Reducing Losses in Combat

A Look at Avoidable Casualties

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American troops have not sustained casualties on the magnitude of those sustained in World War II, the Korean War, and Vietnam. As a result, our officer and noncommissioned officer leaders have not been exposed to handling troops in a major conflict in which rifle companies have been known to routinely sustain debilitating casualties. This happened to the 90th Infantry Division, in which I served during World War II. The division entered combat on D+1 on Utah beachhead with 14,000 men, fought continuously over 330 sequential days (of the 100 divisions in the European Theater of Operations, the 90th had the most days in combat) and sustained more than 22,000 casualties — the fourth largest number of casualties of the 100 divisions. Three division commanders and many regimental and battalion commanders were relieved in less than a month. Yet all of the units from battalion to division operating in Third Army, the 90th Infantry Division was the only unit recommended for a citation by General George Patton at the end of the war. The 90th therefore makes an excellent test sample for discussion.

Definition of Avoidable Casualties

"Avoidable" casualties in combat are those that — given proper precautions — could have been avoided. An implication of this definition is that there must be another subset of casualties that are inevitable. This, of course, is not the meaning here. In any combat, casualties are likely to occur, but this discussion considers only the subset of casualties that could have been prevented. "Avoidable casualties" are defined as those generated by obvious and foreseeable errors. If casualties do not result from such errors, then they cannot be classified as avoidable. Frequently, there is a fine line between avoidable casualties and other casualties that arise in the course of tactical operations.

Foreseeable Errors Partially Created by the Combat Environment

We tend to think of the enemy as the unique creator of potential foreseeable errors. But this is only partially true. The combat environment itself contributes heavily to the potentially foreseeable errors. There are many parameters that affect the combat environment. A few of the most important factors include the terrain, weather conditions, long term battle stress, and situational combat events that create errors of omission and commission.

Terrain. Much of our basic training involved learning how to make the best use of terrain in combat. Several elemental foreseeable errors come to mind—failure to build overhead cover on one's foxhole when the opportunity and time permit; a foreseeable error of omission; taking cover among trees when it is unnecessary; taking up positions on prominent points such as road junctions, stand-out buildings and prominent terrain features, again when it is not necessary to do so.

On the other hand, if a building such as a tower is occupied to serve as an artillery observation post, then we have a combat priority that overrides any consideration of personal security. If casualties occur among the artillery observers, these may simply be a function of their tough, dangerous mission, and not avoidable.

The distinction should be made that if there is no immediate ongoing combat priority, casualties that occur may fall into the *avoidable* category. It is evident that the foreseeable combat errors discussed repetitively in basic training are so simple that they could easily be avoided. But they have been violated, from the individual level up through every echelon, all the way into the staff strategic planning level.

Weather Conditions. The errors initiated by weather conditions are easily seen but are seldom acted upon in time to keep them from resulting in unnecessary casualties.

As an example, the necessity of changing the individual infantry Soldier's camouflage uniform to white during winter combat months should be obvious, yet the German Army command staff often completely failed to provide proper camouflage for their infantrymen during winter months. The immediate consequence of this foreseeable error caused a tremendous number of German

casualties generated by dark uniforms that made them stand out when they moved. The Russian troops in their white sheets, blending with the snow background, were almost impossible to see when they moved. (The German Army at least partially rectified this mistake during the Battle of the Bulge.)

Unfortunately, our command staff at the strategic level learned little from this. The proper camouflage for winter fighting apparently was seldom considered. A few of our more ingenious infantry recognized their high commands' oversight and provided their own camouflage by stealing white bed sheets from German houses. A few of these individuals participating in this so-called "criminal activity" against enemy civilians were threatened with courts martial. Their immediate commanding officers had to step in to prevent these actions and save their men from becoming casualties of our own legal system.

The second — and even more important — condition affecting front-line troops living day in and day out in the open is severe winter conditions. For Soldiers who are not properly clothed, combat morale and efficiency are markedly reduced and result in a tremendous increase in preventable casualties. The misery of such conditions for the individual Soldier results in an acceleration of battle exhaustion, a severe reduction in morale, and a marked increase in susceptibility to disease, including pneumonia, influenza, trench foot, and frostbite.

One might have thought that the German high command would have learned the most obvious lesson from Napoleon's winter campaign disaster in Russia, where a great many of his casualties were preventable—caused not by the Russian Army but by the Russian winter itself. Since the German leadership failed to recognize this error, many Wehrmacht troops found themselves fighting in the Russian winter in summer uniforms.

Although not entirely lacking in winter clothing the way the Germans were on the Russian front, the U.S. Army was still not properly equipped for the European winter that occurred in 1944 — the worst in half a century.

It is interesting to note that General George Patton, who always considered the welfare of his men his first priority, somewhat corrected the overt error of high command by sending out raiding parties to steal heavy winter clothing and blankets from the rear areas of adjacent American units. This resulted in an overall gain in morale, efficiency, and the desire of the individuals in his units to carry out with enthusiasm General Patton's every command, but at a great cost to the men of those adjacent units.

Battle Stress, Long Term. Long-term battle stress is generated by the intensity of the combat, its duration, and the conditions associated with it. The chief initial impact of such stress is exhaustion and especially mental lethargy. Carried to the extreme, it results in a complete psychological breakdown in which a Soldier cannot function effectively at all.

The mental lethargy of individuals and the combat unit should be the main concern of unit leadership. Mental lethargy causes oversight in predicting errors that would not otherwise be overlooked. While combat leadership cannot correct the psychological problem, it may certainly be able to prevent predictable errors.

Errors of Omission and Commission. We can think of quite a few situational events that create predictable errors. One such event is that of green troops under fire for the first time. Panic, if it occurs, generates predictable troop errors with disastrous results. Another situational event is the effect of friendly fire on your own troops, fratricide in today's terms.

A Combat Unit's Measures of Performance. In general, we can recognize four parameters to measure the combat performance of a unit, whether it is an army, a division, or an infantry platoon: strength, efficiency, morale, and effectiveness.

Every combat unit has a maximum strength before battle, which generally changes little. Continuous combat degrades unit strength, and such losses must be countered by a continual influx of trained replacements. The mathematical measure of this degradation at any point in time is expressed in terms of a percentage of the unit's strength prior to the action. Obviously, if the replacement rate does not equal or exceed the casualty rate, the unit strength will continue to drop until the unit becomes completely ineffective. There is a lower limit to this ratio, which if penetrated on the downside results in the unit being considered combat ineffective. Generally, a unit that has sustained casualties of 30 percent or more is considered combat ineffective. If this ineffectiveness persists, usually the only course of action open to the commander is to assimilate the unit's members into other units.

This almost happened to the 90th Infantry Division, since it had sustained such heavy losses during the first month of the Normandy Campaign. The staff command of Operation *Overlord* requested that General Omar Bradley break up the division for replacements. He refused, replacing three ineffective division commanders in less than a month along with many poor leaders at the regimental and battalion level.

Efficiency is the measure of effective and aggressive leadership, high performance of tactical teamwork under fire, battle experience, and each member's knowledge of the others' capabilities and the support of each member for each other and the unit as a whole. Of these four parameters, the efficiency of a combat unit is by far the most important. A high order of efficiency reduces casualties, increases morale, and — unless the enemy has overwhelming strength — increases the unit's effectiveness. The efficiency of a unit will also rise or fall according to which side has the most and best weapons. The measure of combat effectiveness is the ratio of the

casualties of a given force to the total casualties over a certain period.

Let's now assume a high efficiency level initially but also a high combat intensity level, creating continuously a large number of casualties. Let's also assume that these casualties are immediately replaced so that the strength of the unit remains high without continuing to degrade. The question to be asked is what happens to the effectiveness under this scenario. The answer is that the unit's morale and effectiveness can drop to zero. That is because the expert leaders — those members of the combat team with battle experience, a high order of training, and the interactive support of each other and the unit as a whole — are gone. With continually high casualty rates, the unit over time is severely degraded. Even though the replacements are assumed to be able to keep the unit's strength level constant, we now have a unit whose leaders and men are strangers and must learn to work together. Tactical teamwork is absent because the replacements do not know each other and their leaders. In the end, the unit loses effectiveness.

Many nations have tried to alleviate this problem by withdrawing the unit from combat, reconstituting it, and giving it a limited amount of retraining before sending it back to the front. This was time consuming, of course; the unit would no longer be operationally available during this time. The United States chose to do the opposite, replacing casualties by sending replacements directly to the unit in combat without withdrawing the unit. This generally worked well only because of our superior number of well-trained troops and our superiority in weapon systems, particularly aircraft and artillery. This increased the effectiveness for our units and placed German troops at a disadvantage. For most of our units, we had low casualty rates, and the replacements could be readily absorbed into a unit and also integrated into the teamwork of the unit. This method will not work if the casualty attrition rate is high, however. General Patton recognized the importance of degrading the enemy units' efficiency by the shock of overwhelming "surprise" attacks. This raised the enemy attrition rate and dramatically damaged the enemy units' leadership and cohesion.

It should be obvious now that reducing the total casualties over time can help both the efficiency and the effectiveness of the unit. Aside from superior tactical skills, the only other method of reducing the casualty attrition rate is to reduce the number of avoidable casualties. And the only way to reduce this type of casualties is to avoid foreseeable errors. The following are real samples from the combat log of the 90th Division — as well as units at higher echelons — in generating both potential and actual avoidable casualties by failing to recognize and take measures to prevent them.

By studying some of these avoidable casualties, we can classify them into three categories:

- Unnecessary casualties that affect only the Soldiers committing the foreseeable errors — not the internal technical and tactical operations of the unit.
- Unnecessary casualties within the unit that affect and degrade both the technical and the tactical operations of the unit or adjacent combat units.

Panic causes soldiers to block their thinking processes so that easily recognizable errors are completely overlooked, resulting frequently in large numbers of casualties.

- Foreseeable errors of high command (division, corps, army, and overall command) that affect and degrade all subunits.

Many men of the 90th Division correctly dug foxholes on the reverse side of the hedge rows, but failed to cover them with at least two feet of earth. This error was committed during the static combat in Normandy, resulting in a large number of casualties from German 88mm and 150mm air bursts and additional tree bursts from quick fuses.

In another example, prior to a company assault on a village, a 105mm artillery battalion was provided in support. The first battalion volley landed between the infantry jump-off line and the village, but closer to the jump-off line. Because the green troops had not been trained to distinguish incoming artillery fire from outgoing, and had not been told of the coming barrage, they immediately ran to the rear, throwing down their arms. The artillery concentrations advanced into the village, from which no enemy small arms fire was returned. The enemy had vacated the village. It took more than an hour to round up the panic-stricken troops. With many similar episodes during the Normandy campaign, it is hard to believe that at the end of the war, the 90th Infantry Division was the only combat unit in Third Army that was recommended for a unit citation by General Patton.

The foreseeable errors with respect to this action — which would have led to casualties if the enemy had been in the village — were the following:

- Failure of the artillery liaison officer to inform the infantry commander that he was going to receive artillery support.
- Failure of leadership to instill and enforce discipline.
- Failure to teach infantry not only the difference between the sounds of incoming and outgoing artillery fire, but also the difference between sounds of high-velocity shells and low-velocity howitzer fire. This training is important, because during World War II artillery fire generated three times as many casualties as small arms fire.

We have seen here the most insidious condition that affects troops — panic. Panic causes Soldiers to block their thinking processes so that easily recognizable errors are completely overlooked, resulting frequently in large numbers of casualties. The following is a tragic example of casualties caused by panic, in this partial quote from Martin Blumenson, formerly a staff member of the Army's Office of the Chief of Military History:

> *Innumerable examples in the official unit records make evident the inefficiency of the 90th Division. The St. Germain action is perhaps the best example and certainly the most convenient illustration of how bad the division was. It shows the division at its worst. The small part of the division involved was typical of the whole.*
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> *The Island of St. Germain, the objective of the action, is a low mound of earth surrounded by swamps and was athwart the division zone of advance.*

U.S. Army photo

During World War II, a medic carries a wounded German prisoner of war.

From the beginning of the attack, troops of both battalions had displayed a disinclination to engage the enemy. Strong and accurate fire nourished this reluctance, and the terrain facilitated those who wished to avoid crossing the open space of marsh and river into the bridgehead. Stragglers individually and in groups drifted unobtrusively out of the battle area. At least four hundred men made the difficult passage through the swamp to establish a bridgehead.

German artillery fire continued throughout the night. The extreme darkness and the inability of small unit commanders to recognize recently arrived replacements facilitated unauthorized trips to the rear by demoralized men.

Shortly after daybreak, three enemy tanks appeared on one flank, an armored car appeared on the other. As they commenced to fire, German infantry, about forty men, attacked.

American troops in the bridgehead became panic stricken.

Many did not fire their weapons. Groups of Soldiers fell back and waded the river toward safety.

The bridgehead force was reduced from 400 to less than 300 men. They congregated in two large fields at the edge of the island. Hedgerows surrounded each of these fields on three sides. The side to the rear was open and invited escape. The enemy provided the only restraint to wholesale retreat by automatic weapons and mortar fire.

About the time that regimental headquarters began to suspect the deteriorating situation, a shell landed in a corner of one field on the island inflicting numerous casualties on a large number of men huddling next to each other in fear. At this psychologically sensitive moment, though there was actually little firing and few Germans were in view, cries of "cease fire" swept across the two fields where men in the bridgehead had gathered. A group of American Soldiers started forward toward the enemy with their hands up. Some displayed white handkerchiefs; others joined them or fled across the river. The force in the bridgehead disintegrated, the Germans remaining in possession of St. Germain.

Casualties were high, 100 men dead, 500 wounded, 200 captured, and 300 missing in action.

It is difficult to count all of the errors and particularly to determine which ones contributed most to this catastrophe. The first error, and maybe the most important, was the complete failure of leadership, resulting in the panic, which in turn resulted in other overlooked errors. The one prominent foreseeable error that really stands out is the clustering of a large group of terror-stricken troops, which resulted in heavy casualties when a shell found its mark in the congested group.

At the other extreme we have the hardened, experienced combat Soldiers — nearing complete battle exhaustion from months of fighting — enduring the awful winter environment of snow in subzero temperatures. This created foreseeable errors that normally would be recognized, but these conditions were completely disregarded.

One evening during a temporary halt, an undamaged, heated building became available for temporary relief of weeks of environmental torture. Unfortunately, because of crowded conditions, the ground floor and the cellar were not available to all, and the remainder had to bed down in the attic. This would have been fine except for the German 150mm howitzer fire interdicting the area, a few shells creasing the roof and falling in the back yard.

Although those in the attic easily saw their errors and the consequences, their attitude in an exhausted state was: "If my number is not on one of those shells, it won't hit me, and if it is, it doesn't matter where I am." Again this false logic was generated by the physical and psychological condition of the individuals.

Soldiers (mainly infantry) who are not involved in the technical operations of a lower echelon unit will usually be able to accomplish their mission unless errors are committed at any one time by an overwhelming number within the unit.

In general, though we have presented an exception, the unnecessary casualties of the lower echelon units are few and do not affect the strength and efficiency of the unit. If this is true, why should we place any importance upon these isolated

casualties? In some cases, highly specialized technical individuals can create foreseeable errors resulting in unnecessary casualties that completely degrade the unit's effectiveness. Let me cite an example.

During the Battle of the Bulge in the severe winter of 1944, the 90th Division's Headquarters Battery, 345th Field Artillery Battalion, was able to set up a command post in a house in a small village. In bedding down for the evening, both fire direction teams selected a large first-floor room — the only room with a fireplace — and soon put it to good use. Unfortunately, the room faced the direction of the enemy, and the village was receiving 150mm howitzer fire throughout the night.

About midnight when the two fire direction teams were asleep, the enemy scored a direct hit and blew the brick wall of the room in on top of both teams. The hole in the wall was big enough to drive a large truck through.

We went into what was left of the room, expecting to find both teams wiped out. The fact is that we were able to drag all of them out alive from under furniture and brick, a small miracle. The fact that there were only minor lacerations and only a few Soldiers temporarily unconscious, speaks volumes as to how lucky the battalion was: First, the enemy had used a quick fuse instead of a delayed fuse. Second, the shell had missed the windows by only a few feet.

It is illogical to simply refuse to accept any risk, just for the sake of avoiding casualties. But even if there is small risk that the enemy will obtain a direct hit by unobserved fire, a leader must take into account the consequences of taking such a risk. One fire direction team, taking the risk and being wiped out, results in tragic consequences that the commander might be forced to accept. Since one fire direction team remains, the efficiency and effectiveness of the artillery battalion partially remain. But if both teams became casualties in the same incident, this is an entirely different matter. Both the efficiency and the effectiveness of the artillery battalion would be significantly degraded. Here the consequence was large though the risk was small. In short, a commander must weigh the risk and its likely gains against possible consequences.

With respect to the errors of high command, as we ascend the chain of command involving larger and larger units, the consequences on subordinate units of such errors increase exponentially. We have already seen the devastating consequences of both German and U.S. commands' failure to supply both winter clothing and winter camouflage.

In the enormous complexities of strategic planning for the invasion of Normandy, the high command was absolutely blinded to an obvious, highly foreseeable, and extremely simple error of omission: They forgot to analyze combat tactics in the Normandy bocage country and to put into place training doctrine on how to fight in this country. The Germans did not commit this error of omission and were expert in the tactical use of the area. The result of this simple error cost the Americans thousands of unnecessary casualties as they sought to fight their way through the hedgerows.

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Using the Enemy's Overlooked Foreseeable Errors

We should not just stop training every echelon to recognize and avoid potential errors. But we should take advantage of finding the enemy's weaknesses and things he has overlooked, and take action to inflict the greatest possible casualties on him. The weapon systems best able to do this are first the artillery, which not only has the long-range reach but always the element of surprise, and secondarily, the Air Force.

There are times when it is easy to identify the enemy's errors of omission or commission, resulting in an easy analysis of how best to inflict casualties on him. Frequently, the analysis of how to generate enemy casualties is quite difficult. Here are two examples from the combat log of the 90th Infantry Division:

In the first case, an enemy infantry platoon occupied a large semi-wrecked building on a prominent road junction behind their front line, on which we had registered one of our batteries only hours before.

Our observer noted that the enemy was having some sort of party, which included the consumption of alcoholic beverages. In order to maximize the number of unnecessary enemy casualties, a decision was made to delay the fire mission to allow the enemy Soldiers to become inebriated. The mission was fired about one hour after their occupation of our registration point, with devastating results.

In the second case, the analysis of how to generate numerous casualties from the foreseeable error of commission was not quite so simple. This occasion was the combat stalemate at Metz, where the U.S. Third Army was opposed by strong German forces occupying three strong forts (Lorient, Driant, and Koenigsmacher) with many concrete bunkers in front of these forts. These strong points and forts for the most part appeared to be impervious to artillery fire. The stalemate had been created by the diversion of large amounts of fuel and artillery ammunition originally assigned to the U.S. Third Army and subsequently transferred to the British army of General Montgomery. The resulting stalemate at Metz was similar to that of the trench warfare of World War I, with heavy American casualties and little or no progress against the entrenched German forces.

During the very early morning hours every day, a very limited number of Germans were observed by our forward observers venturing forth from their strong points to relieve themselves and obtain a little fresh air and exercise. These strong points, of course, were out of range of small arms fire.

These small enemy groups were not only limited in number but also extremely scattered, hardly presenting a worthwhile artillery target. Further, after one group had enough exercise and fresh air, they would retreat to their bunkers and the next small group would scatter forth.

The enemy was obviously well aware of their error in exposing themselves to artillery fire, but reduced the risk by not presenting a concentrated target. The

problem for our division was how to encourage the enemy to become careless and generate a concentrated target of personnel.

To take advantage of the enemy's error of commission was a most difficult problem, but one officer genius in divisional artillery came up with a solution. The division requested and obtained a large quantity of propaganda leaflet shells, designed to detonate high in the air, scattering leaflets over the wide area of ground. While the leaflets had no effect in causing the German Soldiers to desert, they nevertheless were picked up and read, along with the stories and pictures that the leaflets contained, after which they were used for toilet paper. It also came to the attention of the divisional staff that our propaganda leaflets were of a softer tissue than the German military issue of toilet paper.

During the daily barrage of leaflets, strict orders went out to our artillery battalions that no high-explosive was to be fired except in an attack of our infantry.

At first, there was considerable suspicion and little change in the number and concentration of personnel. But as the daily dose of leaflets with no high explosive continued, the number and concentration of the German Soldiers increased dramatically. Further, since the number of leaflets per day was limited, those that did not get out of their bunkers right away found that they had to wait for the following day to obtain their issue of softer toilet paper.

When it was determined that there was no significant increase in the number of concentration of enemy personnel, our divisional, and corps artillery threw in volley after volley of high explosive following the initial concentration of leaflets. The Germans never again trusted our propaganda efforts.

As with every operational aspect of combat, it is teamwork that pays off; so it is that the most effective way to reduce unnecessary casualties is the effective use of good leadership and teamwork in recognizing and avoiding foreseeable errors.

At the same time, it is up to individuals to make their own security against committing foreseeable errors. It is one thing to commit to an extremely high order of risk because the tactical operation requires it for success. It is quite another thing to take dangerous risks when the tactical operation is temporarily dormant or static and does not warrant taking such risks. As an example, one of our men, leisurely observing 40mm antiaircraft fire on enemy planes, was struck in the chest by a falling round and killed instantly. This was a wasted casualty, a man no longer available to his team because of his dubious pleasure in observing antiaircraft fire.

Thus the primary responsibility of keeping unnecessary casualties to a minimum resides with every member of the combat unit, from rifle squad up to army, and we must instill and reinforce in basic training the general principles of recognizing and avoiding foreseeable errors. And we can later reinforce it in training and in discussion classes, with both officers and noncommissioned officers leading the discussions.

In combat it is up to the leaders to ensure, insofar as is possible, that their men do not become trapped into making obvious mistakes that can result in their death or injury. Within a unit containing many military occupational specialties, the foreseeable errors committed result not only in exponential damage to the performance of the unit, but also in the performance of the overall command.

At the same time, officer and noncommissioned officer leaders must constantly be alert to errors on the part of the enemy, and analyze how best to cause such errors to be turned to our advantage. This gives us double leverage in reducing our own unnecessary casualties and increasing his.

Finally, at the top level of command, it is imperative that foreseeable errors not be overlooked. Failure to recognize and to take preventive action can cost thousands of lives, as it most certainly did in the Normandy Campaign.

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