

Modernisation of Infantry in India

Rumel Dahiya*

Besides equipping the infantry, a serious look also needs to be given to its training. Use of tactical simulators for training commanders up to unit level, support weapons and advanced infantry weapons simulators, driving and communication simulators have to be procured and utilised to train better educated soldiers who will be required to handle more complex weapon systems and equipment in future. More than the shortcoming in educational standards among the soldiers there is a lack of understanding on part of the officers for need to train their command better and manage the time more gainfully. For this to happen the working ethos in the Army will have to undergo a change and senior officers will have to give a lead. Besides, a serious thought also needs to be given to re-organisation of mountain formations to enhance their combat capabilities which have remained unchanged for many decades. They need to be provided with tools for better situational awareness, fire power, command and control, manoeuvrability, better logistics and greater staying power.

Introduction

The Indian Infantry is one of the most battle-hardened and combat rich forces in the world. It has constantly been involved in fighting wars and restoring peace in troubled insurgency and terrorism affected areas in various states of the country since independence besides helping the state in restoration of law and order and helping the people during natural calamities. Many a time, it has fought with sub-optimal tools of fighting including sub-standard equipment and old weapon systems. Infantry weapons and equipment are not as glamorous and expensive as fighter aircraft, tanks and submarines and that perhaps is the reason why infantry modernisation has not received the kind of attention it deserves.

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* Brigadier Rumel Dahiya, SM (Retd.) is Advisor (Net Assessment & Defence Studies) at the Institute for Defence Studies and Analyses (IDSA), New Delhi.

However, in certain terrains like mountains and high altitude or jungle and even in dense urban environment it is only infantry that can decide the outcome of an engagement. Infantry is the only arm which can fight in all kinds of terrain and in all weather conditions.

To be successful, an army must have good command, leadership and organisation. In terms of equipping a force, as part of organisation, it must have four types of

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technologies i.e. mobility, engagement, control and protection. In the modern age situational awareness has become even more important. State of modernisation of any force, particularly at tactical level, has to be measured with regard to availability and proficiency in use of latest technologies in these fields. Indian infantry has always fought bravely and has been led from front brilliantly by its young officers but has suffered many preventable casualties due to poor quality of weapons and equipment at its disposal. Even the basic protective gear, communications and anti-armour weapons and grenades have been of poor quality and suspect reliability.

There have been some half hearted attempts at modernisation of infantry, not unlike other arms, but lack of focus and inadequacy of funds has not permitted an organisational transformation of the "Queen of Battle". No doubt, re-organisation at formation level by way of rapidisation (reorganization of infantry divisions for employment in plains, primarily by providing an integral armoured brigade) has added punch to the capabilities of the formations in plains but other formations like the mountain divisions, brigades and battalions have not changed since their raising in mid sixties. Obviously, their capabilities have not grown to meet the demands of modern day battlefield. The purpose of this article is not to lament the lost opportunities or complain about lack of concern about the decision making in our country. Suffice is to say that the ability to apply a superior tactical system, of which organisation is an extremely important part, continuously and repeatedly against an opposing force, is a critical foundation on which enduring military advantage is built. Operational and strategic advantage can only be created through tactical advantage and we can be sure of victory in war if our forces create and retain overall military advantage over our adversaries. Mere introduction of latest weapons and equipment will not bring RMA. The Army has got to be better than the adversaries in leadership, command, organisation,

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logistics, training, doctrines, manoeuvre, strategic thought and national will. Modernisation of working ethos and social mores is also necessary to benefit from induction of modern weapons and equipment.

Role of Infantry

It is clear from its role that infantry should be prepared to undertake operations across the entire spectrum of warfare within the country and across the borders or out of area, if national interests so demand.

The role of infantry in defensive operations is to hold ground against all forms of attack by the enemy and to carry the battle into his territory by closing in and destroying him. In offensive operations, its role is to close in with the enemy and destroy him independently or in concert with other arms. In asymmetric warfare, it is required to deter and counter asymmetric threat posed to the country by insurgency, terrorism or proxy war and to be prepared to transit to a limited war in nuclear backdrop. It is clear from its role that infantry should be prepared to undertake operations across the entire spectrum of warfare within the country and across the borders or out of area, if national interests so demand.

Nature of Future Wars

Chances of full scale conventional wars may have reduced due to the costs involved yet short and intense limited wars under nuclear shadow cannot be ruled out in which highly accurate and destructive weapons will be used. Situational awareness and short decision cycles, in an environment of transparent battlefield, information overload and electronic warfare, will be necessary to achieve victory. Availability of more lethal and precision weapons with longer ranges and net centric capability will be necessary along with improved night fighting capability, smarter logistics chain and matching mobility with mechanised forces.

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In the shadow of nuclear war, large scale concentration of forces will have to give room to smaller, self sufficient battle groups to prevent offering an attractive counter-force target. Infantry operations will, therefore, remain important. Although the role of infantry is likely to remain unchanged its commanders and troops will need to be trained and equipped appropriately to undertake successful operations against the adversary. In any case, in our context, the probability of the next conventional or limited war breaking

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out in the mountains is far higher than that of a war in the plains. It is mainly infantry which will be required to fight this war. Besides, counter-terror and counter insurgency operations are continuing and these may have to be undertaken simultaneously with a future border conflict that may spill over to a larger conventional war.

Requirements and Shortcomings

Considering future requirements of war fighting there is a need to improve firepower, protective gear, mobility, situational awareness, communication and digital connectivity at individual soldier, sub-unit and unit levels. For offensive and defensive operations in mountains and CI operations the basic consideration should be the ability to fight when isolated and at small team level. This will require units being self sufficient in most aspects and function like combat groups so that they can undertake and develop operations on separate axes and in depth without having to wait for supporting arms to catch up.

The protective gear has to be effective and light weight to improve survivability and foot mobility when in contact with the enemy. Mine protected vehicles (MPV) at subunit level and anti-mine boots at section level are required to improve survivability. Soldiers have to be provided with light weight and reliable weapons with good day and night accuracy and high lethality. Some of these requirements seem contradictory. However, since different members of a team would require different weapons and equipment for their respective tasks not everyone needs a heavy caliber support weapon. For terrain permitting vehicular mobility and mechanised threat, an infantry subunit will need to be equipped with longer range and accurate anti-armour missiles and rocket launchers besides higher calibre machine guns and longer range mortars. Scales of authorisation will have to be worked out based on tactical necessity and the need to keep the individual soldiers and sub-units light and foot mobile. A battalion should have the means to collect, analyse, disseminate and act upon information and intelligence received from higher formations, its own subunits and flanking units and formations. It will therefore require a battalion surveillance centre and its own short range UAVs. Communications need major improvements. Every soldier is required to be in touch with his colleagues and his commander. Ideally, everyone should be networked

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with light weight, short range radio but frequency management and overall weight to be carried by individuals weigh in against this requirement except where it is unavoidable like in urban warfare. Within a section visual and voice communication may suffice but the section commander and his second in command need to be in radio communication with each other and with superiors in chain of command. All support weapon detachments and platoon and higher levels radio communication is absolutely essential. The radio equipment should be secure from interception and be of light weight. At least at the level of company commander and above the sets should be able to provide data and video links. This is a must to achieve short OODA loop and to ensure that momentum is maintained in a fast moving battle. All support weapons must have rugged dedicated vehicle to support quick

movement and deployment of such weapons. This is necessary for faster movement and to be able to carry adequate ammunition on weapon without tiring the crew. All automatic weapons at whatever level and other support weapons require laser range finders and day/night thermal imaging sights. It will result in increased ancillaries like generators but the net advantage in terms of improved accuracy and lethality of weapons and resultant reduced consumption of ammunition will be significant. This will ease supply chain problem to some extent.

An attempt was made in late 90s to improve infantry's capabilities by giving a fresh look at War Establishment (WE) of standard infantry battalion, famously known as WE 4B. It involved reorganizing the infantry battalion, authorizing it better fire power, greater degree of mobility and some surveillance capability. It came into effect in 2003 after a sum of Rs 3,500 crores was earmarked for this purpose. Despite a decade having elapsed since its inception, the complete range of equipment authorised as part of revised War Equipment Tables (WET) is yet to be provided to the units. For want of indigenous production facilities, some of the weapons and equipment were imported but not in sufficient numbers to equip all the units fully. Some equipment produced indigenously has not been of desired quality such as the night sights.

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In many cases ammunition imported was in much less quantity thus affecting training of weapon crews. In any case, even at full authorisation, the capability in terms of fire power, navigation, mobility, surveillance and night fighting capability,

protective combat gear, communications and logistics capability were inadequate to meet the challenges of modern intense and destructive battle field milieu across all spectrums of warfare ranging from low intensity to NBC warfare. Inadequacy of numbers of weapons and equipment and often enough poor quality has compounded the problem.

As of now, infantry units do not have a reliable CQB weapon or hand grenade, total weight carried by a soldier even with most basic equipment is on higher side, protective gear like helmet and bullet proof jacket are bulky and do not provide required degree of protection, means of communication are limited in numbers and capability thus affecting command and control, obstacle crossing expedients are heavy and antiquated. There is no matching mobility with mechanised forces, logistics chain is inefficient, battle field management system is non-existent at battalion level and below, and units' capacity for reconnaissance and surveillance is limited to foot patrols, limited number of short range battle field surveillance radars and antiquated binoculars. GPS, standard personal equipment for navigation even with terrorists, is still a luxury with infantry sub-units.

Without going into numbers of various pieces of new weapons and equipment, it can be summarised that some anti-tank guided missiles(ATGM), hand held thermal imaging sights(HHTI), hand held BFSRs, long range reconnaissance sights (LORROS), anti-material rifles(AMRs), under barrel grenade launchers (UBGL), carbines, bullet proof vehicles and mine detectors etc have been provided mostly to the infantry and Rashtriya Rifles battalions deployed in CI and on the line of control with Pakistan Occupied Kashmir(POK). Their availability with the units deployed on our northern borders and in plains is limited. Ammunition shortages persist. Besides, adequate number of weapon and tactical simulators are yet to be produced or procured to improve training standards.

A question sometimes raised is about the ability of mainly rural origin and poorly educated soldiery to absorb the high tech equipment. Yes it is true that rank and file of infantry hail from rural areas where standard of education is poor to say the least. Yet our experience in the counter insurgency operations in handling the modern equipment has been reasonably satisfactory. The troops are found to possess high degree of common sense and with improvement in training methodology it will be possible to absorb high tech weapons and equipment.

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Sociological changes in terms of more educated urban youth being inducted in infantry are hard to come by when job opportunities are increasing in civil street. Improving educational standards in rural areas will also take decades if not more. Improving training standards of NCOs and jawans is therefore the only viable option for the present.

Equally important is the need for changing the mindset of commanders who are either too preoccupied in mere day to day administration and paper work or reluctant to pay adequate attention to realistic training which is necessary to get the best out of every soldier. Large scale exercises and preparation leading to them end up hiding shortcomings in training of individual soldiers and sub units. In actual war every one will have to perform at his optimum level to achieve favourable results and therefore greater emphasis on training each soldier for his assigned role needs much

greater attention. Modernisation of thought and ability to get the cumulative best out of ones command, using best possible resources, will be the key to success.

F-INSAS

Considering the emerging trends of warfare and the complexity of mission spectrum of infantry, armies of various advanced countries have embarked on 'future soldier' programmes. LAND 125 Soldier Combat System of Australia, Integrated and Modular Engagement System (IMESS) of Switzerland, Soldato Futuro of Italy, Future Force Warrior of USA, Future Infantry Soldier Technology (FIST) of UK, IdZ of Germany, FELIN of France, Advance Combat Man System of Singapore, ANOG of Israel and F-INSAS or Future Infantry Soldier as a System are some of the programmes in various states of implementation. The common theme running across these programmes is that they are meant to provide an infantry soldier with improved combat effectiveness in terms of lethality, mobility, survivability and C4I. The aim and scope of these programmes differ in some details due to the nature of likely employment of respective armies. Singapore, for example, has to pay attention to urban combat preparedness.

F-INSAS, in case of India, is not proposed as a revolutionary whole new programme. It is rather seen as a supplement to WE 4B, with a focus on individual soldier. WE 4B by itself is a work in

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progress. Project Management Organisation for F-INSAS was established in 2005 and the sub-systems to be procured were identified in 2008. The sub-systems identified are the weapon, protection, communications, surveillance and situational awareness and computers. Some of the items of equipment proposed as part of the programme are a light weight composite material helmet with head display screen, push-to-talk short range radio set, light weight composite material body armour, night vision goggles, a small computer and data card with support weapon detachment commanders and company commanders, light weight and long life disposable power pack, wrist mounted GPS with sub unit commanders, new personal weapon with greater reliability and lethality, better quality clothing and web equipment and boots and rations in the form of meals-ready-to-eat. Obviously, all these will require a huge investment if the entire force is to be equipped simultaneously. The equipment can therefore be introduced selectively and gradually starting with the Special Forces and then as per priority of formations depending upon their planned employment. Complete transformation will take decades but move in this direction is absolutely essential.

Now the familiar story of our procurement procedure involving case by case approvals has started. Besides, our DRDO has now undertaken to provide all the items and unless it raises its hands nothing can be procured from private sector or ex imports. Mumbai terror strike has forced a segmented approach of equipping the Ghatak platoons first, with 15 new items like sniper rifle, fibre scope, door-breaking and stuns grenades, breach munitions, new carbine and assault rifle, ballistic shield, combat helmet, pump action shot gun and telescopic ladder etc. This seems like a diversion and reflective of adhocism that the country is so used to. Not every one needs these items hence these could be provided as sector stores to formations which are tasked to undertake operations in urban setting internally. True, some of the main items forming part of various sub-systems of F-INSAS programme are going to take a lot of time to be provided to an ordinary infantry soldier but a beginning has to be made soonest lest the infantry should remain perpetually saddled with obsolete equipment while required to fight a modern war.

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It needs to be understood that F-INSAS is not a replacement for WE 4B. On implementation, the former will improve capability of an individual soldier and his survivability, the latter is required for enhancing the combat effectiveness of

units and subunits of infantry. Both are complementary but are required to be progressed simultaneously to be able to make a significant positive difference.

Conclusion

Infantry has seen slow and incremental improvements to its weapons and equipment since independence. There has never been a life changing scenario

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transforming the capabilities of infantry thus making it a force par excellence. It has fought bravely and been led admirably but has suffered very high casualties in wars and CI operations basically because of poor weapons and equipment. It is not enough to blame our procurement procedures for such a state of affairs. Infantry has received a step motherly treatment within the Army. Cost of modernisation of infantry is a low fraction of the costs of modernisation of some other arms and the human cost to infantry of the lack of modernisation is so disproportionately high that it should have received first priority in allocation of capital outlay but it has not. The increments that have taken place are basically half measures forced upon by crises. This has to change.

Besides equipping the infantry, a serious look also needs to be given to its training. Use of tactical simulators for training commanders up to unit level, support weapons and advanced infantry weapons simulators, driving and communication simulators

have to be procured and utilised to train better educated soldiers who will be required to handle more complex weapon systems and equipment in future. More than the shortcoming in educational standards among the soldiers there is a lack of understanding on part of the officers for need to train their command better and manage the time more gainfully. For this to happen the working ethos in the Army will have to undergo a change and senior officers will have to give a lead. Besides, a serious thought also needs to be given to re-organisation of mountain formations to enhance their combat capabilities which have remained unchanged for many decades. They need to be provided with tools for better situational awareness, fire power, command and control, manoeuvrability, better

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logistics and greater staying power. Mountain formations will have to have units capable of undertaking independent operations on their own, as combat groups, and provided with air mobility for quick reaction to restore an adverse situation and/or make equal or more gains in an area where the adversary is not expecting.

Army also needs to start making subtle efforts to change eating habits of soldiers to make ready to eat meals culturally acceptable, think of reorganising units on all India class composition to spread out available talent across the organisation, smarter selection of personnel for handling high tech equipment and apply more exacting standards to training. Some things money will buy but other things have to change within. The foremost requirement is to change the way we fight at tactical and operational level. 