Trench Warfare between 1776 and 1918

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S610A, Evolution of Modern Warfare
In large part, the devastation of WWI on human life can be blamed on trench warfare and the failure of European military observers, especially the British and the French, to recognize the need to adapt offensive strategies. Several instances of trench warfare appeared from the Eighteenth Century until the advent of WWI, but the Europeans consistently discounted its significance. They regarded the use of trench warfare during the Revolutionary and Civil Wars in the United States to be an American phenomenon that was inapplicable to European strategies. Similarly, Jomini rejected the Archduke Charles of Austria's claim that frontier fortifications significantly contributed to France's success in the wars of the 18th Century and to the Revolutionaries' success in the French Revolution.

The United States, after the Revolutionary War

In the early Nineteenth Century, the United States was a young nation which considered itself vulnerable to attack. Naturally, then, Americans were the first to take heed of the need to perfect trench warfare and to develop offensive strategies and tactics to overcome it. As part of its national defense policy, Congress reluctantly appropriated funds for the construction of fortifications along coastlines and the Canadian border.

From 1830 to 1871, Professor Mahan of West Point stressed the value of field fortifications both defensively and offensively, contending that the spade was as useful as the musket. At West
Point, Professor Mahan taught many of the generals who would lead battles during the Civil War. Indeed, Henry Halleck, one of Mahan's students, also emphasized the importance of fortification and military engineers. During the Crimean War, 1854-1856, Jefferson Davis, the Secretary of War, arranged for three officers to observe the war. One of the officers was Major Richard Delafield who stressed engineering and fortification in his report.

The Civil War, 1861-1865

The first battle of the Civil War, Bull Run, in 1861, clearly demonstrated the advanced firepower and range of the rifled shouldered weapon and led to the gradual introduction of field entrenchments, especially by the Confederate Army. To restore a unified nation, the Union needed to take offensive action against the seceding states. By contrast, the Confederacy needed only to repel the Union aggression to preserve its independence. It was therefore logical for the Confederate Army to use trench warfare to defend key positions.

The most well-known instance of the Confederacy's use of entrenchments is the defense of its capital Richmond. From 1862 to 1863, trench warfare prevented Union generals from taking Richmond in their "on to Richmond" drives. In mid-1862, Lee successfully employed trenches to defend Richmond against McClellan in the Seven Days' battle and earned the named "King of Spades" from his men.
In his memoirs, Grant wrote that "Richmond was so fortified and intrenched so perfectly that one man inside to defend was more than equal to five outside besieging or assaulting." In June 1864, at Cold Harbor, the entrenched Confederates again repelled the Union soldiers, inflicting heavy losses. Ultimately, after ten months of trench warfare, the Confederate resistance at Petersburg collapsed in the spring of 1865, but not until after a tremendous loss of lives due in large part to General Lee's strategy of attrition.

The Union employed tunneling as an offensive response to Confederate trenches, most notably in the so-called "Battle of the Crater." For six weeks, Union soldiers tunneled with the objective of setting explosives under the first line of Confederate defense. On July 30, 1864, the tunnel system was complete and the explosives were detonated. However, the ensuing Union attack was badly executed, resulting in heavy Union losses. In sum, the Union realized the importance of devising tactics to overcome trench warfare, but was unsuccessful in doing so other than by sheer force of numbers and courage.

Trench Warfare, 1896-1905

Although the use of trench warfare during the Civil War foreshadowed what was to occur during WWI, European military observers regarded the trench warfare of the Civil War to be a unique American phenomenon. Between the Civil War and WWI, trench
warfare was employed against the Americans, the British and the Russians, but only the Germans seemed to take heed of its usefulness in a strategy of attrition.\textsuperscript{20}

On February 4, 1896, during the Philippine-American War, the Filipinos fought from entrenched positions to defend the United States' attack of Manila.\textsuperscript{21} The fact that the United States was able to overcome the defenses with little difficulty gave the Europeans no reason to depart from their view that trench warfare was ineffective against decisive tactics. During the Boer War, 1899-1902, the British should have foreseen the extensive use of hidden trenches,\textsuperscript{22} which the Boers used effectively against them.

In the Russo-Japanese War, 1904-1905,\textsuperscript{23} the Russians employed trenches against the Japanese, but failed to conceal them properly.\textsuperscript{24} At the battle of Mukden, the Russians defended the city with entrenchments. However, when the Japanese attacked, the Russians left their entrenchments to fight in the open, and the Japanese took the city. Some observers, including American Major Joseph E. Kuhn, reached the incorrect conclusion that frontal assaults were effective against entrenchments.\textsuperscript{25}

\textbf{World War I, 1914-1918}

During WWI, the Germans surprised the Allies by employing a strategy of attrition, incorporating trench warfare as a primary tactic.\textsuperscript{26} The strategy proved to be effective in forcing France out
of the war and all but destroying the will of the Russians. After four years of trench warfare, both the Germans and the British had built an elaborate network of trenches, tunnels, dug-outs (funk holes and caves). The British developed a manual entitled "Notes for Infantry on Trench Warfare," containing some 200 pages of instructions and diagrams.

Meanwhile, the Allies developed tactics for using entrenchments offensively against the Germans. In its manual, the British noted the "frequently neglected" use of entrenchments to launch attacks and instructed that "the trenches from which an attack is to be made should . . . be within close assaulting distance of the opposing front line" to surprise the enemy. The Russian General Brusilov successfully employed this tactic. However, as in the Civil War, the Allied forces finally terminated the "stalemate" only through sheer perseverance and tremendous losses of lives.

By the end of WWI, military strategists recognized that new technologies could overcome trench warfare decisively by means of armored penetrations, by airborne drops behind the entrenchments, and by the long-range bombing of strategic targets. However, history should have suggested that entrenchments would simply become deeper and better hidden as weapons become more destructive. Nations defending against much stronger and more technologically advanced aggressors would continue to resort to underground
tunnels,\textsuperscript{29} and trench warfare would continue to be a tactic in strategies of attrition between adversaries of comparable strength.\textsuperscript{30}

**Conclusion**

Trench warfare, which was a logical response to the introduction of rifled guns, had a significant impact upon the conduct of war because it gave defensive troops a much greater advantage over charging infantry. It stymied Napoleonic tactics and was a primary tactic for waging a defensive war of attrition. Unfortunately, European military strategists did not learn from the painful American experience of trench warfare during the Civil War, so they did not anticipate WWI's repeat of history.


NOTES


7. Ibid., p. 416.

8. Ibid., pp. 417-18.

9. Ibid., p. 419.


12. Robertson, p. ADV5-10.


14. Ulysses S. Grant, Memoirs (1885), pp. 140-41, quoted in Weigley II, p. 144. See also Messenger, p. 9 (quoting Colonel Lyman that "a man in a hole [with a] good battery on a hill behind him . . . will beat off three times his number, even if he is not a very good soldier").


17. James, pp. ADV6-8 - ADV6-18.


20. Weigley I, pp. 368-69 (Colonel Neznamov of Russia).


22. Prior to the advent of smokeless powder, it served no purpose to hide trenches, since the positions would be given away by the smoke of the firing rifles.


25. Ibid.


27. Broom, p. ADV8-15. Dug-outs protected the entrenched soldiers from artillery shells. The most common type was a "funk hole," a niche carved into the side of a trench into which the soldier could crawl. Another type was a simple cave below the surface of the trench, accommodating several men. The Germans built elaborate dug-outs, complete with wood-paneling, wallpaper, mirrors and even carpeting.


29. Consider the Japanese during World War II (Weigley I, pp. 300-01, 307), the North Vietnamese during the Vietnam War, and Saddam Hussein during the Gulf War.