The Emergence of Joint Fires During World War I

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The first recorded evidence of ordnance dates back to 1313, in the city of Ghent, Belgium, where brass cannon weapons were manufactured and exported to England (Rogers, 1975). In the 700 years since, artillery has become a staple of warfare and utilized in countless military battles and campaigns. World War I (WWI) represents the largest amassment of artillery during any war in human history. It features the Second Battle of Champagne, where the French Army deployed forty-seven heavy guns per every mile, and the Battle of Arras, where the British Army deployed one heavy gun per every twenty yards (Rogers, 1975). The use of artillery during WWI not only shaped the operating environment of the Western Front, but it elevated the long-lasting importance of joint fires and joint fire support.

Joint Fires and Joint Fire Support

The joint planning process describes the deliberate system for recognizing and classifying a problem, examining the internal and external variables, constructing courses of action and selecting the optimal solution for a concept of operations (Joint Chiefs of Staff, 2020). Joint fires and joint fire support are integral to the joint planning process. They explain the systematic approach for delivering assistance through air, land, maritime, space and cyberspace to enable commanders the freedom of movement and action (Joint Chiefs of Staff, 2019). During WWI, the emergence of artillery placed a premium on the importance of command and control.

Command and Control

Command and control in the joint fires and joint fire support process involve the organization, management and synchronization of national and multinational assets and capabilities (Joint Chiefs of Staff, 2019). In 1914, at the beginning of WWI, no large-scale command and control systems were in place beyond the division level (Zabecki, 1995). However, by 1918, with a combined 8,542 batteries between the British, French and German forces, command and control of the artillery weapons was primarily the difference between victory and defeat (Zabecki, 1995). Artillery became a staple of the Western Front during the war. To enable joint commanders the freedom of movement and action throughout the operating environment, a scheme of fires is necessary.

Scheme of Fires

The scheme of fires is a critical part of the concept of operations, and it describes the coordination and synchronization of assets and capabilities across all domains, including a strategic breakdown of nonlethal and lethal capabilities (Joint Chiefs of Staff, 2019). WWI saw the usage of various artillery weapons differing in their tactical and strategic capabilities, ammunition requirements and mobility restrictions. During the Battle of Messines on the Western Front, the British Army employed 1,510 light guns and 756 heavy guns, which required ammunition dumps that took weeks to restock and often failed to keep pace with the advancements of the Infantry units that they supported (Rogers, 1975). The Battle of Cambrai highlights the importance of joint fires and joint fire support and serves as an early example of the tactical and strategic advantage of joint planning.

The Battle of Cambrai

The Battle of Cambrai represents the first-time units from the United States military were engaged in combat operations in WWI (Vergun, 2017). On November 20th, 1917, Soldiers from the United States Army's 11th, 12th and 14th Engineer Regiments began constructing railroads for the British Army, enabling the establishment of supply lines to support their numerous artillery batteries (Vergun, 2017). The Allied forces' joint planning process for fires and fire support elements was decisive throughout the war. The United States Army primarily relied on the French Army for all their artillery assets, which further deepened the criticality of the joint planning process, specifically the joint fires and joint fire support aspect (Zabecki, 1995).

With artillery, the offensive and defensive capabilities of the United States Army were greatly expanded (Zabecki, 1995). Artillery was a decisive factor in WWI, and it served as a principal element for enabling joint force commanders to shape the operating environment. Utilized by both sides, the

Artillery shells from the first day of the Battle of the Somme, 1916.

technological advancements in military weapons delivered catastrophic effects that were physical and psychological. The amassment of artillery pieces in the war represented the arrival of weapons of mass destruction onto the battlefield (Preston, 2016).

Weapons of Mass Destruction

The proliferation of artillery in WWI, specifically on the Western Front, earned it the nickname: "The Gunners War" (Rogers, 1975). In 1866, during the Austro-Prussian War, the German forces averaged 20,000 rounds of artillery per month (Zabecki, 1995). However, just five decades later, in 1918, during WWI, the German forces averaged 8 million rounds of artillery per month (Zabecki, 1995). The exponential growth in the fielding, implementation and deployment of artillery during that time required dramatic changes and overhauls to the joint fires and fire support concepts utilized by the German, French, Russian and British forces.

Large-Scale Combat Operations (LSCO) may require a variety of joint fires assets and capabilities—including artillery, air support, maritime, electronic and cyberspace (Joint Chiefs of Staff, 2019). While WWI primarily focused on artillery and air support, the joint force commander had a wide range of fires effects from field guns, howitzers, mortars, naval artillery and airships (Preston, 2016). Today, weapons of mass destruction are an essential part of the joint planning process, and their impact on the operating environment, including collateral damage, must be considered in the holistic approach to providing distinguishable, suitable, feasible, acceptable and complete courses of action (Joint Chiefs of Staff, 2019).

WWI marked the dawn of the era of weapons of mass destruction, and the advancements in military weapons forever changed the rules of war (Preston, 2016). The devasting impact and brutality of the emergence of artillery was only as good as the planning, location and manning that supported it. History often serves as a precursor for future actions and events, and the joint planning process on the Western Front of WWI emphasizes the importance of joint fires and joint fire support.

Implications as a Future Sergeant Major

Joint fires and joint fire support are an integral part of the joint planning process, and as a future Sergeant Major, developing a comprehensive understanding of the command and control and the scheme of fires aspects can significantly enhance the quality of advisement to the commander. The joint planning process requires various perspectives, experience and expertise to provide rigorous, well-informed, feasible courses of action (Joint Chiefs of Staff, 2020). The integration of joint fires and joint fire support throughout WWI emphasized that the technological advancements in artillery weaponry required an evolution of joint planning to ensure effectiveness and efficiency and ultimately provide commanders with the freedom of movement and action (Preston, 2016). Military technological advancements are inevitable, and they will require experienced leaders to deliberately plan for and against their integration, support, deployment and execution. The future Sergeants Major of the Army of 2030 and 2040 must comprehensively understand the joint planning environment.

Conclusion

The use of artillery during WWI not only shaped the operating environment of the Western Front, but it elevated the long-lasting importance of joint fires and joint fire support. WWI introduced weapons of mass destruction and forever changed the landscape of the battlefield. As a future Sergeant Major, developing a methodical comprehension of joint fires and joint fire support can significantly improve the joint planning process for future combat engagements.

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