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MASTER OF MILITARY STUDIES

TITLE:

BRITISH LOGISTICS CHALLENGES IN THE AMERICAN REVOLUTION: HOW
LOGISTICS WAS A "CRITICAL VULNERABILITY" IN THE BRITISH EFFORT TO
ENSURE VICTORY

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DISCLAIMER

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Preface

This research topic was chosen as it directly relates to my professional career with the Central Intelligence Agency as a logistics officer. I chose the American Revolution as it is a topic of personal interest and significant importance to understanding the historical difficulties with supply chain management. My research was based on internet blogs, magazine articles, well known literature and class room discussions, Dr. Gordon's Operational Art course and American Revolution elective.

I need to acknowledge the significant support provided by Dr. Gordon. His advice and guidance provided me the ability to locate the literature necessary to research and write this paper. His historical insights offered me the opportunity to further study a topic of personal interest and better understand my role as a operational logistics officer at the Central Intelligence Agency.

I would also like to acknowledge the faculty at the Marine Corps University. The military advisors, professors, and panel discussions provided me a wealth of knowledge to grow professionally and as a leader. Dr. Cobb taught me the importance of cultural differences when planning operations. I greatly appreciate his patience as I learned how to interject my thoughts into classroom discussions.

I want to personally thank my wife and daughter for their support. I could have never succeeded in completing the MMS without their tireless support ensuring I had the time to read, research and write this paper. This has been an amazing year that I will never forget.

Executive Summary

Title: British Logistics Challenges in the American Revolution: How logistics was a "critical vulnerability" in the British effort to ensure victory.

Author: Mr. Carter James Potts, Interagency Student

Thesis: This paper will argue that the British failure to secure a solid logistical support system played a significant cause in British operational failures and thus, ultimately, the success of the American Revolution.

Discussion: From 1775 - 1783, the British government and military leadership performed a failed isolation campaign against the American colonies. The British operational design-- that is the use of military force to achieve strategic goals -- was to defeat rebel forces in the field thereby eliminating American revolutionary passion, while raising loyalist support to their side. Historical literature demonstrates the British strategy was sound; however, their unity of effort, military numerical inferiority, inability to adapt to the American guerrilla tactics, and reliance on a logistical supply line three thousand miles away via sea led to the British defeat. This paper will concentrate on the British reliance on an inadequate supply line via sea from England and their inability to secure loyalist support, which the British government intended to utilize to augment their supply deficiencies. The significant length of time and unreliability of supplying the British military during the revolution drained valuable resources, which led the British to forage for supplies within the colonies. The American Continental army, militia and guerrilla forces, lead by commanders such as Daniel Morgan, used the British foraging strategy to attrite British military personnel thru strategically striking these less defended foraging parties. As the British were unable to adequately supply their forces in the American colonial North, they adjusted their strategy to the American South. The British mistakenly judged the American South as a considerable source for loyalist support and supplies for its military forces. The Southern campaign led to operational success against American colonial forces; however, failed to inspire the desired loyalist support or accumulate adequate supplies. As soon as the French entered the war, the British had to divide resources and supplies elsewhere. The British General Cornwallis decided to chase the American General Nathanael Greene to Virginia. And in order to catch Greene, Cornwallis destroyed his supplies to increase the speed of his forces. Cornwallis's exhausted, starved and overwhelmed forces were eventually defeated at Yorktown. This marked the beginning of the end of British operations in the American colonies.

Conclusion: The British military failed to defeat the American colonists in various methods during the American Revolution, but clearly failed in the area of overcoming logistical deficiencies. As the main supply line depended on a lengthy and unreliable sea voyage from England, British forces found themselves with limited logistical options. The American colonies never generated the Loyalist numbers necessary to augment British forces nor provide the essential logistical supplies needed to sustain operations. The British government and military leadership lost the American Revolution due to its inability to sustain military operations.

The British military faced numerous challenges during the American Revolution, in particular the methods used to suppress the rebels and maintain governance control of the American colonies. Historians have judged more than a few reasons why the British failed to win the American Revolution, such as a lack of unity of command, flawed strategy to win and utilize Loyalist support, inability to adapt to the American form of combat (a joint combination of Continental forces and guerrilla or insurgency tactics), and to suppress the colonists' passion to become independent of British rule. These are all important factors to explain the ultimate British loss of the American colonies. This paper will concentrate on the argument that the British failure to secure a solid logistics foundation led to their defeat in the American Revolution.

Before the paper tackles the various British logistical failures, it will first define logistics. "Logistics is the science of planning and carrying out the movement and maintenance of forces. Logistics provides the resources of combat power, positions those resources on the battlefield, and sustains them throughout the execution of operations."ⁱ Based on this definition, it is easy to understand the importance of logistics, as the British defeat expressed, to the final outcome of military operations. If the British were unable to transport personnel, military equipment, such as ammunition, cannons, and life support, such as food and water, then how could they expect to sustain operations indefinitely?

Logistics by itself cannot win wars, but it has been the major contributing factor in losing wars. At the strategic level, the inability of a nation to generate sufficient forces, move them to the front, and support them once engaged invariably leads to deterioration of the forces' material condition, morale, and tactical capabilityⁱⁱ

Logistics was a "critical vulnerability" in which the American forces were able to damage the British's ability to amass combat fire power and sustain operations during key engagements.

A critical vulnerability is "a vulnerability that permits the destruction of a capability without which the enemy cannot function effectively."ⁱⁱⁱ The best way to describe how logistics operations failed the British forces, is to explain a critical vulnerability impacting their combat logistics support. A number of factors negatively impacted the British supply lines. These were the American strategy during the war (War of Posts or also know as a war of attrition); 2) distance of the main supply depot from Britain to the American theatre; 3) dependence on Loyalists' support; and, 4) a key turning point, France and Spain entering the conflict.

The British began the war with a sound strategy to conduct operations. The plans drawn up in England to suppress the rebellion in 1776 "were based on the strangulation of New England. While the navy blockaded New England's eastern and southern coasts, New York City and Rhode Island were to be taken. Once secured, NY was to be the launching pad for a drive up the Hudson River to join hands with the regulars coming down from Canada. Encircled, New England at last would be invaded from several points simultaneously."^{iv} These plans provided a solid foundation to utilize the American river networks to sustain military operations.

The largest concern with these plans was the difference between the British political and military opinion of the American Revolution's center of gravity. A center of gravity is the sole source of an opponent's will to fight or the one area that brings your enemy to the table to surrender. The British Government desired the strangulation of the revolutionaries' perceived source of power (New England), whereas the British military perceived the sole source of American power as being the American army in the field and its commanding general George Washington.

Thus, the British generals desired a quick, decisive victory over the American army to curb the American revolutionaries' passion to continue the Rebellion. "Most ministers concurred with the King, who allowed that, when once the rebels have felt a smart blow, they will submit."^v If the British could defeat the American army on the field of battle, then the American ability to recruit additional troops to conduct military operations would end. Now numerous arguments could be made that the American militia played a larger role than given credit, for which this author concurs; however, the British had little regard for local militia in the beginning of the Rebellion. The British believed this was a conventional war between two opposing armies. With that said, George Washington decided not to conduct this war by the British war planning book.

"Washington started the war ready to fight decisive battles, only to be disappointed with early defeats, which led him to advise Congress that it was necessary to wage what he called a War of Posts. The Continentals must remain on the defensive, he said, adding that we should on all occasions avoid a general action or put anything to the risk unless compelled by a necessity into which we ought to never be drawn. The idea of a grand and decisive battle had given way to the notion of a war of attrition."^{vi} The American commanding general decided to conduct an irregular warfare ensuring that the British could not gain the advantage by choosing a field of battle providing them their desired decisive engagement. "Washington had learned that five hundred Indians could down five thousand English soldiers, he once said, and he had come to admire the Indians' ability to use the environment to great advantage."^{vii} As many of the commanding generals and militia had similar experiences to their Commander and Chief, the War of Posts strategy was adopted. The Americans realized early that the British had numerical superiority and tactical maneuverability through the British navy. Until the Americans could meet

the British in a conventional battle, they would need to attrite the British combat power; military numerical superiority and supplies.

This new strategy is significant as it draws the war out longer than the British had anticipated. The British prepared for a quick end to the Rebellion and thus amassed a limited number of forces and supplies for a long war. It is this factor which directs British leaders towards failed strategies building a combat service support system based upon utilizing resources 3,000 miles away via sea from Great Britain, in addition to depending on Loyalist support locally. The Americans harass these dependences, or critical vulnerabilities, efficiently throughout the war.

The British were not completely unaware of these challenges. "Several members of the army administration expressed skepticism that the war could be won. They warned that the Americans could replace their losses more easily than the British, and they raised troubling concerns about the difficulty of waging a war so far from home. They pointed especially to the stupendous demands that would be faced in supplying a large army three thousand miles away. Any two of the larger colonies nearly equivalent in size to England."^{viii} As these army administrators were obviously ignored, these challenges quickly impacted military operations. The British government, King, and predominant military leaders believed the Americans could be defeated before lack of supplies became an issue. As the war progressed, the faith that the British army could win without a viable supply chain slowed down offensive operations, allowing the Americans to strengthen their forces, while demoralizing the British army through conducting useless foraging missions.

A key issue is the difficulties supplying an army/campaign from a significant distance from the main supply hub, England and Ireland. "The problems of supplying the army from Great Britain were great, and the most serious challenge was that of providing food over such a tremendous distance."^{ix} Logistics operations during the 1700s were tested over such a great distance due to unforeseen weather at sea, available packaging materials and techniques, and zero availability of preservatives/temperature controlled storage. As the "packaging was often very poor, barrels routinely didn't survive the journey, and if they did, they were often no longer strong enough to be moved onto wagons and shipped overland."^x As an example, "In one convoy in 1775, five ships departed with 7,000 barrels of flour; on arrival in Boston, 5,000 of those barrels were condemned. So instead of 12,000 men having bread for five and half months, that particular shipment was consumed in only 47 days. In 1778 alone, flour deficiencies amounted to over 640,000 pounds, which would have been enough to feed 20,000 soldiers for over a month."^{xi} This example provides a bleak picture of how undependable supplying food for the British army was from England. It was impossible for the British to keep their army fed and thus, operationally fit with high morale, when their main supply chain was ineffective and unreliable.

Another example is from "October 1775, when a commercial firm, Mure, Son and Atkinson, was contracted to furnish enough fresh food to fill thirty six ships. Only thirteen of the thirty six ships eventually made it to Boston, and very little of their cargoes survived. Out of 856 horses shipped, only 532 survived the voyage."^{xii} Reliance on England for food and war materials was extremely damaging to the British army's morale and thus its ability to conduct offensive operations. With these early failures, it is difficult to understand why the British would not have adopted a local strategy to counter the break in their supply chain from home. "Waging war against a hostile citizenry compelled the British army to rely to a striking degree on

provisions sent from overseas. Six years into the war the British were still sending out approximately four hundred ships laden with supplies for its military forces in America. Year in and year out, many supply ships arrived too late for the summer campaigns. Others never arrived, as many fell prey to storms and privateers, or after 1778 - 1779 to the French and Spanish."^{xiii}

However, another serious challenge of supplying the war effort via sea from England was concerning the transportation of troops. Recalling our earlier logistics definition of carrying out the movement of forces, the voyage from England was just as dangerous for military personnel as it was food and supplies. "The British soldiers, unlike their enemy, also reached the war zone only after a lengthy ocean crossing that not infrequently left a large percentage of the voyagers ill and incapacitated for weeks."^{xiv} As George Washington was able to call upon local militia to augment his forces, which were not only fresh troops, but would leave after engagements, thus not requiring a large amount of supplies to sustain that large a force, he possessed a logistical tactical advantage. Whereas the British depended on fresh troops, mercenaries from Germany and fresh troops from Great Britain, to augment their losses from battles and disease. If British soldiers arrived from England sick, than they were unfit for operations (offensive or defensive). As the British combat service support providing transportation left troops unable to fight for weeks at a time, it is easy to comprehend the reasons why the British were unable to act aggressively. And transportation via sea for the British troops continued even within the American area of operations.

The great ocean between England and the American colonies was dangerous; however, the coast of the American colonies proved to be just as dangerous for transporting troops and supplies. One good example confirming this point was General Howe's campaign against

Philadelphia. "Howe's voyage was a nightmare. It consumed thirty-two days, four times what had been anticipated, and twice as long as an overland march would have been required. Men and horses alike suffered terribly from the stifling heat in their fetid, noisy, airless compartments. The soldiers endured a steady diet of bread, which is spoiled or full of worms and stinking water with all the impurities mixed in. Twenty-seven men and one hundred seventy horses perished in the course of the voyage, and many of the mounts of the sole cavalry unit that Howe had brought went lame. Another one hundred fifty horses, weak and emaciated, thus useless for their military duties, were destroyed."^{xv} Logistics operations cannot operate efficiently without reliable transportation. If forces are unable to reach the battlefield fit and ready for combat, than logistics has failed in its mission. The fact that the voyage took longer than anticipated, meant that critical supplies, such as potable water and food, were depleted prior to arrival at the desired location. As we have discussed this war was one of attrition; the loss of soldiers and horses left General Howe and the British army with a void it would need to quickly refill to conduct offensive operations.

Another example of poor transportation via sea is General Clinton's first voyage during his Southern campaign. "On 26 December Clinton accordingly set out for Charleston with some 7600 men aboard ninety transports. Off the perilous Outer Banks of North Carolina, the winter winds buffeted the ships whose masts crashed down upon decks, ripping the sails to shreds. Two frigates foundered; the Anna was blown off course, the transport George sank beneath the waves. It was over a month before Clinton reached John's Island and by then nine transports had been lost, and seven of them destroyed by ice."^{xvi} Once again, the British are plagued with inadequate, unreliable transportation that took valuable resources to start the Southern campaign. It is amazing that the British were able to overcome these immediate deficiencies with life support supplies, military equipment and overall morale of their forces. However, the attrition of these

resources will hamper their ability to sustain operations. Clinton could ill afford these losses as the main British effort was shifting away from the American colonies and towards France and Spain.

The two major turning points impacting the British's ability to sustain military operations during the American Revolution are the Battle of Saratoga and France and Spain entering the war. These turning points show a profound negative impact on British logistics policies and their ability to sustain operations. It is these turning points which best validates logistics as a critical vulnerability through their poor management of transportation, foraging for supplies and dependence on Loyalist to augment logistics deficiencies.

The battle of Saratoga was a significant turning point in the war. The Americans suffered defeat after defeat leading towards low morale among the American forces, while instilling resolve among the British government and commanding Generals. The American government was working diligently towards an alliance with France; which would provide renewed resources for the cause of Independence. The American government and commanding generals knew without outside assistance, their ability to sustain an army on the field of battle was hopeless. In short, the Americans needed a victory to show Britain's rival powers that they could defeat them, thus breaking away from the British crown.

The British lost the battle of Saratoga due to serious mistakes in maneuver, command and control deficiencies and communication; however, this paper will review the mistakes made concerning their combat service support. "General Burgoyne had expected to have at his disposal at least twelve thousand soldiers with a generous number of Canadian volunteers. In fact, when all his forces were assembled at Cumberland Point, on the shores of Lake Champlain,

there were no more than three British and three German brigades, comprising about eight thousand men in all. In addition, a mere four hundred Indians".^{xvii} As always, the British were depending on local support to augment their forces as the American Continental army did with militia. The British were reliant on Loyalist support to sustain their campaigns. They depended on local knowledge of the geographical area and, thus, Loyalists' farms to supplement their food/water during a long military operation. Now remember the failures that the Americans had earlier trying to take Canada. "The six-week ordeal (originally estimated as three) saw men stumble along formidable portages, struggle against swollen streams, wade snow-covered swamps, and, when provisions gave out, ate their dogs and made gruel from shaving soap." ^{xviii} The terrain and surrounding area didn't provide much in the area of forging for food and water to help sustain their operation. And to "exacerbate the situation, Burgoyne decided to permit what must have seemed to be half the population of Canada to accompany the army. Wives, girlfriends, and mistresses together with their copious wardrobes came along, as did children, pets, and cutlers with goods to sell to those with cash. He commandeered 30 wagons to convoy his personal creature comforts."^{xix} These are not modern roads meandering through small rural towns. Benedict Arnold lost good men attempting to get into Canada; so, how did Burgoyne expect to conduct a military operation in the Canadian, Upper New York valley with wives, children and unreliable, uncontrollable Indian forces? How did he expect to sustain his operation? The underlying reason that Burgoyne continued his operation with less than desired military personnel and supplies was assumed support from General Howe.

"Burgoyne's plan was designed to isolate New England from the other colonies. Burgoyne was to lead his army down from Canada to Albany where he would effect a junction with General Howe. Lieutenant-Colonel Barry St. Leger was to make a diversion with a much

smaller force of about seventeen hundred men, half of them Indians, to Albany via the Mohawk river. Howe was to cross the Delaware into Pennsylvania, to strike at the heart of revolutionary resistance, Philadelphia, then move towards Albany."^{xx} Now what part of this plan sounds feasible from a combat service perspective? As discussed earlier, the joint British and Canadian army is moving down from Canada with minimal supplies depending on other military operations going as planned to sustain their operations. And Burgoyne admitted as such when he advised, "he would have at some point to cross to the west side of the Hudson river, which would sever his ties to his supply line."^{xxi} This provides a clear indication that Burgoyne was depending on Howe to reinforce his army with not only military personnel, but supplies as well. As communication and strong willed characteristics generally don't match well, Burgoyne plans to depend on a General, who had other plans, was devastating. With that said, Howe had his own supply line concerns before he could help Burgoyne, had he even chosen to do so, in Philadelphia.

After Howe took Philadelphia, he immediately needed to address his "logistical needs, which required that he first clear the Delaware river approach to Philadelphia of three American Forts, multiple chevaux-de-frieze, and an American flotilla consisting of a frigate, brig, schooner, row galleys, floating batteries, and numerous fire ships and fire rafts."^{xxii} Howe understood that he needed to address his supply line before engaging George Washington or assisting Burgoyne. As this example shows, Burgoyne never should have depended on another military operation's supply line to sustain his operation. And Burgoyne's road to Albany was not easy either.

The American forces retreating from Burgoyne laid an additional foundation to deplete his sparse supplies. "In the American retreat from Skenesborough to Fort Anne and from Fort

Anne to Fort Edward, they had wielded their axes with astonishing vigor and felled hundreds of trees across the road, which the British would have to transport their ammunition and stores. One British officer stated, we were obliged to wait for some time until the roads were cleared, a week after entering Skenesborough. As well as dragging away trees, the men had to work night and day in building wagons, and in constructing over forty bridges and causeways across creeks and marshes beneath which the road disappeared with exasperating frequency".^{xxiii} When an army doesn't plan for contingencies, especially supplies, it is easy to grasp that the British forces are now hungry, exhausted and demoralized after marching through the wilderness finding no food and only American hospitality.

Without assistance from British forces in theatre, Burgoyne was finished. His forces were exhausted and demoralized. When a courier arrived to Howe in Philadelphia, he described "the slow erosion of Burgoyne's army and reported that it was cut off from its supply base. Burgoyne was outnumbered by nearly three to one, as the British commander possessed 6,617 men, while Gates had 11,469 with him and an additional 8,000 under arms in the sector."^{xxiv} Burgoyne had no hope of combating numerical superiority without essential food and water. And Burgoyne had his own opinion for his defeat. In a letter that he sent to the British American Secretary Germain, "the bulk of the country is undoubtedly with the Congress. Upper NY and Vermont abounds in the most active and Rebellious of peoples. Awaiting him was an American army that was well supplied by France and not only superior to mine, but its commander could have as many militia as he pleases."^{xxv} Burgoyne hints at two items that signals the reasons for his failure; supplies and militia. He felt he lost Saratoga not because of his Generalship, but because the British government and supporting British Generals failed to provide him equal supplies and men. A lot can be said for his opinion on this matter. A complete lack of command and control within the

American area of operations doomed Burgoyne; however, his complete disregard for supplies for his troops and desire for flamboyance with wives, mistresses or potential witnesses to his triumphant success played a significant role as well.

Saratoga was a turning point. It provided the American people an inspiration to draw upon that the British could be defeated. But most importantly, it provided the proof of Americans' resolve to sever ties with England, which France required before entering the war. "On Saturday night, May 2, 1778, the French treaties reached Philadelphia. Richard Henry Lee stated that Great Britain has its choice now of madness, or meanness. She will not war with the house of Bourbon and North America at the same time."^{xxvi} And Great Britain decided on a path to meanness (and madness). Attempting to supply one war is difficult enough, but to supply multiple wars is extremely difficult. England didn't have the resources necessary to combat the American Rebellion; so, what led them to believe they could support war efforts at home, Americas, West Indies and elsewhere is truly remarkable or as Mr. Henry Lee described, madness.

The British government had to change their force structure to maneuver against multiple enemies within multiple theatres. As the British would have less resources to transport essential supplies to America, the government once again looked to the Loyalist to sustain them; however, the shift was being moved to the America South. "Charles Jenkinson, the British Undersecretary in the Treasury, was a proponent of giving up New England. He believed that peace with New England once again would be an excellent market for British goods, but as the region largely turned out was produced in England, its exports were immaterial. The South was a different matter altogether. Its retention was crucial, as it produced such vital cash crops as tobacco, rice, indigo, and sea island cotton, and its naval stores were crucial to ship construction and maritime

industries."^{xxvii} Since forging had caused problems in New England, while British forces depleted available resources searching the countryside for George Washington's elusive army, the British decided this was a losing strategy. The British decided to look elsewhere. And as the British believed the South was full of Loyalists and abundant farmland in order to sustain its army and horses - it was time to shift operational strategy to the South. The American congress was all too aware that this idea held significant importance as well.

If the South could be used to sustain the British army, than it could be used to sustain the American Continental army as well. Southern Congressmen stressed, "the enemy have at length discovered our weak part. Not only would Britain's logistical woes be alleviated by the capture of every grain of rice and corn, and all the cattle, horses, and other live stock, but the greatest source of danger is the accession of strength they will peacefully receive from black inhabitants."^{xxviii} Southern colonist feared the loss of property, which included black slaves, which if armed, could act as militia, and thus tipping numerical superiority back in favor of the depleted British forces. Now that the British government had decided to move the war South, it was time to maneuver forces into place as well as and into other theaters of operation to meet French and Spanish threats.

It was up to the commanding general in the Americas to deliver the new British strategy of taking the American South. "Sir Henry Clinton arrived in Philadelphia on 8 May 1778. His orders, framed in the light of the Americans' new alliance with France, were to withdraw troops to New York, and then, if necessary, to Canada, leaving garrisons at Rhode Island and Halifax. At the same time he was to embark five thousand men for an attack on St. Lucia, one of the most important French harbors in the West Indies, another three thousand men for the coast of Florida, and smaller detachments for Bermuda and the Bahamas."^{xxix} The Americans' owe their

independence to the decision of the French and Spanish to enter the war, which is largely due to the amount of resources the British needed to combat European navies elsewhere. The new plan called for abandonment of Philadelphia and movement to NY, where the British could maneuver easier towards the South, while giving up a substantial amount of Regular British troops and valuable officers. As George Washington's strategy was a "war of posts" or attrition, the numbers were shifting towards his favor. And the American irregular warfare tactics, conducted by commanders such as Daniel Morgan, was going to damage the British strategy of sustaining their army in the American South as well.

As the British were depending on Loyalist support and a renewed ability to forage for their army, the irregular warfare utilized by the Americans was instrumental in deteriorating the British's ability to sustain its forces. There were "three partisan leaders responsible for the irregular warfare tactics in the South, who were Thomas Sumter, Francis Marion and Andrew Pickens".^{xxx} These unorthodox leaders lead their volunteers on numerous raids that hampered the British supply lines and foraging expeditions. And they had a dramatic impact. First, and foremost, it kept Loyalist from joining forces completely with the British, and secondly, caused the British to use more resources than available to gather supplies. As an example, "In August, Sumter's men knocked over a supply convoy en route from Ninety-six to the Waxhaws, capturing fifty wagons filled with booty and two hundred fifty prisoners. Merely the knowledge of the guerrilla's existence hamstrung the British, as it was forced to draw away units from other endeavors to protect the supply lines."^{xxxi} The British relied on supplies from the interior of the South to support its coastal forts. As it has been expressed that supplying the army from its main supply hub in Ireland was pointless, the British found it essential to gather supplies from surrounding farms and town stores. This left the British further stretched. They would require

small garrisons throughout the South to sustain their supply and communication lines. "The problems involved in shipping materials from the coastal region to remote interior posts would have vexed the most capable supply officer in peacetime. With partisan bands on the loose, the British faced a logistical nightmare. These guerrilla fighters were almost entirely horse soldiers".^{xxxii} These guerrilla forces were fast and elusive. The British needed to counter these forces with their own elite cavalry, which took them away from vital intelligence gathering and offensive military operations. As the British were now fighting a war of attrition, due to fighting the French and Spanish forces elsewhere, they could ill afford to leave vital military elements, such as the cavalry, exposed.

The cavalry and Loyalist forces were essential for General Cornwallis to be successful in the South. And two significant engagements change that course for him; the battle at Kings' Mountain and Cowpens. A Loyalist militia group, under the leadership of Inspector General Patrick Ferguson, was designated to assist clearing out the various partisans in South Carolina. And they had some successes; however, at Kings' Mountain, this success comes to a fateful end. "In little more than an hour it was all over, with Ferguson dead, shot off his magnificent white horse while leading a forlorn charge. More died in the next few days from the savagery of the over-the-mountain men. Wounded and those trying to surrender were shot and stabbed. A few days later nine were hanged, including three Loyalist militia officers."^{xxxiii} This quick engagement was an enormous deterrent for further Loyalist support in the South. Another constant reminder that the British forces couldn't protect those Loyalist who rallied to the King's cause. General Clinton remarked at war's end that "the decisive moment in the war had been King's Mountain as thereafter, no realistic hope existed of raising substantial numbers of Loyalists."^{xxxiv} As the British ability to sustain their operations was dependent on Loyalist

support, this key victory significantly changed the British's capabilities in the South. And these victories from partisan groups continued.

As Daniel Morgan continued to harass Cornwallis' supply lines, Lt. Col. Banastre Tarleton was tasked with stopping Morgan's successful raids. The two opposing forces finally met at the Battle of Cowpens 17 January, 1781. The battle was a clear loss to Tarleton and his cavalry. "The highlanders were either killed or surrendered, and the artillerymen died gallantly trying to hold their howitzers. Beaten, the British soon began to beg for quarter. Tarleton escaped with forty horsemen. He left behind one hundred dead, over eight hundred of his men prisoners (two hundred twenty nine with wounds), the colors of the seventh regiment, eight hundred muskets, and most of the baggage, horses, and ammunition."^{xxxv} The damages from this loss are obvious. The British could ill afford to lose valuable supplies, such as horses and ammunition. And the anger from losing these consecutive battles to back woods countrymen was all Cornwallis could take.

These engagements left General Cornwallis with a difficult decision. "To stay in the Carolinas was to fight on the defensive, which would achieve nothing, or to resume offensive operations that promised only further desultory expeditions such as he had endured to no good end for the past two fruitless months. Only through taking the upper South, he had come to believe, could the Rebellion in the lower South be suffocated."^{xxxvi} This decision will show to be his undoing; due, in large part, to his lack of supplies and providing a strong foundation to sustain his operation. Before Cornwallis departed, with a strong desire to chase Morgan and seek revenge, he changed usual British protocol. In order to pursue the much faster Morgan, he ordered "that his army should slim down, destroy baggage, including tents, and most of its wagons, and prepare to live off the country."^{xxxvii} This military operation sounds very similar to

the aspirations of Burgoyne in his Albany campaign, which ended in defeat at the Battle of Saratoga. Cornwallis had struggled to sustain his operations in the Carolinas due to logistical difficulties transporting materials into the interior forward operating bases and the extremely effective guerrilla tactics used by the partisan American forces; so, how he determined that this operation would be different is confusing. "Cornwallis confessed to feeling disappointed at the absence of Loyalist support - the Carolinians neither joined his army nor fed it willingly. Worse, they did not give him, or his successors, information about his enemy's movements. Instead Carolinians ambushed his dispatch riders, attacked his supply trains, and wiped out the Tory forces that dared to show themselves."^{xxxviii} As his statement expresses clearly, he had no assistance chasing Morgan through the Carolinas, which caused him to rethink his overall strategy. It was time to leave the Carolinas and meet the Americans in Virginia, which leads to the final battle for Cornwallis at Yorktown.

The logistical woes for Cornwallis only continued as he led his army into Yorktown. "The British at Yorktown had only some six weeks to stock their pantries. The allies held numerical and weaponry advantage in this siege."^{xxxix} The losses that Cornwallis suffered in route to Virginia shows a significant impact at Yorktown. He did meet up with additional troops; however, supplies were not enough to endure a lengthy siege without support from Clinton and the British Navy. This is where French involvement in the war demonstrates the extent of damage to Cornwallis' supply lines. As the British are surrounded at Yorktown by French and American forces, his only hope for re-supply is via sea; however, the British blockade that was so successful against American forces earlier in the war proves deadly for the British now. "A British small squadron, under leadership of Graves, was bringing siege guns and other supplies to Cornwallis. The French naval forces, under de Grasse, moved to face Graves. After the naval

battle was completed, about two hundred French sailors were casualties, while nearly three hundred British seamen were killed or wounded. And as de Grasse with a the superior fleet, a superiority that increased as the battle progressed, for another French fleet arrived, under Barras, in the midst of the encounter, Graves weighed anchor and returned home."^{xl} Now without help from land or sea, Cornwallis was truly on his own. He is completely unable to sustain his forces.

The lack of supplies from his movement North from the Carolinas, culminated from his inability to gather supplies prior to the combined French and American forces arriving, had a dramatic impact on his forces ability to fight. "Cornwallis himself lived in a kind of grotto, a rough underground cave. Still the dead and wounded piled up. Food supplies did not run out, but the army, which had eaten putrid meat and wormy biscuits at least since early September, did not fare well. Sickness brought on by bad food and water incapacitated hundreds of soldiers."^{xli} Cornwallis was defeated. His forces were incapacitated and demoralized. He was burdened by his troops and Loyalist seeking his protection. It is easy to see why he himself didn't leave when given the opportunity as "a flight would have required him to abandon his ill troops, sacrifice the Loyalists, scuttle his artillery, and turn his back on his tiny fleet, as well as its officers and sailors."^{xlii} If Cornwallis was going to save his men and the fate of the Loyalist, he needed to surrender, and thus, begin the ending of the American Revolution.

In conclusion, the British failed to secure the necessary combat service support required to win a war three thousand miles from their main base of forces and supplies, which was one factor that led to them losing the American colonies to a less experienced army, less trained, undisciplined militia, and frontiersmen. The British center of gravity was the American will to continue to fight, which centered around the American army or George Washington. When the British failed to secure a decisive victory against the American army, they moved offensive

operations to the American South. As France and Spain entered the war, England depended on Loyalist rising up in the South to augment their depleted military force and provide essential combat service support.

George Washington's war of posts strategy might have been unorthodox at the time; however, it proved to be a model to combat a superior force with guerilla tactics until the disparity changes in the insurgency's favor. As the American army was most commonly smaller in size to the British army throughout the war, it augmented itself with local militia. "Without the militia the war could not have been won. It secured the home front in nearly every state by suppressing and disarming the Loyalist in the crucial early stage of the war. Time and again militiamen augmented the Continental army."^{xliii} The militia played an integral role in defeating the British forces through attrition. The militia would fight and disperse, returning home and lessening the supply burden on the Continental army, whereas, the British found themselves attrite of fit military officers for duty and burdened with Loyalists, requiring their protection, and runaway slaves, depleting valuable resources; such as food and water.

The distance from the main supply depot proved to be a critical vulnerability to the British ability to sustain military operations. As demonstrated, these deliveries were dangerous undertakings with some ships never making their destination or when they did, the food was spoiled before delivery to the troops.

Each year each soldier in America had to be supplied with a third of a ton of food, excluding the weight of the chests and casks in which were packed the salt beef, pork and flour, the oatmeal, peas and butter, the barley and biscuits and all other comestibles which could not be obtained on the often dangerous foraging expeditions sent out in search of fodder and hay for horses.^{xliv}

These issues plague even the most advanced militaries today. The United States is fighting a global war on terrorism and even with its advanced technology still finds itself struggling to get supplies into Afghanistan. The U.S. finds itself struggling to maintain healthy relationships with regional nations to sustain its forces through bases, landing rights and providing security for supply lines. The British found many of the same issues during the American Revolution to navigate American ports, businesses and providing security for its supply lines within the American colonial interior.

The British dependence on Loyalist support critically damaged their ability to combat an irregular war. "The British mishandled the Loyalists from the start to finish. British officials were too trusting of the Loyalists' counsel, expected too much of them long after reliability had become questionable, waited too long to arm them, and often betrayed them promising protection that proved to be fleeting."^{xlv} As the war continued, the British dependency on them became significant; however, that support never materialized. The British government and commanding generals clearly misunderstood the culture of the American colonies and any numerical Loyalist superiority they believed was present, wasn't. "About five hundred thousand Americans remained loyal to Britain between 1775 and 1783, and perhaps as many as eighty thousand of them left their homes to take refuge in England, Canada, Nova Scotia, and the West Indies. Altogether the loyalists comprised about sixteen percent of the total population or a little more than nineteen percent of all white Americans."^{xlvi} As historians have demonstrated, the necessary number of Loyalist to sustain military operations were overestimated by the British and were never adequately recruited as the British military generals required.

The most significant turning point impacting the British management of their combat service support was the entrance of European powers into the war: France and Spain.

The prospect of renewed war with the French, who would certainly try to seize the West Indian sugar islands, and with their ally Spain, made a review of British strategy in America essential. It had already been reluctantly recognized in London that revolutionaries in America could not be defeated without the British army there being greatly reinforced. Since the raising of the large force which was considered essential would present insuperable difficulties, efforts on land, so it was suggested, would have to be limited to keeping footholds on the coast, and to defending Canada and the West Indies, while the war at sea was intensified. The object of the war being now changed, and the contest in America being secondary consideration, our principle object must be distressing France.^{xlvi}

Being able to sustain military operations on multiple fronts often stretches military sustainment commands even today. The United States military finds itself stretched thin supporting two wars within Iraq and Afghanistan today. It is easy to understand the full range of difficulties based on available resources in the late 1700s that Britain faced fighting a war in the colonies, West Indies and at home.

The British lost the American Revolution based on multiple factors; however, ignoring the importance of sustaining its operations in key engagements assisted in the ultimate failure to suppress the Americans. Burgoyne and Cornwallis both ignored the importance of supplies during the Saratoga and Southern campaigns, which laid the foundation for failure. Their dependence on Loyalist support and foraging off the land ignored the failures of those that tried before them. A key lesson learned from this war is the necessity of ensuring a solid sustainment plan with realistic outcomes. A significant review of available resources and gaining a clear understanding of your supply vulnerabilities are key to successful campaigns. As the famous General Napoleon once said, "A real knowledge of supply and movement factors must be the basis of every leader's plan; only then can he know how and when to take risks with those factors, and battles are won by taking risks".^{xlvi} The British took risks, but didn't appropriately

weigh those risks against their ability to sustain their forces. Without logistics, personnel and ammunition never make it to the fight, thus, losing the war.

END NOTES:

ⁱ Headquarters U.S. Marine Corps, *Logistics*, MCDP4 (Washington, DC: U.S. Marine Corps, February 21, 1997) 3.

ⁱⁱ Headquarters U.S. Marine Corps, *Logistics*, MCDP4 (Washington, DC: U.S. Marine Corps, February 21, 1997) 7.

ⁱⁱⁱ Headquarters U.S. Marine Corps, *Marine Corps Operations*, MCDP 1-0 (Washington, DC: U.S. Marine Corps, September 27, 2001) 6-11.

^{iv} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 67.

^v John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 63.

^{vi} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 137.

^{vii} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 63.

^{viii} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 63.

^{ix} John A. Tokar, Major USA, *Logistics and the British Defeat in the Revolutionary War* (<http://www.almc.army.mil/alog/sepoct99/ms409.htm>) 3.

^x John A. Tokar, Major USA, *Logistics and the British Defeat in the Revolutionary War* (<http://www.almc.army.mil/alog/sepoct99/ms409.htm>) 3.

^{xi} John A. Tokar, Major USA, *Logistics and the British Defeat in the Revolutionary War* (<http://www.almc.army.mil/alog/sepoct99/ms409.htm>) 3-4.

^{xii} John A. Tokar, Major USA, *Logistics and the British Defeat in the Revolutionary War* (<http://www.almc.army.mil/alog/sepoct99/ms409.htm>) 4.

^{xiii} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 565.

^{xiv} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 565-567.

^{xv} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 243.

^{xvi} Christopher Hibbert, *Redcoats and Rebels* (New York, NY: W.W. Norton and Company, Inc., 1990) 264.

^{xvii} Christopher Hibbert, *Redcoats and Rebels* (New York, NY: W.W. Norton and Company, Inc., 1990) 163.

^{xviii} Don Higginbotham, *The War of American Independence: Military attitudes, policies, and practice 1763 - 1789* (Boston, Massachusetts: Northeastern University Press, 1983) 110.

^{xix} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 226.

^{xx} Christopher Hibbert, *Redcoats and Rebels* (New York, NY: W.W. Norton and Company, Inc., 1990) 226.

^{xxi} Christopher Hibbert, *Redcoats and Rebels* (New York, NY: W.W. Norton and Company, Inc., 1990) 227.

^{xxii} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 256-257.

^{xxiii} Hibbert, *Redcoats and Rebels* (New York, NY: W.W. Norton and Company, Inc., 1990) 171.

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- ^{xxiv} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 237.
- ^{xxv} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 228-229.
- ^{xxvi} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 256.
- ^{xxvii} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 269.
- ^{xxviii} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 325.
- ^{xxix} Hibbert, *Redcoats and Rebels* (New York, NY: W.W. Norton and Company, Inc., 1990) 222.
- ^{xxx} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 454.
- ^{xxxi} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 457.
- ^{xxxii} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 457.
- ^{xxxiii} Robert Middlekauff, *The Glorious Cause: The American Revolution, 1763 - 1789* (New York, NY: Oxford University Press, Inc., 2005) 467 - 468.
- ^{xxxiv} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 500.
- ^{xxxv} Robert Middlekauff, *The Glorious Cause: The American Revolution, 1763 - 1789* (New York, NY: Oxford University Press, Inc., 2005) 480.
- ^{xxxvi} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 500.
- ^{xxxvii} Robert Middlekauff, *The Glorious Cause: The American Revolution, 1763 - 1789* (New York, NY: Oxford University Press, Inc., 2005) 482.
- ^{xxxviii} Robert Middlekauff, *The Glorious Cause: The American Revolution, 1763 - 1789* (New York, NY: Oxford University Press, Inc., 2005) 501.
- ^{xxxix} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 504.
- ^{xl} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 504.
- ^{xli} Robert Middlekauff, *The Glorious Cause: The American Revolution, 1763 - 1789* (New York, NY: Oxford University Press, Inc., 2005) 589.
- ^{xlii} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 504.
- ^{xliii} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 575.
- ^{xliv} Hibbert, *Redcoats and Rebels* (New York, NY: W.W. Norton and Company, Inc., 1990) 335.
- ^{xlv} John Ferling, *Almost a Miracle: The American Victory in the War of Independence* (New York, NY: Oxford University Press, Inc., 2007) 565.
- ^{xlvi} Robert Middlekauff, *The Glorious Cause: The American Revolution, 1763 - 1789* (New York, NY: Oxford University Press, Inc., 2005) 563-564.
- ^{xlvii} Hibbert, *Redcoats and Rebels* (New York, NY: W.W. Norton and Company, Inc., 1990) 209.
- ^{xlviii} Headquarters U.S. Marine Corps, *Logistics*, MCDP4 (Washington, DC: U.S. Marine Corps, February 21, 1997) 35.

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