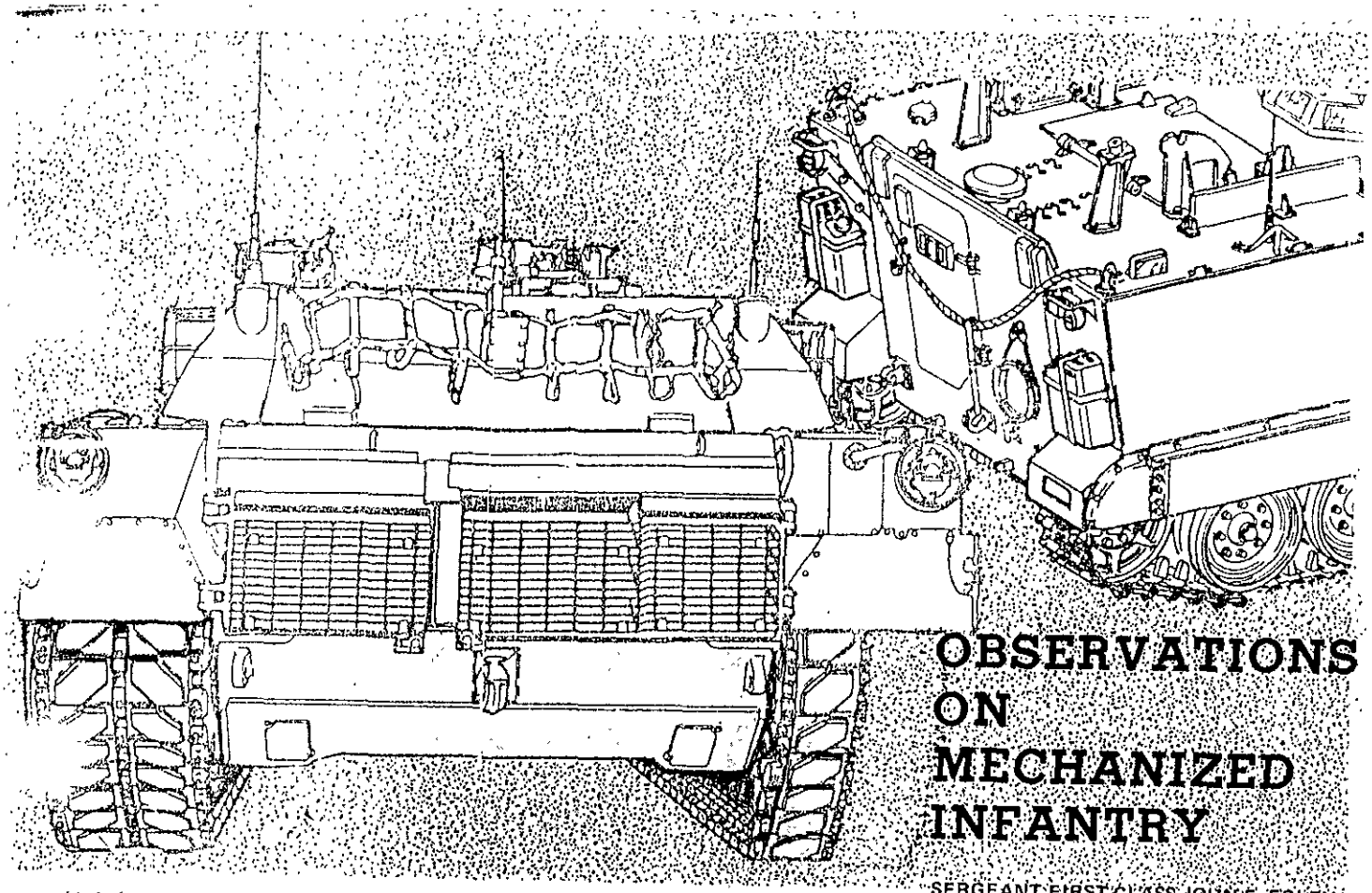


OBSERVATIONS ON MECHANIZED INFANTRY

SERGEANT FIRST CLASS JOHN E. FOLEY

There's a big difference between light infantry units and mechanized units. I knew that. But after 10 years of experience in light units—light, conventional, airborne, and Ranger—my first assignment to a mechanized unit (equipped with the M113A1) was a challenge. I had a lot to learn. The only thing to do was to grab the field manuals and technical manuals, get into the motor pool and out in the field, and learn mechanized infantry from the ground up. (I also picked the brains of my First Sergeant, who helped me write this article.)

During this learning process, being a senior NCO, I was able to compare mechanized infantry to the light units I had served in and to look at it perhaps with a fresh view. Nothing is ever perfect, and seeing what I have seen, and thinking about how it might be made better, I want to share some of my observations and to challenge my fellow infantrymen to think about ways to improve our profession—tactically and technically.

The single most impressive aspect of mechanized infantry, compared to all the other types, is the firepower available to a platoon and the amount of ammunition it can carry. Having hoarded ammunition for years, since what I carried was all I would have, the idea of having plenty now is exciting. But how do we use it to our advantage without wasting it?

Machineguns provide the bulk of a mechanized platoon's firepower. With the 900 to 1,200 rounds per gun that can be carried easily, the platoon has staying power in a firefight. The main problem I have seen with firing the machineguns while mounted has been their lack of accuracy. The .50 caliber M2, for example, is our main weapon, but it is either locked into position or is a free gun, held and controlled only by the gunner. At certain angles its barrel comes perilously close to the head of the driver, and its accuracy is poor.

The M60 machinegun is either held loose over the side or, better, is mounted on its tripod and the tripod then lashed to the side of the vehicle. It is more accurate when it is tied down, but it can then fire only to one side of the track, and dismounting it from the track takes longer.

Tactically, it is dangerous for the gunners of both the machineguns to expose themselves, because they are then subject to enemy counterfire. (I have always been taught to take out machineguns first, and the enemy probably also considers it sensible to take out machineguns that are firing at him.)

Another problem associated with enemy fire is how helpless mechanized infantrymen are when they come under enemy artillery fire or chemical attack. They can button up, of course, but when they do they are blind, and they cannot fire their machineguns from under cover. (This is a great weakness of the M113.)

Considering all this, are the machineguns we are equipped with now what we really need? The Bradley will solve most of these problems, but we will not see the Bradley totally fielded for a few years yet. We therefore need to improve our capabilities now with what we have.

The .50 caliber machinegun is notorious for its inaccuracy when fired on the move. This was demonstrated during my unit's mechanized gunnery training and at the NTC, when

only one or two men could effectively handle the gun while firing on the move, and both of those men were unusually big and strong. Then again, "effective" is a relative term. But they kept their bullets in the general direction of the targets, which was better than the other men could do.

We need a much better mount that will let the average soldier control his weapon effectively, keep accurate fire on the target while moving or at a halt, and fire from under cover.

Many attempts have been made to solve this problem. The M59 series of APCs had a turret for its .50 caliber machinegun. Various turrets have been mounted on M113s with guns ranging from 7.62mm machineguns to 76mm cannons. To keep things simple, it should be possible to incorporate the .50 caliber mount from an M1 Abrams tank into an M113. This would give a gunner better control over and accuracy with his weapon, and still enable the gun to be fired (but not cleared) from under cover. With the .50 caliber SLAP (sabot light armor-piercing) ammunition (which gives the .50 caliber a more effective round to use against Soviet HIND gunships and BMPs), we may have an answer that will be cheap and effective, at least until we can get something better.

Should we stop here, though? The .50 caliber is an excellent weapon; it gives good firepower for its weight, and we can carry a lot of ammunition for it. But is it enough?

A mixture of weapons is normally better than just one type, and it may be possible to incorporate another type of weapon into the platoon. What I am referring to is the 40mm Mark 19 grenade launcher. During the Vietnam war, a similar weapon was found to be superior to the .50 caliber, particularly in ambush-busting.

Think of it—two .50 calibers in the platoon to pin the enemy down with tracers and high velocity rounds, and two 40mm grenade launchers! The two weapons could complement each other, and while resupply headaches might increase, the results would be worthwhile.

OTHER SOLUTIONS

There are other possible solutions: A soft-recoil 30mm cannon that combines the best of both the .50 and the 40mm is one. Less ammunition could be carried, but it should be more effective against the threat we face today. There have also been tests on a new turret for the Bradley that would house a 35mm gun, and one has been tested on an M113 hull as well. This could solve a lot of firepower problems, giving us an effective 35mm gun for AP or HE roles, and a coaxial 7.62mm machinegun to use against troops.

Our current 7.62mm M60 is a pretty fine piece; I have used it for years and it does a good job. It could be lighter, and there is a new lightweight version out that weighs little more than an old Browning automatic rifle. What we need, though, is a way to make our M60s more effective. The Israelis use pintles on the sides of their APCs which provide stable and accurate mounts for their 7.62mm machineguns firing off the sides of the tracks. We used a similar system on the armored cavalry fighting vehicles in Vietnam, and it was effective. Instead of lashing the tripods down on one side or the other of the M113 to get a stable firing mount with good traverse from the sides of the tracks, I would rather see two M60s carried with each squad and have pintles for mounting them on both sides of the M113, so as to cover both flanks. I would use the M60s for mounted work and leave them with the track most of the time, using our SAWs when we dismount (whenever we get them). I want to keep the M60s since they can fire good armor-piercing rounds for use against light vehicles, as well as incendiary and tracer rounds.

By having two SAWs and two M60s as standard equipment with every track, plus a .50 caliber or larger weapon, we would also have enough firepower in the defense for a squad to hold off a platoon or better by itself, assuming we could man them.

Currently, we also have the M901 ITV for our heavy long-range fire support, and it is a good system. At the company and platoon levels we have the Dragon missile system and the M72A2 LAW. (Nobody is really happy with the Dragon.) These are also the weapons we have for bunkers and other hard targets. The LAW is due to be replaced by the 84mm AT4, which from my readings should be a fine weapon for us to have, with excellent effect against any bunkers we may encounter.

Although HEAT rounds do a pretty fair job of putting holes in things, they are not the best thing to use on a bunker. We need something that will put a satchel charge right into the bunker, and there are things on the market that will do it.

Speaking of the Dragon, I would rather have something along the lines of a true fire-and-forget system. Give us an unguided round or recoilless rocket, accurate enough to kill at 1,500 meters, and then train the gunners to shoot it. Technology cannot make up for skill. We need something simple, powerful, accurate, and cheap. Another weapon that could be fired from a cupola mount or adapted to a tripod for accuracy would be a great boon. In short, we want something to kill tanks and other armored vehicles with, and if it is also effective against helicopters and bunkers or buildings, so much the better.

Incidentally, we do have the M202A2 four-barreled 66mm launcher, for firing incendiary rounds. It's an interesting weapon, like four LAW tubes glued together. We have not used it much in my unit and have conducted no training with it, aside from what I give my platoon with no ammunition. This is a pity. It's another good weapon we should train our troops on so that they can take advantage of its characteristics.

To do that, we need to get beyond the "TASK, CONDITION, and STANDARD" in the Soldier's Manuals. The Soldier's Manuals are excellent for teaching the basics, but they give little thought to the advanced techniques. For example, the M202A2 is good for bunker-busting, burning wood bridges or buildings, and forcing tanks to button up, or their occupants to panic and dismount.

Flame is one of the oldest weapons in the inventory, and in mechanized infantry we can carry the materials needed to make improvised flame weapons — soap powder, containers, and the like. By using the lessons from past wars, we can train our troops to make the most of flame weapons, both issued and improvised.

It does not really matter what the rifle is as long as soldiers get good, continuous training with it.

As for indirect fire, at the NTC this year I really missed the company level mortars my light units had. Even a couple of 60mm mortars would have been a great help, especially with illumination at night.

There is a basic flaw in reducing the number of mortars in an infantry battalion from 13 to 6. Six mortars can cover a maximum of six targets at a time. I know about target lists and priority targets, but what happens if a squad on outpost gets hit and no fire support assets are available? With company mortars always at company level, we never lost the support. Give every platoon a 60mm mortar, train the men to use it, and let us go at it. Add two men to the platoon headquarters as mortarmen, and so much the better. The platoon leader or platoon sergeant could control them. The benefit in firepower would be worth the investment.

At battalion level I would rather see a mortar company composed of 12 guns, or four three-gun platoons. The new 120mm mortar the Army is getting is a fine weapon, but my reasoning is this: Each line company needs fire support. A mortar platoon per company for fire support, particularly with the new GAMP round, would give us the firepower edge over any enemy we might come up against.

If 12 guns is considered excessive, why not increase the present number to eight mortars? That would give us four two-gun sections, which would give every company some measure of fire support but still allow for the massing of fires when necessary.

This brings me to individual weapons. I have carried quite a few rifles in my time—M14s, FN FALs, G3s, AKMs, and even M16s. I was originally trained in high school with the M14, and I appreciate its fine accuracy. No matter what my own preference is, though, the M16 is what we have, and it is about as good as the other weapons that are touted as being better. But a soldier needs to believe in his weapon, and the M16 does not give him a lot of faith. It jams on him too often no mattter what he does, and most M16A1s are pretty worn out. (The jamming is often blamed on bad magazines, and although research is going on with plastic magazines to correct this problem, the doubts are still there.)

The M16A2s I saw the Marines carrying at the NTC impressed me. The M16A2, particularly with the optical sight that is being tested, should cure most of the ills of the M16A1, but it will take a battle to prove to our soldiers that their weapons are the best. (Also, we would be better off if we issued only semi-automatic rifles, with good triggers, and got rid of the gimmicky three-shot burst on the M16A2. For firing at aircraft, a three-round burst is not enough; for ground targets it is a waste of ammunition.)

This gets to my final point about rifles. It does not really matter what the rifle is as long as soldiers get good, continuous training with it. But firing 40 rounds a year does not make a man a good shooter.

Using MILES is not good enough. A soldier needs to fire

live ammunition to get a feel for his weapon, know its zero, and be confident that he can hit his target! Nothing can replace rifle practice with live ammunition on ranges where the firer has to maneuver and shoot, and shoot to hit from every position imaginable. Target shooting is fine and an excellent start, but then we need to progress and teach our men to kill other men, quickly and efficiently, with a rifle.

Submachineguns and carbines are usually very popular weapons when they are available. They look sexy and mark the soldiers who carry them as somebody different. But I believe they should be left to the special operations types who are trained to use them.

There are exceptions, of course. I believe drivers and track commanders should carry rifles in their tracks; then, if a track is disabled and the two have to dismount, they will be armed like everybody else. But they need something more, something they can carry in chest holsters, independent of their LCE so that they will be armed all of the time. A good candidate for this is Beretta's 93R, which is a compact, controllable, submachinegun that would be little burden to the supply system, because it is almost identical to the model 92 pistol recently adopted by the Department of Defense. It is also accurate and effective out to 100 meters, which means we would have another weapon to train with, but it beats having men killed because their weapons are out of reach.

The grenade launcher is another important weapon in a mechanized infantry unit. The M203 has its faults — one shot, not as accurate as the M79, and the grenadier has a tendency to forget his grenade launcher and fire only his rifle. The M203 is a rather fragile weapon, too, judging by the amount of time mine spends in repair.

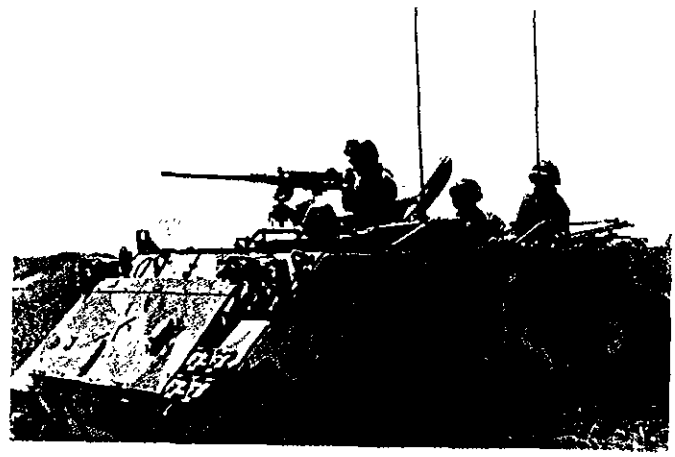
We still have to contend with the "loss" of a rifle from the squad. I think the firepower of two grenade launchers would make up for it. The grenadiers would stick to their primary job of grenading things. They, too, could carry Berreta M93Rs, which would give them effective short-range firepower without overburdening them.

Every man in the squad should carry extra grenades for the grenadiers — if you have to break contact, it is easier to do with a barrage of high explosive rounds that make the enemy think he is getting hit by artillery.

PROTECTION

Aside from all this firepower we have, we also need to be aware of the fire coming at us. While we need all the firepower we can get, we need additional protection, too. What I am referring to is the flak vests issued to ground troops together with the Kevlar helmet. The helmet will stop bullets, but the vest itself is good only against fragments. Surely we can give our soldiers better protection and less weight than we are giving them now.

On the M113 itself, the latest version, the M113A3 (as described in the September-October 1985 issue of INFANTRY, page 8), has the fuel tanks on the outside, a more powerful engine, and fixtures for mounting Kevlar blankets to increase the survivability of the troops inside. We still



We still have the problem of trying to fight from the carrier.

have the problem of trying to fight from the carrier, however, and since we will have the M113 series well into the year 2000, this is something we should consider.

Now, with the cargo hatch open, the troops in an M113 are vulnerable to air-burst artillery fire, and when they button up for NBC attacks, they are blind and helpless. It also takes precious seconds to close the cargo hatch.

A possible solution would be to install light tubular framing around the cargo hatch and cover it with a ballistic blanket of Kevlar. This would keep the weight down, offer better overhead cover than we have now, and, if large firing ports were left in the sides of the blanket, would enable us to continue to observe and fight even in MOPP-4.

Another modification that could be made is to put an observation port in the troop door of the M113A3—the same kind used on the ITV (improved TOW vehicle).

In my unit, NBC training is tough and realistic. We spend a lot of time in MOPP-4 and practice buttoning up and masking every time we get hit by air or artillery. In addition to being blind when buttoned up, when we mask we cannot aim and fire our rifles accurately. With the M17 or M25 series masks, we either point and hope or pull our heads back to the heel of the butt in a vain attempt to get a good sight picture, but then our zeros are off since we are seeing the sights from a distance. We also have problems with masks fogging up and with making ourselves understood over a radio, or understood at all.

There are new masks coming out, and I can only hope they will solve these problems.

Warfare is now a 24-hour proposition, and we need all the night vision we can get to enable us to fight as effectively at night as during the day. We still need more practice in night operations, and we should have a more liberal allowance of night vision devices.

The AN/TVS-5, our main crew-served night vision sight, is a wonderful device — when it works, but it seems to blink out fast. A tracer will still burn it out, or the reticle will not light, or the picture will just go blank. I had the same problems with TVS-5s in light infantry units, so obviously it is a problem that needs correcting.

Individual sights for grenadiers and riflemen are also needed. In fact, I would like to see something small and light

enough to issue to every man in the squad. But if we can't do that, then we should spend more time shooting at night so the men will be more confident in their ability to react to and suppress enemy fire at night.

LOGISTICS

Logistics is definitely a problem in mechanized units. All we have in the company for transportation is a two-and-a-half ton truck and a quarter-ton jeep with a trailer. Jeeps and trucks, no matter how good the intentions, cannot keep up with a tracked vehicle or cross the same terrain. Besides, jeeps are going out of the inventory, and my First Sergeant's jeep was transferred to somebody else whose jeep had been coded out, leaving the First Sergeant with only a truck for company logistical support.

The support platoon? It is too overworked now. With the distance between companies and the amount of material required, we end up attaching men to the company headquarters from the line platoons just so we can accomplish our missions. The supply sergeant needs at least three men to make a four-man company logistical unit, which would give him the manpower he needs to load and unload supplies and move them from the combat trains to the line platoons. The First Sergeant needs a driver and a radio-telephone operator assigned to him as part of the headquarters. He also needs a vehicle that can keep up with the tracks — either a stripped-down M113 or an M548, something that can carry a great deal of ammunition and food and keep up with the company. HMMWVs (high mobility, multipurpose wheeled vehicles) will not be able to do this — a tracked cargo vehicle is needed. If we give the company headquarters section the men and vehicles to accomplish its mission, we will not have to take riflemen from the line platoons to keep the supplies flowing.

A final item for discussion is communications. Our mounted radios are pretty good. Sometimes a radio will blink out after a hard jolt, and the new disposable mikes do not last long, but, overall, we get the job done.

We tend to be overly dependent on our radios anyway. We need to use them in a more disciplined, frugal manner. Repetitious orders only relay fear and uncertainty, and too many "radio checks" by people who are nervous and just want to be reassured someone is there can easily pinpoint for the enemy a unit's location within ten meters.

We have found that flag signals, hand and arm signals, and SOPs are better for controlling our tactical movement. These signals can be seen by everyone as long as there is visibility, and they should be used as much as possible.

Dismounted communications are not as good. Mechanized infantry units are issued only obsolete squad radios, two-piece AN/PRC-88s, which have not worked well in any unit I have ever been in. This radio has a short battery life, is fragile, goes out at the worst times, is not compatible with the AN/PRC-77s, and generally is not worth the trouble it causes. Besides, it is unbalanced and awkward.

Some units have the AN/PRC-68, which is slightly better but it does not do a good enough job either. Fortunately, better radios that will solve these problems are in the works.

We have taken steps to make the most of what we do have in my platoon by drilling with hand and arm signals, by using mirror or flashlight/pyrotechnic signals, and by converting one of our AN/GRC-160s into an AN/PRC-77 mode for dismounted operations. Thus, we have been able to control the dismounted squads and the carriers at the same time. Of course, all of this requires practice, but it enables everybody to know what to do in advance; then there is less need for verbal communication.

Mechanized infantry held a lot of surprises for me. Its tactical mobility is something that amazes me. The ground it can cover in minutes takes light infantry on foot hours to cross (without opposition). This tactical mobility, the ability to bypass impassable terrain (of which there is actually very little), enables us to move faster and arrive fresher than any light infantry in the world.

We can carry more ammunition, enabling us to fight longer; more food and water, enabling us to stay longer; and barrier material, making us harder to dig out.

The are some disadvantages to the mechanized infantry, of course. It makes a lot of noise. It needs a heavy logistical tail, because it has to be kept supplied with oil, water, ammunition, and parts. As reliable as the M113s are, they do break down, and after a few weeks in the field we start having serious maintenance problems from the strain on the equipment.

One of the biggest lessons I have learned is that mechanized infantry is not roadbound — where there are no roads, tracks, tanks, and engineers can make them.

With our equipment, our firepower, our speed, we can accomplish any mission given to us, but these things are not substitutes for leadership and training. We need to challenge ourselves to make the most of what we have now. Above all else, we need to train our men to fight, mounted and dismounted, with everything they have.

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