

Contracting and Acquisition DURING WORLD WAR I

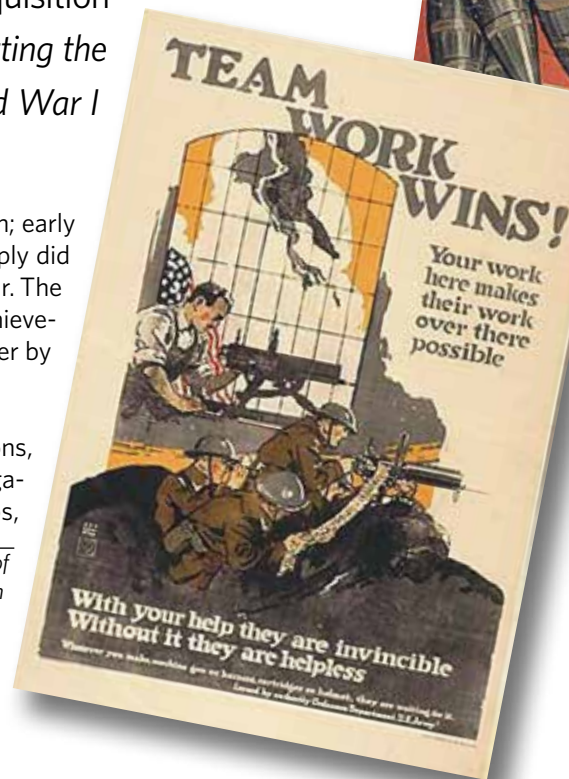
Leo P. Hirrel, Ph.D.

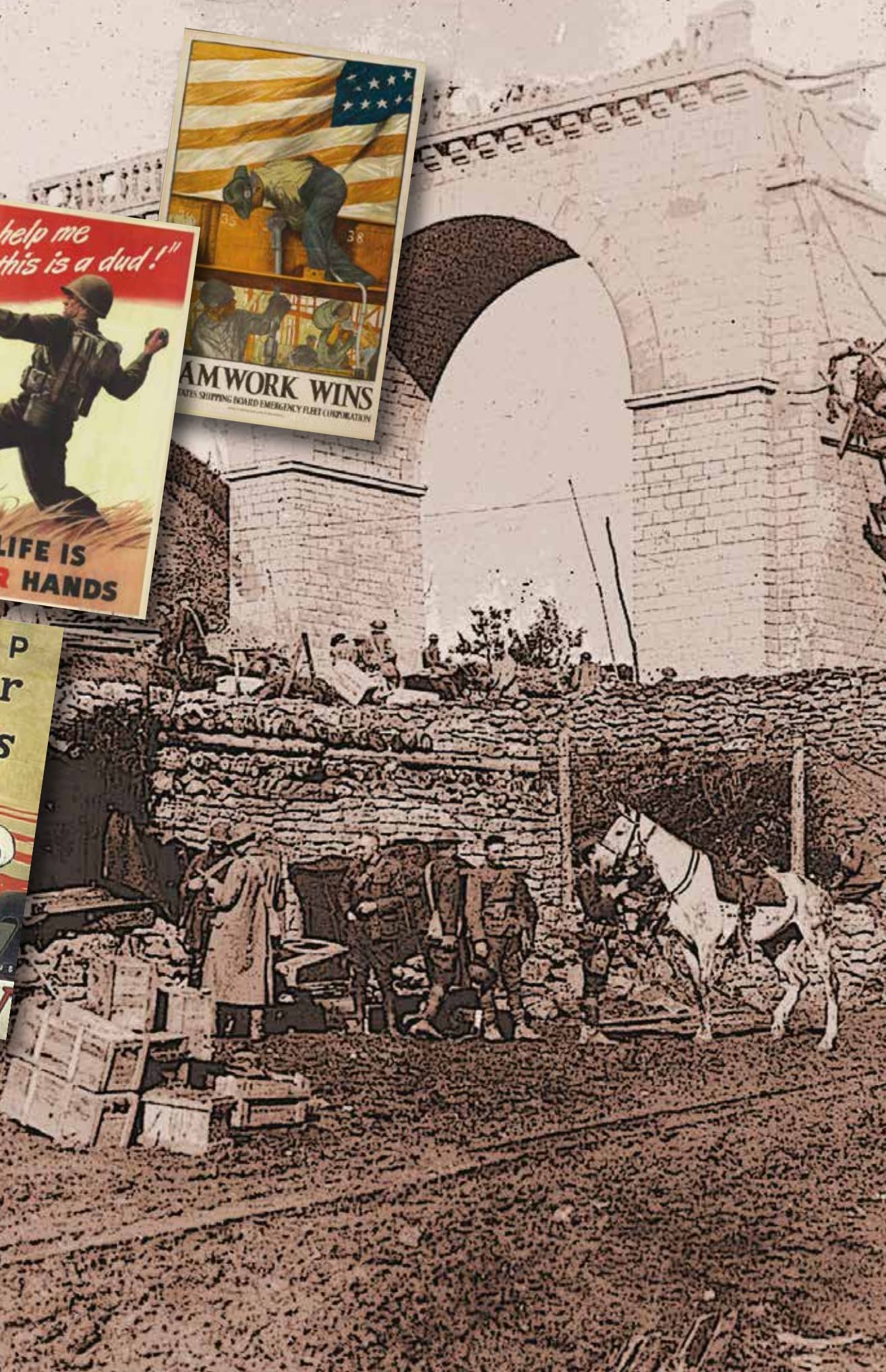
World War I marked the transition of the United States Army from military insignificance into a premier fighting force. Much has been written about the immense changes within the Army's operational side; yet the lessons learned regarding contracting and acquisition were equally important. Any global power requires the institutional culture to translate industrial resources into munitions, services and the other means of waging war. In reviewing the war's centennial anniversary, it is useful to consider its contracting and acquisition side. This article has been derived from my book *Supporting the Doughboys: US Army Logistics and Personnel During World War I* (Fort Leavenworth: Combat Studies Institute 2017).

Success in acquisition came slowly and was plagued by delays and confusion; early mistakes had implications that lasted beyond the Armistice. The nation simply did not have the bureaucratic culture, or flexibility, to obtain the instruments of war. The story of contracting and acquisition for World War I is one of remarkable achievements to solve problems that might have been mitigated or avoided altogether by better preparation.

America entered the war with a dysfunctional bureaucracy. Logistical functions, including acquisition, were managed by a collection of semi-autonomous organizations collectively termed the supply bureaus. The Quartermaster Corps,

Hirrel is the former historian of the U.S. Army Quartermaster School and command historian of the U.S. Joint Forces Command. He retired with the rank of lieutenant colonel after 28 years with the U.S. Army Reserve, specializing in logistics. He holds a Ph.D. and a master's degree in History from the University of Virginia, a bachelor's degree in History from Loyola College in Baltimore and a Master of Library Science from The Catholic University of America.





which managed general supplies or services, and the Ordnance Department, which managed weapons systems, were the two most important bureaus; but the Corps of Engineers, Signal Corps, and Medical Department held materiel responsibilities in addition to their operational duties. (During the war, the Air Service and the Chemical Warfare Service became independent agencies, with their own logistical authorities.) Although the system worked well enough in peacetime, it lacked any mechanism for creating a unified wartime effort. Over time, the pre-war bureaus developed a culture that valued individual performance over the national effort. They competed for scarce resources, driving up prices in the process. In short, decades of atrophy produced a War Department better suited for peace.



An ordnance production line in World War I.

Photos from the U.S. Army Signal Corps.

Contracts were advertised in advance and awarded on a low bid, fixed price. The success of this system depended upon predictable conditions, when potential contractors were familiar with government requirements, and raw materials were available at predictable prices. The system did not work well in an emergency environment, where the requirements were unpredictable, and contractors had to produce immediately.

Despite these problems, most Americans expected efficient mobilization; and the confusion surrounding industrial mobilization shocked the nation. Lack of planning for installation construction delayed the training program for new soldiers until the onset of winter. Even though the Quartermaster General recognized the potential for a shortage of wool, laws about market speculation prevented the government from acquiring wool while it was available, thus leaving the soldiers without coats and blankets during that extremely cold winter. An insufficient number of shipyards delayed an aggressive ship construction program until nearly the end of the war. Charges of excessive profits by industry compounded the difficulties.

Difficulties with ordnance production best illustrate the results of the decades of neglect. Prior to the war, the Ordnance Department relied upon its network of government arsenals to produce weapons, ammunition and related items. Without government contracts, American industries had no reason to create the jigs, dies and other tools necessary for mass production. In 1915 and 1916, Congress rejected recommendations by the Chief of Ordnance to accept higher prices from industry to prepare for an emergency surge in requirements. When the United States entered the war, American industry could not produce the necessary weapons, forcing the Army

to rely upon France and Britain for artillery, tanks, aircraft and most ammunition. Despite the superiority of the Springfield rifle, American soldiers used the British Enfield rifle because American companies already had British contracts and therefore had the tools for mass production. Efforts to adopt French designs for artillery and other weapons proved unexpectedly tricky because of the difficulties of converting metric specifications and the French methods of looser tolerances with final adjustments made by the mechanics.

By December 1917, problems with production and transportation reached a crisis level leading to significant government reorganization. Although President Woodrow Wilson had statutory powers to allocate resources, he preferred to rely upon voluntary cooperation from industry and the various government agencies. Unsurprisingly, both government bureaus and war industries competed against each other for scarce resources. The resulting chaos threatened to cripple the national mobilization. Consequently, Wilson asserted more authority by seizing control over the railroads; and initiating government reorganizations. Bernard Baruch's appointment to the War Industries Board signaled a more aggressive management of priorities.

Despite the late start, American industry, working in conjunction with the Army and Navy, made some impressive accomplishments, often with groundbreaking techniques. Shipyards developed mass production techniques so that a single shipyard at Hog Island, Pennsylvania, launched more ships in October 1918 than the entire United States did in 1916. New arrangements for government-owned, contractor-operated ammunition factories were just starting to produce impressive

numbers by the end of the war. Some innovations included standardized construction procedures at new shipyards, or coating cotton fabric for aircraft to replace scarce linens. By autumn 1918, the United States was showing indications of the munitions juggernaut it would become in later decades.

In Europe, contracting and acquisition became a vital component of the logistical support to the American Expeditionary Forces (AEF). Given the constant shortages of cargo ships, the United States relied heavily upon local goods and labor to supplement the support available from home. In addition, the United States relied upon France and Britain to compensate for the lag in retooling American industry for munitions production.

As the War Department bureaus became operational in Europe, they began to function with their customary independence by competing against each other, thus driving up prices. The result not only hurt the Americans but raised concerns about inflation among the French. In August 1917, a board appointed to study the problem recommended no action because of the independence granted to the bureaus under existing laws. Not satisfied with the recommendation, the American commander General John J. Pershing created a General Purchasing Board, with his old friend (and future Vice President) Charles Dawes as the General Purchasing Agent. The board reviewed all requirements to search for duplicate requirements and to see where purchases might be consolidated to obtain the best price. As an additional precaution against inflation, a French representative reviewed all agreements and employed their government's right to requisition supplies in the event of excessive pricing. Once established, the board's responsibilities grew steadily to include such areas as labor and electrical supply. To stay within the law, the bureaus executed the contracts.

Success from the General Purchasing Board led Charles Dawes to recommend a similar approach at the coalition level. Pershing endorsed the idea and received support from the other Allied governments. In June 1918, the Military Board of Allied Supply convened its first meeting, with Dawes representing the United States. Although the board's authorities were limited by a requirement for unanimous consent and other restrictions, it proved to be an invaluable forum for coordination of logistical requirements, especially during the final battles of autumn 1918.

In addition to purchasing supplies, the U.S. Army contracted for large

numbers of European workers, for the same reasons that the American military still employs local labor. It reduced the logistical demands upon Americans. In France, however, women formed a disproportionate share of the workforce. That required compliance with French laws regulating the women's working conditions, such as paid leave when their husbands were home on furlough. French women worked in a wide variety of tasks, such as warehousing, baking, clothing repair and even manufacturing candy.

The United States also reached out to neutral nations as a means of reducing the burden on trans-Atlantic shipping. Items unavailable in France, such as food or timber, could be purchased in Europe or North Africa, and transported in shallow draft vessels. These ships could use ports not suitable for oceanic ships, which was a substantial advantage given the limited supply of deep-water facilities.

As the Allied victory approached in November 1918, acquisition systems for both the Army and Navy were functioning impressively. Building the contracting structure proved to be a matter of learning through mistakes both in America and in Europe—but the emphasis was on learning. At home, defense production began to look like the arsenal of democracy later seen in World War II. Purchases in Europe helped to meet the critical gap caused by the shipping shortages. These achievements allowed the AEF to reach its strength of approximately 2 million soldiers with thousands more arriving daily. Quite probably the prospect of endless American reinforcements played a critical role in the German decision to accept an Armistice on Allied terms.

After the Armistice, most of the wartime contracts required termination. This presented an entirely new set of problems.



Military Board of Allied Supply (Charles Dawes at front left).

Before 1917, War Department contracting was marked by a scrupulous adherence to every detail. As the pressures of the war mounted, the culture changed to carelessness. In the rush to supply, the Army contracts were executed without the proper signatures, or sometimes merely upon verbal assurances that the paperwork would follow. Shortly after the Armistice, the Comptroller of the Treasury ruled that the government could not pay for approximately \$1.5 billion worth of contracts due to some irregularity, despite any good faith

numbers in the belief that time lost on careful audits would be more damaging to the nation in the long run. This approach might have been correct, but it did little to ease the perception of grotesque defense industry profits.

In fact, the question of excessive profits became a bitter legacy of World War I. Modern scholarship has concluded that the accusations either were greatly exaggerated or unfounded. Many of the costs were attributable to the lack of planning

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by the contractor. The ruling applied in the United States and Europe, with the predictable damage to the American reputation in Europe. In May 1919, Congress resolved the issue with the Dent Act that authorized the Secretary of War to pay for the contracts on an equitable basis, provided the claims were filed by June 30 of that year.

Another problem developed from the absence of standardized clauses in the contracts until September 1918. Among other deficiencies, most contracts did not contain provisions for termination in the event of peace. In theory, any contractor could have sued for full execution of the contract; but in practice, the delays in the legal procedure would leave the business bankrupt. Therefore, it was in the interest of both parties to negotiate a settlement. In the absence of any guidance, the government developed a set of principles that included payment for capital investments plus a 10 percent profit, but not anticipatory profits. Additionally, the War Department agreed to advance payments of 75 percent of undisputed costs, and gradual termination of contracts where sudden termination might result in undue hardship to the community. In some cases, the contracts were continued to completion when considered in the best interest of the government. With all parties eager for quick resolution, the negotiations proceeded quickly.


In Europe, the Army used the members of the General Purchasing Board to create the nucleus of a liquidation commission. Termination proceeded along the same principles as in the United States, but effect upon the French economy was not a consideration. A parallel commission considered European contracts within the United States, and the claims were balanced against each other.

Rapid resolution of the outstanding contracts required a cultural shift from monitoring every penny, to accepting rounded

that required rushed production, or else expensive capital investments for a war of uncertain duration. Much of the ammunition profits came from sales to Britain before the United States entered the war. Nevertheless, the charges persisted and received added attention in the 1930s when isolationist Sen. Gerald Nye held sensational hearings describing munitions production as the "merchants of death."

Other military and political leaders gave serious consideration to the lessons of World War I. Creation of the Army Industrial College to study the problems of industrial mobilization was one of the visible legacies of the war. Today this is the Dwight D. Eisenhower School for National Security and Resource Strategy and is part of the National Defense University (formerly the Industrial College of the Armed Forces). In August 1940, President Franklin D. Roosevelt ordered a partial mobilization of national resources to reduce the chaos created by waiting until a declaration of war. He quickly grasped the concept for a War Production Board to prioritize resources and industrial production. The World War I experiences greatly assisted the United States in fighting the next war.

World War I transformed the U.S. Army from an insignificant force into a world-class power. The maturation of contracting and acquisition was essential part of the process. The process was rough and full of learning through mistakes; but ultimately successful.

Supporting the Doughboys is available free of charge at the following website: <http://www.armyupress.army.mil/Books/CSI-Press-Publications/World-War-I/>. (Or just enter the title in your browser for an Internet search.) 

The author can be contacted at leohirrel@aol.com.