Mechanised infantry past present and future history essay

An armoured personnel carrier or an APC is a vehicle designed to carry men along with their weapons and equipment into the battlefield. It provides them limited protection against small arms and possesses some degree of fire support in the form of medium calibre weapons. Some of them are also referred to as “ Battle Taxis”. In addition to these lightly protected versions there are also the heavily armed types commonly called the Infantry Fighting Vehicles. Armoured tanks, though lethal and well protected, are extremely vulnerable on the battlefield if operating independently. These threats range from the missiles launched from aerial platforms to the single infantryman carrying a hand held anti tank weapon. Therefore, a need was felt to group infantry along with the armoured tanks to provide them with protection against local threats while also allowing them to advance through areas cleared by this infantry element. To obviate the mobility differential between the two, this infantry was provided with vehicles to match the speed and reach of the tanks. This may be called the genesis of the APC or the Mechanised Infantry as it is now commonly referred to.

The Mechanised Infantry has proved itself time again in various theatre of operations since its inception. Their importance has only been confirmed by their regular employment in a host of conflicts. Be it the Arab- Israel wars, the conflicts in Africa, the Soviet invasion of Afghanistan and the present day insurgency’s in Iraq and Afghanistan, these vehicles have proved their mettle time and again. Despite their potential, in the context of the Indian army there is a reluctance to take this arm seriously. Though this may not be true in the upper echelons of the organisation, within the middle rung there is a lack of comprehension and confidence in the capability of the

mechanised infantry to carry out their task. Having personally witnessed the effect a platoon of ICVs can have on a belligerent force in Congo it can be confidently averred that an ICV/APC is the best platform to be employed in such tasks without the threat of an escalation in the conflict spectrum. This article will trace out the history of the mechanised infantry, discuss it role and employment in the present context and the likely future trends. It will also discuss the relevance of this arm in context of the Indian army and the methods to increase its employability.

Role of the Mechanised Infantry

The role of the Mechanised Infantry has more or less remained the same since its origin. The Wehrmacht during the Second World War carried out an analysis of its Panzer force and identified certain weaknesses. To overcome the shortcomings the following regulation was framed for the collaboration of the tanks and Panzer grenadiers.

“… the tank fights the enemy tank and destroys other weapons. The Panzer grenadier looks for hidden anti-tank guns and fires on them. He prevents close quarter attack on the tanks. Covered by the tanks, he clears the enemy’s position. … Mutual assistance is essential. … In good country, the armour moves by bounds from cover to cover, giving fire protection to the panzer grenadiers following. In wooded areas, the Panzer grenadiers precede the tanks. … and … destroy the enemy with the weapons they carry on their vehicles.[1]

The same field service regulations further explained the role of the panzer grenadiers:

Every other arm is dedicated to helping the tank advance ... Tanks cannot completely clear the enemy from captured ground, and scattered groups of the enemy may combine to continue the fight. The Panzer grenadiers regiments follow the tanks in elongated echelon, and, collaborating with the second armoured wave, annihilate enemy remnants as well as carrying out the tasks of guarding and securing the rear and flanks of the armoured units. Panzer grenadiers hold the areas captured by tanks. Where a tank is obstructed by difficult terrain or by artificial barriers, the Panzer grenadiers advance first. The conditions for this are:

(a) attacking across rivers; (b) in heavily wooded areas, swamp or badly cut-up terrain; (c) minefields, anti-tank ditches and other tank obstacles: (d) when breaking through enemy anti-tank fronts. The tanks will give supporting fire to the Panzer grenadier advance. Once past the obstacles, the tanks resume the leadership of the advance ....”[2]

The role, task and method of employment of the mechanised infantry have more or less remained the same since then with only refinements in the drills and tactics. However the equipment has evolved with time and what once a primitive machine with limited firepower and protection is today a weapon with tremendous destructive and capability and adequate protection to allow the infantry to operate with relative comfort and safety.

History of Mechanised Infantry

The history of the tank and the APC/ICV are entwined. They can be traced to the First World War with the development of the _____. Though this is referred to as the first modern tank, history is replete with examples where

commanders have utilised the concept of heavily armed soldiers on chariots and elephants provided with adequate protection taking on the enemy. Ziska, a great warrior of his days, employed the “ Wagon-Lagers” during the Bohemian Wars of 1410-20 against the Catholic Crusaders. These wagon mounted cannons were extremely effective against the German armies. The Scots, in 1456, invented a wooden cart that encased its crew and protected them. Horses, enclosed in wood for protection, were used to propel these carts. However, it was only after the Battle of Somme in 1916 that the potential of the tank was realised and they began to be regarded as the deciding factors in combat engagements throughout the world.

The introduction of the tank at the later stages of World War I did not bring about any change in the war fighting methods being employed. They were simply regarded as a means to end the indecisiveness of Trench Warfare. Large scale casualties with no tangible territorial gains led to the development of this weapon system, designed to cross the miles of barbed wire and torn up earth between the two opposing forces. Success in such form of warfare was also only achievable if the foot soldier could move over the inhospitable terrain with speed and protection and exploit the breakthroughs achieved. The tank was found to be the most suitable means of gaining the desired breakthrough. However, this too had it its inherent shortcomings, with the primary one being that of sustaining the success. Even though the tank was capable of gaining the initial foothold, it was by itself vulnerable to individual/ group of soldiers who could close in with it and destroy it. The British were the first to realise it and developed the first armoured personnel carrier the Mark IX, essentially a redesigned and

lengthened version of the Mark V Male tank. The initial idea was to provide some protection to the infantryman from the machine gun fire so as to allow them to cross the battle field and thereafter serve as the eyes and ears for the tanks as well as providing it with protection.

Development of Mechanised Infantry

The inter war years were a period of stagnation in the field of armoured warfare for the US and most of the European countries. They persisted with the employment of tanks as supporting arm for the infantry in a piecemeal manner. The Germans, under the guidance of Guderian, developed their own employment philosophy, that of Blitzkrieg. Accordingly they built the SdKfz25, a half track, to be used to carry the infantry behind the rapidly moving tanks. These combined task forces gave the Germans their famous victory’s and changed the face of armoured warfare. They were referred to as the Panzer grenadiers, a forerunner of the present day Mechanised Infantry Concurrently, the US developed their M2 and M3 half tracks while the British made the Bren Carriers. Often, APCs were armoured cars with the capacity for carrying troops, but they subsequently evolved into purpose-built vehicles to suit the demands of motorised warfare of the Second World War. Thereafter, subsequent development of the Mechanised Infantry was done on the basis of the employment philosophy being followed by the respective countries. The US and the USSR went about developing their own versions of the APCs which differed in both design and use.

USSR/Warsaw Pact Countries

The USSR continued development on ICVs after the end of the world war and developed the vehicles as per their doctrine. Based on the experience of the

World War, they identified the need for greater protection and firepower to the APC than the US and introduced the Infantry Fighting Vehicle The aim was to achieve a breakthrough to allow the infantry to get through with speed and exploit the available opportunity. The increased lethality of the anti tank missiles demanded greater protection to the infantry soldier sitting inside the vehicle. The soldier sitting inside was provided the ability to bring to bear his personal weapon while under fire. Accordingly, the BMP-1 was designed which catered for all the above requirements. It had a 73 mm gun, the Malutka anti tank missile and machine guns. There was also the provision of port hole in the stick compartment that allowed for use of the personal weapons while sitting inside the vehicle. The BMP intended to pin down the enemy soldiers while on attack and to provide fire support with the heavier weapons while the infantry was dismounted. The Israel-Arab conflict of 1967 and 1973 exposed some vulnerability in the vehicle which saw the development of the BMP-II. The 30 mm cannon replaced the 73 mm gun while the missile was upgraded to the second generation AT-4/5s. The commander was given additional protection and the strength of the section was reduced from 11 to 10. Thereafter, the Russian built the BMP-III which was less of an ICV and more of a light tank with a 100 mm gun, an additional 30 mm cannon and a gun barrel launched missile system. It enjoys better armour protection and is still light enough to be transported by air.

NATO/US APCs

The US developed their version of the vehicle on a different doctrine. Their concept involved the vehicle to provide mobility to its infantry while simultaneously protecting it. Emphasis is not on firepower as the same would

be catered by the tanks moving ahead. Accordingly they built the Armoured Personnel Carrier or the APC. This operated on the concept of “ Battle Taxis”. The vehicle was meant to carry the infantry into battle and thereafter was left out of battle. The most popular of these was the M113 “ box on tracks”. They were introduced in service in 1960 and since then almost 80, 000 of these have been built. They were used effectively for the first time in the Vietnam conflict. There were a number of variants build alongside the primary version. These were used as Command Posts, mortar carriers and ambulance APCs. Because of their versatility, these have been used very effectively used by commanders for tasks they were not designed for. For instance, M-113s were used to lead the attack on the Vietcong in the absence of tanks. This family was extremely popular among the US allies and a large number were inducted in almost 50 other nations. With the introduction of the BMP-1 in the Soviet army the US had to rethink their approach. The large number of A vehicles (tanks and ICVs) available with Russia forced the US army to concentrate on increasing their anti tank capability. They introduced the TOW missile into their force. However the TOW didn’t possess any protection leaving the firer vulnerable to return fire while he tracked the missile to the target. The US built the M2 Bradley as a counter to the Russian BMP-I. They revised their existing philosophy and built a vehicle with heavy armament and armour protection. It was given a TOW missile launcher with the operator under armour. It had an additional 25mm Bushmaster cannon and portholes for the infantry to fire from. It was fairly heavy by the standards of an APC and was supposed to fight behind the infantry and not operate as a “ Battle Taxi”. The Army believed that the Bradley, initially known as the MICV, was essential so the Army could adopt

an armour doctrine that was similar to German doctrine and appropriate to a mechanised battlefield characterized by highly lethal modern weapons and numerical superiority of the enemy. They have proved their value in numerous theatres be it Kuwait, Iraq and Afghanistan. But these have been service since 1964 and the US army has been looking for an alternative. This led to the introduction of the Stryker family of vehicles. This is an eight wheel drive combat vehicle and the focus of the US army's Transformation. It provides enhanced protection to the soldiers from RPG and IED attacks. It has operated extensively in Operation Iraqi Freedom to the tune of six million miles. It is planned to enhance the armour protection by adding reactive armour modules. The US army plans to induct 2691 vehicles for the seven Stryker Brigade Combat Teams that it is raising. Despite the performance of the Stryker, it does a have its share of detractors who warrant against the replacement of the M-113s and M2 Bradleys. The major disadvantage with the Stryker is the weight of the vehicle which reduces its strategic/tactical mobility. As a comparison, the C-17 can carry four combat ready M-113s against two Stryker vehicles. There are other inherent disadvantages with the Stryker family, however the US is keen to continue using them and there have been mixed reviews regarding their performance from the soldiers on ground.

Other Nations

The development of APC/ICVs has not remained with only the US and the Russians. Other nations have also built/ developed models base on their requirements and doctrines. The French army is using the Véhicule de l'Avant Blindé or VAB (" Armoured Vanguard Vehicle" in French). This is an

extremely popular wheeled APC in service since 1974. Its popularity can be gauged by the fact that the US is using the same for their own police departments. One more vehicle that merits attention is the Israeli “ Achzarit” which is based on the Soviet T-55 tank. The IDF modified the tanks they had captured from the Arab armies by removing the turret and modifying the chassis for troop carriage by adding a rear door. The engine was replaced and reactive armour installed. This design of APC was contrary to the existing philosophy of light vehicles. The IDF considered troop protection to be the primary factor and hence the heavy protection at the cost of weight. Availability of strategic mobility not being an imperative IDF could afford to build these heavy APCs.

Mechanised Infantry for Indian Army

The Indian army acquired its first Mechanised unit in 19__. Since then it has raised the Mechanised Infantry Regiment and converted the Brigade of the Guards to a mechanised profile. These units are primarily meant to operate in the Western Theatre, both in the desert and the plains sectors. They are trained to operate as per the new Indian Cold Start Doctrine which envisages the armour and mechanised infantry forming “ Integrated Battle Groups” to launch into an adversary. However there is a school of thought within the army that questions the utility of the ICV. With better mobility available with the infantry, their being able to keep pace with the tanks is no longer an issue. In addition, the BMP-II does not have enjoy adequate protection against the adversary’s anti- tank capability. Therefore, it may be argued that the infantry may be able to perform the tasks meant for the mechanised infantry. In any case, grouping an infantry battalion with the armour to carry

out “ Encounter Crossing” on the water obstacle to overcome the shortfall of mechanised infantry is an option occasionally practised. If that be so, can the infantry replace the Mechanised Infantry outright?

This line of though needs to be negated at the earliest. The more logical question that needs to be asked is that can the mechanised infantry do tasks traditionally associated with the armoured tanks. Before addressing that question let us first reemphasise the importance/relevance of the mechanised infantry. The mechanised infantry is traditionally expected to follow in the wake of the leading armoured column and thereafter clear/ mop up the remnants. This envisages the mechanised infantry moving close behind in relative safety. The ICVs though vulnerable to anti tank missiles provide adequate protection against aimed small arms weapons and artillery splinters in comparison to motorised infantry. Therefore it is unlikely that motorised infantry could replace the mechanised infantry. The employment of infantry for tasks such as Encounter Crossings on obstacles is due to the non availability of mechanised infantry and hence logically, there is a need to raise more units of the same.

Both in plain and the desert sector, it is envisaged that certain built-up areas will have to be cleared to open the axis. This will entail the initial isolation/investment being done by the mechanised columns and thereafter the infantry soldier supported by tanks carrying out the physical clearance of the town/village. This tactics though possible in theory is unlikely to succeed in practise. This was best illustrated in Operation Iraqi Freedom where in the battle for the town of Fallujah the initial operations were carried out by the M1 Abrams and the Bradleys both, with the infantry man only being

employed in the last phase. Based on this experience of fighting in built up area, it may be confidently averred that own mechanised infantry will have to be committed for the clearance of these areas which as of now do not factor in the troops to task. The mechanised infantry is relieved by the follow up infantry to allow them to reach the projection area at the earliest. Clearing of a built up area in the adversary’s terrain is unlikely to involve fighting only regular enemy troops. The local population is likely to put up a resistance as well, similar to what is being seen in both Afghanistan and Iraq. If that be the case the ICV will assume greater importance and may have to be employed for a longer period to overcome the resistance. This merits a greater availability of mechanised infantry to allow for the dual task of fighting the Projection area battle while simultaneously clearing the inter objectives to open the axis at the earliest. Similarly, Corridor Protection will be of extreme importance and ICVs may have to be employed in larger numbers. All these only reinforce the requirement of a larger strength of mechanised infantry.

India desires to be recognised as powerful global player both economically and militarily. The same has been reflected in the Army Doctrine which states India’s desire to be able to conduct “ Out of Area Contingencies”. This capability requires the force to possess adequate strategic mobility. There is a need to have the air/sea assets to move this force in the envisaged time frame and adequately strong force to be put on ground capable of achieving its aim till such time the remainder force is built up. The sheer weight of the tank precludes it being available to such a force in the desired numbers. Therefore the next best alternative is the ICV which though much less

destructive is still better than the unprotected infantry. Even the US faced this problem while deploying in Iraq despite having the best air assets in the world. Against an initial plan of a heavy infantry division of 15, 000 soldiers and 1, 500 armoured vehicles, they could only achieve 2000 airborne soldiers supported by less than two dozen Bradleys and M1 Abrams. This was primarily due to the absence of rapidly deployable light armoured vehicles. [3]

India is not a rich country, it has to weigh its options, prioritise and then select the best compromise. It would be futile to expect a large increase in the number of mechanise infantry battalions. Similarly, keeping the constraints of finances, equipment management and training in mind, it would be difficult to have different vehicle for different roles. The best option would be to have a single family of vehicle capable of conducting multiple tasks. This leads us to the next question, is it time to replace the BMP-II with something better (if not better, then more suitable). I would like to suggest that it is time to phase out the BMP-II and replace it with the more superior BMP-3. The BMP-3 can be, at a stretch, grouped under the nomenclature of a light tank. With its 100mm cannon, barrel launched missile and an additional 30 mm cannon, it packs considerably more fire power than a BMP-II and only a little less than a tank. It has better armour and NBC protection than the BMP-II while being only marginally heavier (18. 7 Tons against 14. 4 Tons). It can easily be transported by air and on landing is adequately strong to perform in the absence of tank support. It is able to carry seven infantry soldiers, similar to the BMP-II. It is the most suitable vehicle for any Rapid Action Force that India plans to raise for conducting Out of Area operations.

The Israel-Lebanon conflict of 2006 reinforced the vulnerability of armoured tanks in Low Intensity conflicts noticed in Iraq and Afghanistan. The high profile Merkava was targeted repeatedly by the Hamas insurgents along its vulnerabilities leading to material damage and loss in morale. In these circumstances, it is imperative that tanks operate in conjunction with infantry. The inherent disadvantage of a tank operating in a built up area is its lack of visibility and arc of fire, both vertically and horizontally. The BMP-3 can traverse vertically from -6 to 60 degrees which is a major requirement for clearing of high buildings. The presence of seven infantry soldiers moving in close proximity provide the requisite close protection, while the 100mm gun and 30 mm cannon are sufficient to destroy any target. It may be argued that the BMP-3 may preclude the requirement of a tank to be grouped along, thus freeing them for more important tasks. The BMP-3 has recently been tested in UAE against the US Bradleys and British Warriors. Their performance has been appreciated and the Arabs are looking to induct them though they have traditionally relied on the US and British for military equipments. The BMP-3 may be considered for induction in the Indian army to bridge the gap between the ICV and the heavy tanks thus filling a long felt absence of an interim vehicle.

The next important aspect to be considered is the required increase in the number of mechanised infantry units. India has a large land boundary with different terrain features. Economics and world pressure do not allow it to increase the strength of its standing army. The next likely option is to convert more infantry units to a mechanised profile. This against has its disadvantages, as there would be lesser number of units available for

standard infantry tasks along the Line of Control, the International Boundary and the Line of Actual Control. There would be greater pressure of the units and the present turn over period of 2-3 years would further reduce. There is, however, one more option worth considering. This option envisages ICVs to be considered as part of sector stores in the Western theatre. The infantry battalions would be dual trained i. e. holding ICVs when deployed in Plains/deserts while reverting to infantry in mountains leaving their mechanised equipment behind for the unit relieving them. Training a fully operational mechanised battalion takes time; therefore this is an option that will only work in a long run. There are likely to be equipment management issues as well for such an option. Feasibility of this can only be gauged after detailed analysis and study. In the meantime the mechanised infantry has to continue to function in its present form.

Conclusion

The importance of mechanised infantry can’t be stressed upon more. It is an integral part of the mechanised forces and has its tasks delineated. For all the fire power and protection available to the tank, it still needs the infantry sitting inside the ICV to operate. The tanks have relied heavily on the mechanised infantry since Second World War for their survival. This reliance is stated in a memorandum by the German Oberkommando des Heers(OkH): “ There can be no doubt that, without the closest cooperation of the panzer grenadier and the tank, the latter is of limited value … It is even said by some that commanders would prefer to lose tanks rather than their infantry….”.[4]‘ Regardless of how the panzer grenadier arrived in the battle, these mechanised infantrymen were indispensable to the German concepts

of combined arms and manoeuvre warfare as the Wehrmacht practiced them during the Second World War.[5]The tenets of mechanised warfare have not changed in the intervening years. Therefore what was true of mechanised infantry then remains so today. Instead of questioning the relevance of mechanised infantry, there is a need to increase its numbers and provide it with a better platform to allow it to perform its task better.