

The Hidden Risks of High-Intensity, Multiechelon Battle-Focused Lane Training

FACT: 73 percent of fatal accidents occur outside the established training lane.

by James M. Coffman

The Army's emphasis on realism in its high-intensity, battle-focused lane training sometimes results in training fatalities despite leaders' efforts to manage risk. But surprisingly, more soldiers are killed in accidents outside the training lane than during the lane training itself.

Mental fatigue, or letting down your mental guard, is an accident causal factor that accounts for a large majority of training fatalities outside the training lane. However, neither mental fatigue nor where or when a fatality occurs in relation to the training lane or phase of an operation appears as a primary cause or factor as a part of the Army accident investigation process. This information is critical to support the Army's proactive accident prevention program. In order to reduce the number of fatalities resulting from mental fatigue, the Army, its leaders, and soldiers must first recognize mental fatigue as a present and credible hazard during high-intensity, multiechelon, battle-focused lane training.

The Army employs lane training to train primarily company team-level and smaller units on a series of selected soldier, leader, and collective tasks using specific terrain. Lanes are generally formatted to fit specific terrain and unit mission-essential tasks. Lane training accommodates a wide range of training scenarios, dependent upon training objectives for particular units to be trained. Unit composition ranges from squad-size elements to multiple company-sized elements. The combination and mix of forces trained using this technique are endless and vary substantially. However, variations are based primarily on unit equipment, heavy for mechanized infantry and armor (tracked vehicles) and light for infantry units with wheeled vehicles.

High-intensity, battle-focused lane training is the foundation of Army

training at Army installations and Combat Training Centers (CTC). The centers offer Army leaders and their soldiers the most realistic combat training available by enabling a unit to train repetitively to standard against a tough, competent enemy, commonly referred to as the Opposing Forces (OPFOR), and to conduct extensive live fire exercises.

These training centers generate a large percentage of the soldier fatalities that take place during training. This perhaps is not alarming considering the sustained continuous operations that are prevalent during the training, simulating combat conditions. To further explain events that leaders face in these training events, one need only look at the multitude of responsibilities these individual leaders and soldiers must assume in order to be successful in obtaining necessary combat skills. Their responsibilities are endless, ranging from ensuring their personnel have adequate ammunition to provision for medical care. All must be synchronized to continuously sustain the force. A more realistic training environment does not exist, as I view it.

As a tactical safety specialist, I've had the opportunity to observe Army units, both in training and during real world deployments, conducting training utilizing the high-intensity, battle-focused lane-training concept. I'm often awed at the ability of the Army leadership to manage the complexities associated with safely deploying and training thousands of soldiers at one time. My experience has culminated over the past six consecutive years observing rotations at the Army's various Combat Training Centers.

As a part of my involvement in these rotations, I've observed hundreds of hours of lane training focusing primarily on the integration of safety risk management into training. Risk man-

agement is a five-step hazard identification and reduction process Army leaders have embraced and used with great success. However, as I investigated one fatality after another, the accident scenarios continued to illustrate that serious accidents resulting in fatal injuries were occurring most often *outside* the training lane, an area where the balancing act of mission essential tasks and risk-taking in the combined arms fight is most challenging for Army leaders.

It's true: tough training does not come without risk, and at times soldiers' lives are lost during the rigors of training while mastering skills that will keep them alive to someday fight our nation's battles and win the nation's wars. Therefore, training must be tough, realistic, and challenging — training as we intend to fight. As General Douglas MacArthur said, "In no other profession are the penalties for employing untrained personnel so appalling or so irrevocable as in the military." (*FM 25-101, Battle Focused Training*)

One could presume that training lanes offer perhaps the highest degree of risk a leader and their soldiers face, not only during training but also in combat where the enemy is most likely to be. But the data collected from our nation's wars and conflicts contradicts this assumption. Studies of U.S Army casualty rates illustrate that accident losses experienced in combat are no different than losses experienced during peacetime training. Furthermore, accidents account for more casualties than those casualties inflicted from enemy action in every war from World War I to Desert Shield/Desert Storm. The exception is the Korean War. (<http://safety.army.mil/program.html>)

A review of Army installations' and CTCs' pre-accident, accident, and post-accident phase narratives from the pre-



Army Safety Center Photo

This fatal Bradley rollover occurred at night with NVGs. What the driver saw as a “shallow ditch” ahead was actually a 15-foot depression.

vious five years of fatal accident reports reveal that 73 percent of all fatal accidents occur outside the established training lane. (Phyllis Moon, *Fatal Accident Reports*) Further, research into recent non-fatal accidents at the National Training Center (NTC), Fort Irwin, California, the Army’s premier CTC, reveals 63 percent of all nonfatal accidents occurred outside the established training lane as well. (Department of the Army, Headquarters, Plans and Operations, Operations Group, National Training Center, Fort Irwin, California, *Safety Incidents for Rotation 99-01*) This suggests that leaders and their soldiers experience a lower accident rate inside the training lane, where the highest risks are perceived. Therefore, an assumption can be made, based on the current data, that Army leaders are clearly identifying high risk operations and applying adequate control measures inside the lane, reducing risks to their soldiers, equipment, protecting the force, and accomplishing the training mission. Make no mistake about it, they are!

The reasons for these training fatalities outside the lane are broad and varied. Statistics from the U.S. Army Safety Center reveal the majority of accidents are a result of human error — 48 percent individual, and 18 percent leader. The U.S. Army expends

extensive resources on proactive prevention efforts to reduce and possibly eliminate recurrence of these tragic losses. However, the current mechanism used to identify hazards that account for training fatalities does not specifically address where deaths occur in relation to the training lane, during what phase of an operation they occur, or the effects of mental fatigue. These attributes significantly impact causal factors applied to human error rates. Currently, the accident report used to collect pertinent accident data utilizes an array of codes fed into a computer database for retrieval at a later date. The system is set-up to allow safety professionals and Army leaders to search the database, based on specific fields, or search criteria, which assists them in identifying accident trends encountered during training. This information is critical in supporting safety professionals and Army leaders, and proactive accident prevention programs. Without it, professionals and leaders have no mechanism to identify trends, or retrieve data that specifically addresses the hazard potential of the three factors.

The events that frequently generate training fatalities are not primarily indicative, or a direct result of, what takes place in the training lane. The expectation is for leaders and soldiers

to focus on where the enemy is most likely to raise its ugly head and kill it. Therefore, it’s logical to assume that a great deal of effort in terms of planning and executing the events in the lane is taking place, including the management of risk. This planning process is an extremely complex and demanding effort. This is a process which, I believe, may be producing tremendous mental fatigue that contributes to unplanned events resulting in the loss of equipment, soldier capability, or life. This ultimately degrades unit effectiveness, commonly referred to as loss of combat power by Army commanders. In the safety business, this is also known as an accident. As LTC Michael M. Grant said in *Army Trainer Magazine*, September 1993, “The most credible associated hazard is not the obvious.” He also concluded that most accidents occur when and where you least expect them, and that leaders who let their guard down will continually gamble with ever-present risks associated with realistic training. This may not be a novel conclusion, but when it consumes soldiers’ lives, novelty is not at issue.

What causes leaders to focus so much attention on the training lane? The challenge is in balancing leader emphasis and soldier focus beyond the lane, where risk continues to produce

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greater accident rates, whether these risks are perceived as credible or not. Safe training results from systematic management of inherently dangerous training risks. (FM 25-100, *Training the Force*) Lanes are established to closely emulate combat; therefore, it's logical to assume that the greatest potential of risk lies therein. Perhaps this logic, and the effects of mental fatigue, is causing leaders and soldiers to dismiss the real apparent hazards outside the lane. Statistically, accident investigations have proven leaders and their soldiers focus their undivided attention to the lane and the immediate mission at hand. As a result, far fewer accidents occur inside the lane as opposed to outside.

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Dr. Gerald J. S. Wilde, a research psychologist who has long studied the effects of mental fatigue, has determined that with ever-increasing complex tasks, human error increases as a direct result of mental fatigue. (Gerald J. S. Wilde, *Target Risk*) This could be a contributing factor in lane training fatalities, a factor that should be acknowledged by Army leaders at all levels.

Convincing warfighters that the greatest risks are the ones imposed by themselves, not the enemy, is a difficult teaching point to absorb. Proposing that leaders and soldiers alike take a hard look at how we perceive risk throughout the various levels of training and war may be the necessary approach. This must first be acknowledged at senior levels before it's recognized as a credible factor when considering and managing risk in the future. Soldiers are not often in the position to fully perceive or understand the risks inherent in the tasks they are directed to perform. They depend on their leaders to ensure that they are protected from potentially hazardous situations. Acci-

dent experience shows that mission-stopper accidents occur when victims are ignorant of hazards and the countermeasures, or when directed countermeasures are ignored. (FM 100-22, *Installation Management*)

Understanding the complexities of mental fatigue and its effects on leaders and soldiers during high-risk operations outside the training lane will help protect our most precious resource (soldiers). This new awareness will ensure the appropriate level of leader involvement to mitigate risk throughout the lane, not just in it. That is not to say that our leaders are not addressing hazards, but perhaps their emphasis should shift to equally distributed leadership throughout the lane. Increasing emphasis is not the cure-all for reducing fatalities. Individual discipline, and training to standard form the foundation required to address the trend. Safe training is a predictable result of performing to established tactical and technical standards. (FM 25-100, *Training the Force*) By developing and maintaining this awareness, leaders and soldiers will be better equipped mentally, not only for the hazards they face during high-intensity multi-echelon battle-focused lane training, but also the hazards of war.

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Abbreviations

CONOPS - Continuous Operations

CTC - Combat Training Center

CSS - Combat Service Support

OPFOR - Opposing Forces

NTC - National Training Center

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