

Historian's Corner



- Part 2 -

DOTMLPF ARTILLERY INSIGHTS FROM THE AMERICAN CIVIL WAR: DOCTRINE

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As you know, “D” stands for doctrine in the DOTMLPF construct. Today’s United States Army is keenly interested in doctrine, which it uses to shape technological development (more on that in a couple of weeks) rather than using technology to define doctrine. As a Redleg, you should be intimately familiar with Field Manual (FM) 3-09, Fire Support and Field Artillery Operations (2020) and its subordinate documents, as well as the new FM 3-0, Operations (2022).¹ The Combined Arms Directorate at Fort Leavenworth, Kansas has produced a series of videos to explain FM 3-0, but you’ll need to read FM 3-09.² As you trudge (admittedly, it’s neither a short nor easy read) through today’s doctrine, keep in mind that you possess a significant intellectual advantage compared to American Civil War (ACW)-era Redlegs.

For most of the nineteenth century, the Army did not possess “a well-digested artillery manual.” Maneuver commanders (read infantrymen, and this was important as we’ll see in the forthcoming discussion of organization) expected Redlegs to focus on the “manual of the piece.” Ultimately, this being what we know today as the checklists and procedures for operating a gun. The 1840 Instructions for Field Artillery, Horse and Foot—the basic building blocks of a combined arms synthesis are apparent in the title—defined Field Artillery (FA) as wholly “auxiliary” to the Infantry and Cavalry. In 1856, the Barry Board—named after Captain William Barry who joined Captain William French and Captain Henry Hunt on it—used the Army’s paucity of doctrine as justification to think about how Infantry commanders could better employ “light artillery” (small guns mounted on carriages that either horses or men could move) to begin the process of creating FA-specific doctrine. Good doctrine takes time to develop, test and evaluate, and four years later, the Barry Board published the Instruction for Field Artillery (IFA). The ACW began the next spring, which meant the IFA did not have the time to permeate the Army’s, or for that matter the FA branch’s, understanding of or training for the tactical and operational levels of war. The FA branches (then called “arms”) of both the federal (the northern) and confederate (the rebellious and treasonous southern) armies “made it up as they went,” and the FA’s performance on the battlefield—to say nothing of the Infantry that FA was supposed to support—suffered.

Several important points in the IFA ring true today. The IFA explained that FA’s role was “to act upon the field of battle, to break an enemy’s line to prevent him from forming; to crush his masses; to dismount his batteries; to follow and support in a pursuit; and to cover and protect a retreat.” That is not fundamentally different from today’s FA mission statement: “The mission of the Field Artillery is to suppress, neutralize or destroy the enemy by cannon, rocket and missile fire and to integrate and synchronize all fire support assets into operations.” The IFA added that “The effect of Field Artillery is

1 FM 3-09: https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN21932_FM_3-09_FINAL_WEB.pdf.

FM 3-0: <https://usacac.army.mil/node/3048>.

2 See “FM-3-0: An introduction to Multidomain Operations” at <https://www.youtube.com/watch?v=QFYjO3XHd3Q>.

generally in proportion to the concentration of its fire [*italics in original*].” With the dual focus on FA as fire supporters who provided concentrated fires, the doctrine counseled against volley or salvo firing (as it was known at the time) because that inevitably produced lulls in the rate of fire. Complex timing and staggered patterns in which every second gun fired in turn, the IFA authors hoped, should become the operating norm. The doctrine said very little about accuracy, and the timing and consistency of fires proved difficult to execute once Redlegs faced adversaries’ counter-battery fires vice simply practicing the manual of the piece on the gunnery range. Moreover, the doctrine read that FA should post itself directly behind Infantry to focus its fires on the point of attack. However, big, heavy guns that required up to six horses to move (even the so-called light artillery demanded a couple of horses and men trained to handle the animals) could not keep pace with Infantry on the move. Furthermore, placing the guns behind the Infantry and firing directly over its head created, on a smoke-filled battlefield, an environment ripe for fratricide. Troops in the attack, therefore, often moved forward against defensive positions without anything more than an initial barrage in support. We are, of course, foreshadowing an explanation for the confederate artillery’s performance at Gettysburg (1–3 JUL 1863). Remember that the doctrine simply could not predict the effects that technology and matériel limitations imposed on commanders.

In practice, commanders generally placed their cannons on a 1,000–Solider regiment’s flanks. The result, therefore, became dispersal of FA assets vice concentration of them. With dispersal came degradations in the ability to effectively command and control artillery batteries (not battalions or regiments, as we’ll see in a couple of weeks) and produce effects on the battlefield. Commanders found the only—albeit in the ACW a tremendous one—advantage from battery dispersal in defensive applications. Throughout the war, the defense dominated, and commanders (at least competent ones) maneuvered to compel their adversaries to attack them, not vice versa, in well-established defensive positions. The Army of the Potomac (AoP, the federal army in Virginia) in fact suffered horrendous casualty rates through much of the war because it found itself often attacking the Army of Northern Virginia (ANV, the main confederate army in the upper south) in the latter’s trenches and behind its barricades. The AoP turned the tables at Gettysburg: you’re probably familiar with the devastation of George Pickett’s division in Pickett’s Charge on the last day of the battle. Still, small-arms fire—not cannon fire—cut the huge swaths through Pickett’s formations.

ACW operational historian Dr. Earl Hess notes that “most long-distance projectiles failed to hit anyone” between 1861 and 1865. The evidence backs his claim. The authors of the *Medical and Surgical History of the Civil War*, for example, looked at the records of 141,970 of the estimated 281,881 federal and the approximately 194,000 confederate Soldiers wounded during the war. They found that shell fragments inflicted only 9% of wounds, canister shot claimed 1% and solid shot produced a measly 0.3% of wounded in action. Union General William Rosecrans’s after-action analysis of the Battle of Stones River (31 DEC 1862–2 JAN 1863) in Tennessee, where he specifically concentrated his batteries into an “artillery group” in hopes of squeezing more tactical-level effects from his guns, found that the approximately 20,000 rounds that his Redlegs fired accounted for 782 confederates killed and wounded in action. The 2,000,000 musket rounds that his Infantry regiments fired over the three-day battle, on the other hand, killed and wounded 13,832 confederates. As we’ll see in a few weeks, however, timing and context were as important as raw numbers. The bottom line here is, according to Hess, “we may not know exactly what percentage of losses occurred because of artillery, but we do know it was quite low.” The sterile number-crunching about (at least federal) FA ineffectiveness flies in the face of some participants’ recollections of their experience, however. Major General Daniel Harvey Hill, who led his confederate division onto the Bloody Lane at Antietam (17 SEP 1862) which was the bloodiest single day of the war, said the rebels could have won the battle but for “the bad handling of our artillery. This could not cope with the superior weight, caliber, range and number of Yankee guns.” That said, it was not FA fires that broke Hill’s division on the Bloody Lane but the enfilading musket fire of the 61st and 63rd New York Infantry Regiments that daringly moved against the confederates’ flank. Hill can certainly be excused, nevertheless, for wanting to put the blame for his defeat on someone or somebody other than his infantrymen. He was neither the first nor the last Infantry commander to try to scapegoat his artillery colleagues for his failures.

To be continued...