

The Communications Revolution and its Impact on Warfare from 1860-1960

A Brief Overview

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By John Callahan, M.A.

In looking at the period from 1860-1960, it is easy to see that there have been several significant “revolutions in military affairs.”¹ The reader can no doubt readily think of several, to include revolutions in mobility, firepower, defensive armor, and the lethality of the individual soldier. Other revolutions, such as those of the modern staff and army structures, were already underway, and yet others, such as unmanned air vehicles and the H-Bomb, came later or at least at the very end of the period in question.

In my opinion, however, one RMA which took place in the period from 1860-1960 overshadows, and enabled, all of the others. That is the development and rapid use of improved communications techniques. Communications is the one revolution which allowed true “World Wars”, and which allowed coordination of intentions and strategy around the globe. I believe that it is no coincidence that the dark genius of 20th century mobile

warfare, Heinz Guderian, served as a communications officer during his formative years in the First World War.²

Long distance communications were long the dream of political and military commanders. The Romans clearly “got it” devising a road system that allowed both commercial expansion and the rapid movement of troops and of the horse-mounted messengers who transmitted their orders. Napoleon clearly “got it” as well. The Chappe system of semaphores allowed Napoleon to administer his empire from Paris, but could not meet the needs of a military campaign. (Confirmed by the bad start of the 1809 campaign, when bad weather garbled several messages from the Emperor to Marshal Berthier at the front and almost caused a French defeat).³

In that whole long span of time from Rome to Imperial France, there where no enduring significant improvements in tactical, operational, or strategic communications. In effect, the Crimean War leader relied on the ship, the horseman, the drum, the horn, or his own voice, for communications (Fifes are to make

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Formally, Revolution in Military Affairs refers to efforts in future transformation of the US armed forces:
http://en.wikipedia.org/wiki/Revolution_in_Military_Affairs

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http://en.wikipedia.org/wiki/Heinz_Guderian

³ Rothenburg, Gunther: The Art of Warfare in the Age of Napoleon; Indiana University Press, 1981. Page 211

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the drums sound good, not for actual transmission of orders).

By 1860, non weather influenced communications existed or where in development that would revolutionize warfare. The telegraph, intercontinental wire, wireless radio, and their various offspring influenced warfare in an almost profound sense.

While it is true that Rail movement allowed Joe Johnston to move his Valley Army to Manassas in time for Jackson to “Stand like a stone wall”, The move itself was only possible because of the rapid transfer of actionable intelligence and mission orders via telegraph.

In 1940, the German Army invaded France, and in 1941, followed up with a near knock out blow of the Soviet Union. In each case, their armored formations were far inferior to those they were facing. And in both cases, the Wehrmacht Panzers literally drove circles around their opponents. Why? Because each vehicle had a radio, thus allowing commanders from the Division level down to the platoon level to exercise flexible command and control over their subordinates. This in turn allowed the superior education, training, and initiative of the German soldier at all levels to be brought into play. In his formulation of Blitzkrieg tactics, Heinz Guderian emphasized communications down to the lowest level to be just as important as

having all elements of a Panzer Formation be at least wheeled if not tracked. As the war progressed, the spread of communications down to the lowest level enabled two developments: The US Army’s unrivalled coordination of Artillery fire; and the Marine Corps evolution of Close Air Support and the Air-Ground Team into a deadly, war winning tool.

How could Operations the size of the Federal Summer Campaign of 1864, the Somme, the Normandy Invasion, or the Battle of Midway, have taken place without modern communications? The answer is simply that they could not have. Consider, for a moment, the Trachtenberg Plan and the defeat of Napoleon in Germany in 1813. Is there any doubt that, with radio communications, Napoleon could have thwarted the efforts of the allies to concentrate against his subordinates and avoid contact with his Army?

Would Lee in the Gettysburg Campaign have lost touch with his subordinate commands (read here General Stuart’s Cavalry), and lost the war for the Confederacy?

Modern Communications allow a commander to extend his influence and control over ever wider areas of the battlespace and the globe, and allow a much clearer picture of operations to be developed. Perversely, over-management can occur, such as Hitler or Lindon

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Johnson (Outside of our time frame but very relevant) commanding individual tactical units from the national capital.

Nevertheless, I believe that it is the development of communications techniques beyond word of mouth, and faster than a horse or ship, which took place from 1860 to 1960, which served as an enabler to all of the other military developments of the period, and allowed commanders to fully exercise control over the battlespace and to use the impressive array of new command techniques, battlefield organizations, and military equipment which the era produced.