

S WORLD WAR II progressed, tens of thousands of tons of artillery munitions were fired on enemy positions in both the European and Pacific theaters of operation.¹ The quintessential armored officer General George S. Patton depended upon his artillery to batter the Germans into submission before and during any maneuver his 3rd Army undertook. In fact, the spearhead of Patton's 3rd Army, the 4th Armored Division, would not maneuver unless continuous, or near continuous, artillery fires were placed on and around objectives. The hard lesson learned was simple: firepower provides freedom of maneuver in combat, and no air force or combat arm provides that firepower better than the artillery.² This led General Patton to declare: "I do not have to tell you who won the war. You know. The artillery did."³

The cold, hard truth then, as now, is that rolling over and through opponents killed or incapacitated by cannon and rocket fires rather than by directly engaging them with rifles, machine guns, and tanks saves the lives of U.S. soldiers. Nor did World War II ground commanders hold themselves hostage to the weather and the Air Corps. The Air Corps could not be everywhere at once, and the weather affected its ability to put ordinance on target at the right time and place. Nothing has changed. Yet now, in over ten years of combat operations, these facts appear lost on many military leaders and politicians.

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PHOTO: SPC Jacob Johns, with the 2-150 Field Artillery, pulls the lanyard firing the M198 howitzer during a retirement ceremony for the M198 howitzer at Camp Atterbury Joint Maneuver Training Center, IN, 18 September 2010.

The Modern Battlefield

As fiscal realities today descend on the military, the services will scramble and fight to justify their existence, and the same historically unsupported ideas will be repackaged and foisted upon the political establishment as the be-all and end-all to defending our nation on the cheap. The "AirSea Battle" is currently in vogue (in the past, it was the AirLand Battle), and it will in turn be replaced by the next "good idea" from Pentagon and think-tank futurists

until the harsh realities of ground combat impose themselves again.

Despite contemporary and past experiences in war, the chorus sings the same old song-only now, it is to protect the sea lanes and project power through the air; before it was dominate the air, win the land battle. The assertion remains unchanged: airpower predominates in modern warfare. The presumption is that airpower is the clean, efficient way to win wars. Yet the historical record shows us that war is a brutal and wasteful affair in the mud that has never been decided in the air. The inconvenient truth for the proponents of airpower is that an airplane cannot even hold the ground it parks on, much less the terrain it flies over. With Asia rising, and in the processes rapidly developing land-based forces, the U.S. Army need not justify its future relevance. Yet, we approach another interwar period and its malaise. What should be evident to anyone with even the slightest grip on history and an understanding of the indispensable role of land forces in winning wars is lost on our policymakers. Many seem incapable of learning from history. Wars are won on the ground and in the will. The Army is the decisive force. The current chief of staff of the Army understands this clearly and has said so.4 But is anyone listening?

Sadly, the infighting is not limited to protecting "rice bowls" within the joint force. The chief of staff's message appears to be falling on deaf ears within his own house. Nation building has taught the Army bad lessons and habits. Nowhere is this more evident than in the continual slide of the artillery into irrelevance. What was once considered by Carl von Clausewitz and Napoleon Bonaparte as the decisive and most destructive combat arm on the battlefield is now viewed as unresponsive and impractical, particularly in counterinsurgency operations (i.e. nation building), where many professional soldiers believe that winning the hearts and minds of the local population in the nation they are occupying is more important than destroying the enemy.5

Lessons "learned" cherry picked from foreign military adventures in Malaysia, Indochina, Northern Ireland, the Mideast, and North Africa underpin U.S. counterinsurgency doctrine. Army commanders' dread of the 24-hour news cycle has created a mentality toward dealing with guerrilla

warfare that says, as James Mulvaney tells us, "We are not a nation at war. We are a nation at the mall."

Nevertheless, the reality remains that when there is nothing left to discuss, adversaries fight. The great decision by arms, as Clausewitz calls it, is ultimately manifest in combat. In combat, "if one side uses force without compunction, undeterred by the bloodshed it involves, while the other side refrains, the first will gain the upper hand. That side will force the other to follow suit; each will drive its opponent toward extremes . . . [I]t would be futile—even wrong—to try and shut one's eyes to what war really is from sheer distress at its brutality." Enter the artillery.

Unfortunately, what will soon be left of U.S. artillery will be a depleted and dispirited force endowed with a magnificent array of precision, near-precision, and area munitions that too few artillerymen can employ from too few systems—so much for the once vaunted King of Battle.

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Lessons Learned?

Among the bad lessons and habits the Army and to some extent the U.S. Marine Corps have developed from counterinsurgency operations (COIN) is an overreliance on air support. The genesis of this bad habit traces to having no precision artillery capabilities in the operational force until four years into the war, coupled with uncontested, absolute control of airspace, freeing nearly all U.S. tactical aircraft for ground attack. As a result, commanders came to rely on aircraft armed with JDAMs or Hellfires for precision strikes on targets where collateral damage was a concern. The artillery took itself out of the fight through the self-inflicted wound of no foresight. It was not until the fall of 2005 that the M31 (guided rocket) came online and the spring of 2007 until the M982 (Excalibur) 155-mm guided projectile arrived. However, the damage was done. Airspace was ceded to the Air Force and attack helicopters. Despite the precision artillery munitions now available to tactical commanders, the default remains tactical air support because it takes too long to clear the airspace and gain the authority to employ precision artillery fires. This has not come without consequence.

In Afghanistan, fixed wing air support response times average eight minutes. Artillery fires can arrive on target within two to three minutes. For troops-in-contact, two to three minutes is a long time to wait for fire support, and eight minutes is an eternity. This assumes, of course, that air support is always available. Assumptions in combat get soldiers killed. A group of American advisors and their Afghan partners learned this lesson outside of Ganjgal in Kunar Province in 2009. It was bad enough that the assurances of air support being only five minutes away did not materialize until nearly two hours into the fight, but repeated requests for artillery fires were denied, and by the time the helicopters arrived four U.S. Marines and eight Afghan soldiers were dead.8 The debacle of the Ganigal ambush demonstrated that the rules of engagement got soldiers killed, while a more

insidious threat doomed the operation: a mentality of overreliance on tactical air support.

Junior leaders conditioned to expect combat air patrols or Apaches over their shoulders did not think to plan for anything but tactical air support. Properly coordinated fire support does not lead to rules of engagement debates at the time of crisis. It also obviates reliance on dubious assurances of air cover. As the Napoleonic maxim goes: no one reasons; everyone executes. Instead, the hero that day, Army Captain Will Swenson, received white phosphorus rounds to cover the retreat of his men rather than high explosives to saturate the ridgeline, which would have enabled his forces to close with and destroy the insurgents. One of the primary purposes of artillery fires is to provide covering or suppressive fires, so that troops under fire can maneuver. We learned this through hard experience in previous wars. There is little doubt that day outside of Gangjal would have turned decisively in favor of U.S. and Afghan forces had artillery fires been brought to bear at the right time and place. Air support is not a luxury in major combat operations, nor in COIN. Our combat leaders need to plan for artillery fires first, and employ them without hindrance.



An AH-64 Apache helicopter patrols the Khod Valley in Shahidi Hasas District, Uruzgan Province, Afghanistan, 18 September 2011.

Denying artillery fires to troops-in-contact is egregious, but failing to bring artillery to the fight is a greater blunder. This is the infamy of Operation Anaconda, foreshadowing the Ganjgal debacle. Conventional forces that should have known better left their howitzers in garrison (far away from the Shah-i-kot Valley) and attempted to conduct combat operations relying wholly on tactical air support and mortars. As is typical in mountainous areas, the weather turned poor and helicopters proved of limited capability at high altitude. Mortars engaged in duels with their entrenched and adept Al-Qaeda counterparts. Hundreds of Al-Qaeda fighters escaped unhindered by artillery fire into and through tunnel networks built by U.S. tax dollars during the Soviet-Afghan War and over goat trails permeating the area. Special operations forces (SOF), 101st Airborne Division, and 10th Mountain Division soldiers could not close the loop and suffered unnecessary casualties from a lack of effective fire support. The fog prevented aircraft from dropping ordinance on Al-Qaeda fighters dug into cave entrances, and U.S. troops fighting uphill could only maneuver under the limited cover of mortar fires during periods of bad weather that kept attack aircraft from providing fire support. Mortar rounds were limited to what individual soldiers could carry. Tactical aircraft could not stay on station continuously and limited visibility hampered them. (Organic artillery support operates under no such limitations. Of course, it has to be brought to the battle to affect the battle.)9

Unfortunately, seven SOF soldiers lost their lives in Operation Anaconda as RPG fire brought down their helicopter while it tried to insert them into a landing zone (LZ) that had not been prepped by artillery fires (a basic tactic no airmobile unit in Vietnam would have failed to implement).

However, when you do not have any artillery fires, you make do with what you have, which in this case proved to be the U.S. Air Force. The Air Force could not be everywhere at once; therefore, the LZ was not covered.

The Past is Not Dead

Our World War I, World War II, Korean, and even Vietnam War predecessors would be appalled that professional soldiers would operate without artillery, much less do so by conscious decision.



A 105-mm howitzer in action against the Communist-led North Korean invaders, Korea, 22 July 1950. (U.S. Army, PFC Hancock)

Yet that is the state of professional soldiers today. Either they do not know their history, or they believe the principles that govern warfare have somehow changed. Yet, artillery remains decisive, and its absence proves costly.

The next worst lesson learned from COIN is that fire-finding radars are sufficient sensors for the artillery. They are reactive. The damage is done by the time the radar acquires the incoming rounds, determines the point of origin, and the guns receive a counter-battery mission. Not only does this limit artillery use to artillery duels, it also makes the artillery literally blind. With fire supporters doing almost everything but observing targets and directing artillery fires, basic fire support skills have atrophied. The eyes of the artillery have grown dim.

Once again, rules of engagement complicates matters. Most tactical commanders are not willing to use quick-fire procedures that make counterfire effective. Nor will most tactical commanders doing COIN accept the collateral damage that may result from shooting quickly with area munitions. In Fallujah, the Marine Corps broke the code, but they proved to be the exception, not the rule. Insurgents establishing mortar-firing positions in the backyards of Iraqi residences were fired upon after being

acquired by either lightweight countermortar radars or larger FireFinder radars like the Q-36. Then the harassing fires against Marine forward operating bases or combat outposts ended rather abruptly. It appeared that most Iraqis were not too pleased with insurgents setting up mortar tubes in their backyards because shortly after they used them, artillery rounds came crashing down, spraying death and destruction. Therefore, the local populace forced the insurgents to take their activities elsewhere.

Contrast this outcome with Army counterfire operations elsewhere in Iraq during the same period in 2006, where valuable time was lost getting "eyes on target" through unmanned aerial surveillance drones or ground forces. Then, once "positive identification" was established, the laborious process of clearing fires began. Eventually, if the insurgents hung around long enough, two 105-mm rounds would be fired at them. Of course, all these parts and pieces rarely came together in time for counterfire to be effective.

Of course, there is more to combat operations than an artillery duel. Artillery fires shape the battle-field. Artillery fires can destroy targets in urban areas without risk to maneuver forces. Artillery fires can provide light during darkness and haze on a clear day. To do these things, the artillery requires more than just forward observers on the ground. It needs eyes that can look deep, that can penetrate into dense urban sprawl.

This was the case at one time in our history. Aerial artillery spotters made their first appearance during our Civil War. On artillery-dominated battlefields during World War I, observers in fabric-covered aircraft proved their worth. In World War II, aerial observation battalions linked observers directly to division and corps artillery assets.

From the Louisiana Maneuvers, to combat operations in both the European and Pacific theaters, aerial observation and direction of artillery fires proved invaluable to striking high-payoff targets, providing preparatory fires, and denying positions of advantage to advancing or attacking enemy forces.¹⁰

This aerial observation capability persisted in the Army through the Korean and Vietnam wars, after which it underwent modification in the 1980s, consolidating it into Army aviation formations where it went from fixed wing platforms to helicopters.

When modularity destroyed divisional and corps artillery formations, Fort Sill responded by vesting considerable effort in establishing, organizing, and resourcing fires brigades (FiBs), seen as filling the gap in operational fires capabilities left by the demise of divisional and corps artilleries. The one glaring problem with FiBs is that the only organic observation capabilities they bring to the fight are radars. Fires brigades are dependent on joint sensors. Those sensors are rarely, if ever, dedicated to FiBs, so FiBs end-up blind.

To be relevant in COIN, and major combat operations, for that matter, FiBs must see deep. They must observe the enemy when he is doing something other than putting indirect fires on friendly forces. This takes the artillery beyond the artillery duel and into a proactive fight where insurgents are destroyed as they set up rockets on timers, establish mortar firing points, use safe houses, plant improvised explosive devices, or establish ambushes. In major combat operations, the ability to look deep puts FiBs in a position to preempt enemy actions by striking assembly areas, airfields, command posts, or logistical sites. One would think that, with the advent of unmanned aircraft systems, placing this capability in the FiB would be a foregone conclusion—but no. Instead, the Army debates funding experimental sensor capabilities in other warfighting functions rather than placing a battle-proven capability in the artillery.

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An Identity Crisis

Aside from the budget wars of shortsighted politicians, the problems with the current identity crisis within the artillery community and the bad habits ten years of COIN have instilled in our force are symptomatic of diminished trust among the Army's combat arms. The ancillary missions into which we have thrust artillerists in COIN have drained their core competencies and with it the credibility of the artillery community to do basic fire support tasks.

The current maneuver force often operates without fire support because confidence has eroded in the planning and clearing of Army fires; therefore, commanders rely on tactical air support. This mentality has two deleterious effects.

First, tactical leaders today believe they no longer need to maneuver under an artillery umbrella or arc of fires. This mentality has led seasoned veterans of multiple wars to conclude that America has the most combat experienced force in the world that does not have combat experience. meaning that today's Army has not been bloodied as it was in World War II, Korea, or even Vietnam, where the result of tactical engagements could, and did, result in either strategic reversals or gains. In Afghanistan, the result of tactical engagements does not jeopardize the entire expeditionary force. Nor do they spell strategic failure despite the hand wringing of many senior military leaders over the "strategic corporal" and "CNN effect." This was not the case in World Wars I and II or Korea, where the fortunes of entire expeditionary forces hinged on tactical success. When U.S. soldiers again start dying by the hundreds in single battles against a more sophisticated and capable enemy, then operating without artillery support will become unthinkable because it will be fatal. Unfortunately, we as a society and military have allowed matters to reach that point because we cannot see beyond our contemporary experience of a flip-flop clad, AK-47 toting enemy whose best firepower rests in improvised explosive devices and haphazardly fired mortars and rockets.

Second, the mentality of leaving fire supporters in the rear to do other things is the very reason the artillery is no longer the first call for killing by maneuver forces. In southern Afghanistan recently, a retired senior Army leader observing operations queried a tactical commander patrolling outside his forward operating base (FOB) as to where his fire support officer was, to which the commander responded, "back in the FOB doing other things." When further asked what fire support was planned for and available for the patrol, the commander said he had one mortar tube. This astounding mentality defies comment.

Vietnam was every bit the guerrilla war Afghanistan is today. "Most commanders concluded that the overriding lesson of 1965-66 [in

Vietnam] was the importance of firepower. As the battles indicated, American ground forces were vulnerable when they lacked fire support. Because of that, many commanders reluctantly operated beyond their artillery or tactical air support and refused to fight on equal terms with the enemy."11 The problem is that the Army is too busy trying to shed this image of being reliant on firepower, and it is filtering down through the ranks—we've got one mortar tube, we're good. Too often, U.S. forces fight on relatively equal terms with insurgents. The tragedy in this is how unnecessary and wasteful of American lives it is. Brigadier General Willard Pearson, commander, 1st Brigade, 101st Airborne Division, wrote in 1966 that his unit's motto was "Save Lives, Not Ammunition."12 There is no doubt this mentality would have saved American lives in the Shah-ikot Valley and outside Ganigal. It is far past time to resurrect the once-held and more practical mentality of firepower above all else.

Theory

The artillery's relevance is in its firepower. The Army's relevance is in its functionality. They are inexorably intertwined. No senior Army leader needs to look beyond this fact to justify the existence of either. The historical record is there. Use it. The essence of combined arms warfare since its inception is functionality. If Clausewitz is right, then the big three—artillery, infantry, cavalry (now called armor)—bring different functions to battle, which under the "genius of the commander" (his term for how essential a good commander is to everything), are complimentary when coordinated and synchronized correctly (correctly being defined only one way—as victory).

Clausewitz goes to great pains to explain the functionality of the big three. Artillery is fire-power and does the vast majority of the killing. Its major drawback is mobility and flexibility. Infantry is versatility. It gains and holds ground. Its major drawback is firepower. Cavalry is mobility, speed, and punch. Its major drawback is versatility. The point Clausewitz is at pains to make is that where one combat arm is strong another is weak. Hence, they are interdependent. We like to believe this notion of interdependence is a post-modern phenomenon, but it was apparent

in the 19th century and over 2,000 years before to the Romans and Macedonians.

In the recent American military experience we broke the traditional relationships between the big three combat arms, and artillery became subordinate to the other two. To return to becoming the killing power of choice on future battlefields, the artillery must regain its coequal status with infantry and armor. There are many ways to do this, from using the menu of precision artillery capabilities mentioned in this article, to improving the artillery's observation and range capabilities, to getting back to the basics of shoot, move, and communicate. Yet, the argument begins and ends with the fact

that artillery is the most cost effective means of killing.¹³ The artillery community must return to lethality as its principal responsibility. Firepower and maneuver are the fundamental elements of combat. The application of artillery fires precedes successful maneuver to permit infantry and armor forces to seize objectives without serious loss.¹⁴ Killing is the business of artillery. No other combat arm or service component kills large numbers of combatants better than the artillery with its all-weather, 24/7 capabilities. For this, the artillery community need not apologize. Until artillery is resorted to its rightful place among the combat arms, the crown is lost. MR

NOTES

- Boyd L. Dastrup, King of Battle: A Branch History of the U.S. Army's Field Artillery, TRADOC Branch History Series (Washington, DC: Center of Military History), 1992, 203-36.
- 2. Íbid., 221-22. Army and Marine Corps forces in World War II got to the point where they would not maneuver unless sustained artillery fires were placed on the objective, or used to shape the battlefield. "Reflecting upon the war in Europe, US Forces, European Theater, concluded late in 1945 that firepower and maneuver were the fundamental elements of combat. The application of firepower preceded successful maneuver to permit infantry and armor to take objectives without serious loss of life or injury." 226.
- 3. Martin Blumenson in *The Patton Papers*, 1940-45, notes that on at least two occasions GEN Koechlin-Schwartz told GEN Patton: "The poorer the infantry, the more artillery it needs; the American infantry needs all it can get."
- 4. Blogging on the Small Wars Journal, GEN Raymond T. Odierno succinctly laid out the strategic framework for the U.S. Army through the interconnected roles of prevent, shape, and win. According to the CSA, the Army "must be ready to win decisively and dominantly." Indeed. There can be no real victory, but on terra firma—so says history. At least one policymaker seems to get it.
- The adherents to Bushido were every bit as fanatical as today's Islamists.Like Imperial Japan, they have their limits, despite their fanaticism.
 - 6. James Mulvaney, *Huffington Post*, "Grief for Sale," 11 September 2007. 7. Carl von Clausewitz, *On War*, ed. and trans. by Michael Howard and Peter
- 7. Carl von Clausewitz, On War, ed. and trans. by Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976) 75-76. Clausewitz previously chides "kind-hearted people" for foolishly believing that the true object of war is to disarm or defeat an enemy without too much bloodshed.
- 8. McClatchy Newspapers, 8 September 2009: "At 5:50 a.m., Army Captain Will Swenson, the trainer of the Afghan Border Police unit in Shakani, began calling

- for air support or artillery fire from a unit of the Army's 10th Mountain Division. The responses came back: No helicopters were available."
- 9. Sean. D. Naylor, *Air Force Times*, "Learning from Operation Anaconda," 29 July 2002. This is not just my contention. Here is the Army's own assessment according to Mr. Naylor: Army COL Mike Hiemstra, [Army Center for Lessons Learned] director, said it would be "a legitimate conclusion" to assume that, had there been a battery of howitzers on the Anaconda battlefield, the guns could have shut down the Al-Qaeda mortars that inflicted casualties on the U.S. force.
- 10. Dastrup, 207-208. "Despite resistance from the Air Corps, which did not want to lose the observation mission, the War Department ordered a test of organic air observation for the field artillery. The test demonstrated the timeliness of organic air observation in the delivery of artillery fires." Terrestrial observation [forward observers] combined with aerial observation became essential to shooting deep. By 1943, every artillery battalion had two planes, pilots, and maintenance support. Today, the Army cannot even equip an Filb with one unmanned aircraft.
 - 11. Dastrup, 284.
- 12. BG Pearson's mentality was reflected in a 1966 article that appeared in Army Information Digest entitled "Find'em, Fix'em, Finish'em." Of course, this has become the targeting methodology for high-value individuals. Its genesis is found in a conventional forces commander who prized massive artillery and air strikes as the most effective means for destroying enemy resistance in his airmobile operations. 13. By way of comparison, an M270 Multiple Launch Rocket System (the most
- 13. By way of comparison, an M270 Multiple Launch Rocket System (the most expensive artillery piece in the U.S. arsenal) costs approximately \$2.5 million per system to provide fire support vs. joint assets that cost anywhere from \$93 million (F18) to \$13 billion (aircraft carrier) to provide fire support to ground forces.
- 14. Report from the General Board, U.S. Forces, European Theater, Subject: Study of Field Artillery Operations.