addressing the issue of national security. The word 'management' is a commercial term which denotes the aspiration to be profitable and efficient. In his acknowledgement, he accepts the primacy of 'methods' to 'methodology' of research as having influenced his writings. The matrix within which he functions as an author is between the environment and the actors related to the management of India's national security. The environment being the geopolitics, national actors, issues of internal security, destabilising movements, natural disasters, cultural preconditions, non- traditional security threats and technology related to the strengthening of national security. Actors, on the other hand, being the ecosystem, armed forces, police forces, technology, borders, intelligence, diplomacy, cyber, the National Security Council (NSC) and national security system.

Each item listed in the environment can be put in a two by two matrix, with every item listed in the actors, with the X-axis covering the extent of 'opportunities' and the Y-axis, the 'resources'. Those who have written the blurbs have called the book a "primer" without realising the intrinsic mathematical value of the work or the opportunities that it provides to decipher the nuances of India's national security policy-making procedures, and philosophy for implementation in the absence of a defined national security policy document till date. Whether the method of writing this book by the author was by choice and design

or for being a public policy-maker and an implementer cannot be fathomed. Suffice to say that the author, being a trained scientific mind in the area of theoretical physics, comes out clearly in his presentation and deliberations to provide a much needed empirical basis of research in national security affairs. With a quantum shift in the processes of the national security-making architecture still shrouded in secrecy and ambiguity, the students of public policy-making in India as well as the corporate and private sectors involved in partnering the development of capacity-building and inputs in policy-making will find this book very useful. It will enable them to optimise the matrix of the environment and actors for their own goals of business ventures, on one side, and the government to substantiate the philosophy of 'Make in 'India' to 'Make for India', for total indigenisation of products and even the realm of ideas, on the other.

Content and Context

Fifty years ago, in 1967, A L Venkateshwaran, the principle information officer to the Government of India wrote a book entitled *Defence Organizations of India,* published by the Publication Division of the Government of India. It became a Bible for all security studies students in India and abroad as an official enunciation of various organisations related to defence, defence production and many aspect of defence policy making. Concurrently, Stephen P. Cohen's book, on *The Indian Army: Its Contribution to Nation Building* has had a gap of a similar period till the appearance of an outstanding work by Steven I. Wilkinson's book entitled *Army And The Nation: The Military and Indian Democracy Since Independence*, published in 2013. The following are the two books presently published in 2018 in quick succession: one by Gautam Sen on *The Purpose of India's Security Strategy: Defence, Deterrence and Global Involvement,* followed by Arvind Gupta's *How India Manages Its National Security.* These works have a global perspective highlighting India's security issues rather than enunciating India's defence policy, as written by many authors, starting from Sardar Panikar, P V Rao, et al.

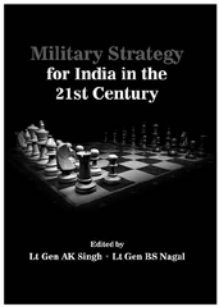
What then is the intrinsic value of Arvind Gupta's present book under review? First, it is written by an author who has spent nearly a decade in the National Security Council Secretariat since its inception in 1999, culminating in the position of Deputy National Security Adviser for three years ending in 2017. Therefore, he has had a grand view of every apparatus related to the national security policy making at the highest levels. Despite being the Director of two think-tanks, though remaining essentially an establishment man, he has brought about academic rigour to his present work by basing it entirely on open sources and avoiding any compromising of classified material that he has been privy to. His 374-page exposition has less than 100 footnotes. This indicates how little he considers corroborative citation as usefully relevant for the enormous amount of work dubbed as security studies that is being published in India without any impact factor or sustained citation. Intelligent and serious researchers will find this book an ideal exposition of the matrix of the environment within which India's security concerns germinate and the actors who catalyse the formulation of national security policy. The dichotomy between the two is clear and the dialectics are interdependent. This makes the work original to contribute to the growth of knowledge and indicate a roadmap to bridge the gap between the realm of ideas and the domain of public policy making.

The work is contained in 12 chapters in which a single chapter on "Environment" provides the key to 11 actors to provide a multi-dimensional matrix approach to decision-making at various levels of enquiry, the relevance of the actors and, lastly, a logical reason to empower a particular actor at a specific point of time and circumstances. It is hoped that this work will be considered useful by the establishment and academia alike.

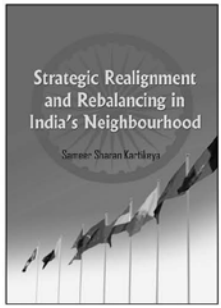
Gautam Sen

Gautam Sen is Distinguished Visiting Fellow at CLAWS as well as Editor-in-Chief of *CLAWS Journal.*

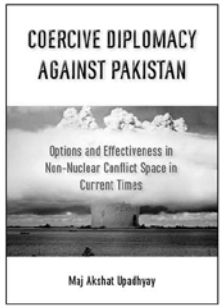
NEW BOOKS



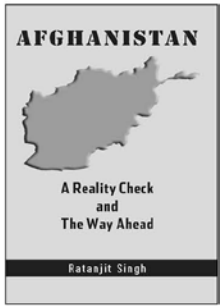
Military Strategy for India in the 21st Century
Lt Gen AK Singh and Lt Gen BS Nagal
₹ 1280



Strategic Realignment and Rebalancing in India's Neighbourhood
Sameer Sharan Kartikeya
₹ 480

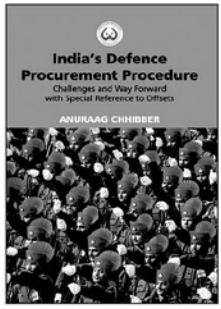


Coercive Diplomacy Against Pakistan: Options and Effectiveness in Non-Nuclear Conflict Space in Current Times
Akshat Upadhyay
₹ 399



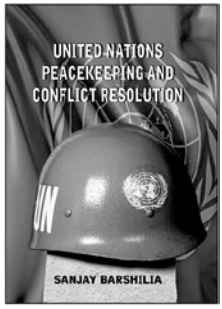
Afghanistan: A Reality Check and The Way Ahead
Ratanjit Singh
₹ 820

Indian Nuclear Strategy: Confronting the Potential Threat from both China and Pakistan
Sanjay Badri-Maharaj
₹ 980



India's Defence Procurement Procedure: Challenges and Way Forward with Special Reference to Offsets
Anuraag Chhibber
₹ 580

Rise of China: A Military Challenge to India
Narender Kumar
₹ 940



United Nations Peacekeeping and Conflict Resolution
Sanjay Barshilia
₹ 680

Notes for Contributors

General

The CLAWS Journal welcomes professional articles on warfare and conflict, national security and strategic issues, especially those related to the art and science of land warfare including sub-conventional conflict in the Indian context. Articles may be submitted by serving and retired members of the armed forces as well as civilians in India and abroad. Articles on aerospace and maritime issues and those on foreign policy and international relations having a bearing on land warfare are also welcome. The Journal particularly encourages articles from younger members of the armed forces.

Manuscripts: Contributors should submit their manuscripts (main articles, commentaries, review articles and book reviews) by e-mail, with one hard copy being sent separately by post. All material must be original, unpublished and should not have been submitted for publication elsewhere. Main articles must have a length of 3,000 to 6,000 words. Commentaries and review articles must not exceed 1,500 to 2000 words.

Book Reviews: Book reviews must contain the name of the author, the title of the book reviewed, particulars of the publisher, place and date of publication, number of pages and price. Authors who wish to have their book considered for review should ask their publisher to send a copy to the Editor, CLAWS Journal.

Submission: Since manuscripts will be sent out anonymously for peer review, the authors should omit their identity from the manuscript. The author's name, rank, unit/institutional affiliation, e-mail ID, postal address and telephone number should be submitted on a separate cover page. Each article must be accompanied by an abstract of about 250 to 300 words. A four to five line (or 75 words) biographical note describing the author should accompany the manuscript. Manuscripts should be typed in double space, including endnotes and references, with 1.5 inch (3.0 cm) margins, on one side of A4 size paper.

Acceptance and Revision: Intimation regarding suitability of the article for publication will be given within 30 days of its receipt in normal cases. Articles not accepted for publication will not be returned. The Editorial team reserves the right to edit articles for better clarity and to ensure that the style conforms to the style of the CLAWS Journal. However, views expressed by an author will not be altered. Authors should be prepared to revise their manuscript based on the suggestions made by the reviewers and the editorial team.

Honorarium: A suitable honorarium will be paid for articles accepted for publication. The CLAWS Journal may also commission articles from time to time.

Mandatory Certificates

- Retired armed forces officers and civilian authors should submit a certificate of originality, clearly stating that the article is original and unpublished and has not been submitted for consideration elsewhere.
- Serving members of the armed forces must submit the necessary clearance certificates in terms of the relevant rules and regulations pertaining to their respective Services.
- Serving army officers must submit three certificates.
  - ❖ First, a certificate of originality, clearly stating that the article is original and unpublished and has not been submitted for consideration elsewhere.
  - ❖ Second, a certificate from the author stating that s/he has not used any official information or material obtained in an official capacity while writing the article submitted.
  - ❖ Third, a certificate from her/his Superior Officer stating that there is no objection to the publication of the article.
  - ❖ The format of the latter two certificates is given in Para 21 (a) and (b) of SAO 3/S/2001/MI.
- Responsibility for obtaining Army HQ DGMI (MI-11) clearance in respect of articles pertaining to subjects specified in Paras 13 and 14 of SAO 3/S/2001/MI, will be that of the officer herself/himself.

Style of the Journal

Clarity: Articles should be written in a clear and lucid style. Sentences should be kept short. The use of too many adjectives should be avoided. The most complex ideas can be expressed in simple language. Paragraphs should also be short.
Use of Pronouns: Articles should be written in third person. Writing in first person should be avoided completely – unless the author is over 65 years old!

Spelling: Use British, not American spellings. Thus, use "humour," not "humor," and "programme," not "program." Where alternative forms exist, choose "-ise" instead of "-ize" or "-isation" instead of "-ization" spellings. Thus, use "modernise,"

"stabilise", "modernisation," "stabilisation," etc.

Quotations: Quotations must be placed in double quotation marks, reserving single quotation marks for a quote within a quote. Long quotes (i.e., four lines or more) should be indented, without quote marks, to set them apart from the text.

Abbreviations:

- All abbreviations must be given in full at their first use in the text; for example, Comprehensive Test Ban Treaty (CTBT).
- Abbreviations should include a final stop in words shortened by omitting the end (such as p., ed., vol.) but not in contractions (words such as Mr, Dr, edn, eds) or between capitals, e.g., USA, SAARC, UN.
- Avoid using "i.e." and "e.g." in the text but use them in the notes if you wish.
- Do not use military abbreviations such as "ops", "int" and "adm" as the CLAWS Journal will have a civilian as well as an international readership. However, those such as CI (counter-insurgency), IS (internal security) and CPMFs (central police and para-military forces) may be used after being given in full at their first use.
- Abbreviated military ranks may be used; e.g., Lt Col, RAdm and Wg Cdr.

Headings and Parts: The only centre heading should be the title of the article. Refrain from dividing an article into several parts. Avoid too many headings, as is the norm in Service writing. While group headings are the norm (bold but not underlined), paragraph headings are best avoided.

Sub-paragraphs and sub-sub-paragraphs:

- Avoid writing in sub-paragraphs unless it is inescapable – e.g. a list needs to be provided.
- Even then, write in complete sentences and not in point form under sub-paragraphs.
- Do not write in sub-sub-paragraphs under any circumstances.

Highlighting Words: Use capitals, bold and italics sparingly but consistently. Italics should be used for titles of books, newspapers, journals and magazines as well as for foreign words not in common usage.

Numbers: Numbers from one to nine should be spelt out, 10 and above will remain in figures; hence, "seven" not "7" and "17" not "seventeen". However, figures should be used for exact measurements (such as "5 per cent," "5 km" and "5-year-old child"). Use "thousand" and "million," not "crore" and "lakh" as the Journal will have international readers. Use fuller forms for inclusive numbers in the case of dates and page numbers (such as "1971-72" and pp. "260-65"). In the text use "per cent", in tables the symbol "%."

Figures and Tables: Figures and Tables should be presented on separate sheets of paper and collected at the end of the article while mentioning the location in the article. Figures and Tables must be numbered in separate sequences, i.e., "Fig. 1" and "Table 1" and the titles should be short and crisp. Copyright permission for reproducing figures or photographs that have been cited from other works must be obtained.

Endnotes and References: Endnotes and References should be amalgamated and marked serially in the text of the article by superscript 1, 2, 3, etc.

Referencing Style: References should be typed in the form of the following example on first appearance:

(a) **Books:**
Michael Foucault, *The Archaeology of Knowledge* (London: Routledge, 1989), p. 26.

(b) **Edited Volume:**
James Der Derian (ed), *International Theory: Critical Investigations* (New York: New York University Press, 1995).

(c) **Articles in Journals:**
Samina Yasmeen, "Pakistan's Kashmir Policy: Voices of Moderation?," *Contemporary South Asia*, Vol. 12, No. 2, June 2003, pp. 187-202. In case of two journals having a similar title, the place of publication must be mentioned, e.g., International Affairs (London) and International Affairs (Moscow).

(d) **Articles in Edited Volumes:**
Tom Nairn, "The Curse of Rurality: Limits of Modernisation Theory" in John A. Hall (ed), *The State of the Nation: Ernest Gellner and the Theory of Nationalism* (Cambridge: Cambridge University Press, 1998), pp. 107-34

(e) Articles in Newsmagazines: Gurmeet Kanwal, "Pakistan: On the Brink," *The Week*, November 4, 2007, p. 45.

(f) Articles from Newspapers: M. K. Bhadrakumar, "New Regionalism in Central Asia," *The Hindu*, July 14, 2004.

(g) References to Websites: United Nations Development Programme, "Arab Human Development Report 2003", http://

www.undp.org/rbas/ ahdr/english2003.html, accessed on October 27, 2007.

(h) Reports and Documents:
- United Nations, UNCED, The Global Partnership for Environment and Development (New York: United Nations, 1992).
- Canberra Commission, Report on the Elimination of Nuclear Weapons (Canberra: Commonwealth of Australia, 1996). Available on the Internet at <http://www.dfat.gov.au/cc/cchome.html>

(i) Conference Papers:
Michael Williams, "The Discursive Power of Community: Consideration on the European 'Security Community'", Draft Paper presented at the conference on Power, Security and Community: IR Theory and the Politics of EU Enlargement, Copenhagen October 9-12, 1997.

(j) Unpublished Theses and Dissertations:
Christopher Strawn, "Falling of the Mountain: A Political History and Analysis of Bhutan, the Bhutanese Refugees and the Movement in Exile", Dissertation submitted to the University of Wisconsin, USA, 1993, Chap. 4.

On subsequent reference (unless immediately following the first reference, in which case Ibid. will be used) please use n. with the number of the note given earlier e.g. n.1, n.2.

Five offprints of each article will be provided to the author and in case of more than one author, to the senior author. A complimentary copy of the printed journal will be provided to each author.

Mailing Address: All manuscripts should be addressed to:

The Managing Editor
CLAWS Journal
Centre for Land Warfare Studies
RPSO Complex, Parade Road
New Delhi 110010, India
Tel: +91-11-25691308
Email: director.claws@gmail.com / claws.publications@gmail.com
Website: www.claws.in

SCHOLAR WARRIOR

SUBSCRIPTION RATES

IN INDIA
☐ Rs. 300 /- per copy

SAARC COUNTRIES
☐ US $ 10 per copy

OTHER COUNTRIES
☐ US $ 15 per copy

☐ Rs. 600 /-
Annual Subscription (2 issues)

Please Print

Name .....
Complete Address .....
..... Pin .....Phone .....
Please find enclosed cheque/draft number ..... dated .....
drawn on .....Favouring Centre for Land Warfare Studies
for Rs US$ .....

Please mail this form to: Centre for Land Warfare Studies (CLAWS),

RPSO Complex, Parade Road, Delhi Cantt, New Delhi - 110010
Tel: +91.11.25691308 • Fax: +91.11.25692347 • Army: 36877
E-mail: landwarfare@gmail.com

CLAWS JOURNAL

Journal of the Centre for Land Warfare Studies

CLAWS JOURNAL

Journal of the Centre for Land Warfare Studies

CLAWS JOURNAL

SUBSCRIPTION RATES

IN INDIA
☐ Rs. 300 /- per copy

SAARC COUNTRIES
☐ US $ 10 per copy

OTHER COUNTRIES
☐ US $ 15 per copy

☐ Rs. 600 /-
Annual Subscription (2 issues)

Please Print

Name .....
Complete Address .....
..... Pin .....Phone .....
Please find enclosed cheque/draft number ..... dated .....
drawn on .....Favouring Centre for Land Warfare Studies
for Rs US$ .....

Please mail this form to: Centre for Land Warfare Studies (CLAWS),
RPSO Complex, Parade Road, Delhi Cantt, New Delhi - 110010
Tel: +91.11.25691308 • Fax: +91.11.25692347 • Army: 36877
E-mail: landwarfare@gmail.com

Note: Kindly add Rs. 10.00 as bank charges for outstation cheques

CLAWS JOURNAL

SUBSCRIPTION RATES

IN INDIA
☐ Rs. 300 /- per copy

SAARC COUNTRIES
☐ US $ 10 per copy

OTHER COUNTRIES
☐ US $ 15 per copy

☐ Rs. 600 /-
Annual Subscription (2 issues)

Please Print

Name .....
Complete Address .....
..... Pin .....Phone .....
Please find enclosed cheque/draft number ..... dated .....
drawn on .....Favouring Centre for Land Warfare Studies
for Rs US$ .....

Please mail this form to: Centre for Land Warfare Studies (CLAWS),
RPSO Complex, Parade Road, Delhi Cantt, New Delhi - 110010
Tel: +91.11.25691308 • Fax: +91.11.25692347 • Army: 36877
E-mail: landwarfare@gmail.com

Note: Kindly add Rs. 10.00 as bank charges for outstation cheques