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6. AUTHOR(S) MAJOR RODNEY J. MORGAN, USA

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) USMC Command and Staff College Marine Corps University 2076 South Street Quantico, VA 22134-5068

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On modern battlefields, the advantages of information superiority are achieved through the use of technological advances, including; global positioning systems, tactical satellite radios, unmanned aerial drones and computer networks. While doctrine for information superiority is relatively new, and was written to support modern technology, American commanders fought to achieve information superiority as early as they fought to achieve independence from Britain. Continental forces relied on intelligence, surveillance and reconnaissance, information tasks, information management, and knowledge management in order to gain an advantage over their British adversaries. They collected information through the use of human intelligence, spot reports and patrols. They used psychological operations, strategic communications, operational security, military deception and counterintelligence to control dissemination of information. To get information to right person at right time, they used information management. Finally, to promote situational understanding, they used knowledge management.

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PIERCING THE FOG OF WAR AND INFORMATION SUPERIORITY BEFORE THE INFORMATION AGE: THE AMERICAN USE OF INFORMATION IN WAR, 1776

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AUTHOR:

MAJOR RODNEY J. MORGAN

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Title: Piercing the Fog and Information Superiority before the Information Age: The American Use of Information in War, 1776

Author: Major Rodney J. Morgan, United States Army

Thesis: Information superiority, the advantage achieved by collecting, processing and disseminating information while preventing the enemy from doing the same, proved as crucial to the Continental forces of 1776 as it does to the modern American military.

Discussion: On modern battlefields, the advantages of information superiority are achieved through the use of technological advances, including: global positioning systems, tactical satellite radios, unmanned aerial drones and computer networks. While doctrine for information superiority is relatively new, and was written to support modern technology, American commanders fought to achieve information superiority as early as they fought to achieve independence from Britain. Continental forces relied on intelligence, surveillance and reconnaissance, information tasks, information management, and knowledge management in order to gain an advantage over their British adversaries. They collected information through the use of human intelligence, spot reports and patrols. They used psychological operations, strategic communications, operational security, military deception and counterintelligence to control dissemination of information. To get information to right person at right time, they used information management. Finally, to promote situational understanding, they used knowledge management.

Conclusion: The Continental forces placed great importance on gaining information superiority over the British in 1776. Although they did not have an established doctrine for the use of information, revolutionary Americans followed the principles of what would later be known as information superiority.
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THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINES CORPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

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PREFACE

The following paper is a result of my interest in both the *American Revolution*, and *information superiority*. I became interested in the American Revolution during my deployment to Baghdad from 2005-2006; while there, I read an article in *ARMOR* magazine comparing the insurgency in Iraq with the insurgency against the British in their southern campaign. The article piqued my interest, and I decided I wanted to learn as much as I could about America's first conflict. After I redeployed from Iraq, I became an Observer-Controller at the Army's National Training Center at Fort Irwin, California. While there, I worked for the Commander of Operations Group, who stressed the importance of information superiority to all rotational training brigade commanders and their staffs. When the time came to choose a topic for my MMS, my mind immediately combined the American Revolution with information superiority. This paper represents the culmination of independent research, as well as pertinent elements of CSC curriculum.

There are many I would like to thank for their assistance to me in writing this paper. I would like to thank first my wife for her patience and support in the overall process. Next, I would like to thank Dr. Paul Gelpi for convincing me to stick with this topic, and Rachel Kingcade for helping me find relevant information. I would also like to thank Dr. Eric Shibuya and LTC John Karagossian for their instruction during seminar, which led to several thoughts about where my research should go. Finally, I would like to thank Dr. John W. Gordon for his assistance as an instructor and mentor, and for keeping me on the right path.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISCLAIMER</td>
<td>i</td>
</tr>
<tr>
<td>PREFACE</td>
<td>ii</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>INTELLIGENCE, SURVEILLANCE AND RECONNAISSANCE</td>
<td>3</td>
</tr>
<tr>
<td>ARMY INFORMATION TASKS</td>
<td>7</td>
</tr>
<tr>
<td>INFORMATION MANAGEMENT</td>
<td>18</td>
</tr>
<tr>
<td>KNOWLEDGE MANAGEMENT</td>
<td>20</td>
</tr>
<tr>
<td>CONCLUSION</td>
<td>20</td>
</tr>
<tr>
<td>NOTES</td>
<td>22</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>28</td>
</tr>
</tbody>
</table>
"Information systems are everywhere, exposure to news and opinion media is pervasive. ... At every level—from the U.S. Government and its strategic communication, through joint capabilities used to exploit and degrade enemy command and control, down to small-unit leaders meeting with village leaders—information shapes the operational environment. It is a critical, and sometimes the decisive, factor in campaigns and major operations."

Army Field Manual 3-0

Information is crucial to modern American military operations. Pilots safely fly unmanned drones from Las Vegas, looking for signs of enemy movement in a war zone. Military and civilian leaders address their talking points to multiple audiences through a variety of media types, including; internet web logs, television, and radio. Infantrymen carry radios that allow them to instantly give situation updates and receive guidance. Analysts filter through terabytes of information on satellite linked servers about high pay-off targets. These pilots, infantrymen, analysts, and leaders all use available means to collect, process, or disseminate information to gain an advantage, that is information superiority, over the enemy. The planes, field radios, media and computer systems described above give specific capabilities to a commander in the modern military. The planes allow for surveillance, the media allows for influence, the field radio allows for situational awareness, and the computer system allows for information filtering. While the particular abilities of these tools are all relatively new to warfare, the functions they perform for a commander are not. American commanders throughout the ages have relied on information to decide and act wisely, including the commanders of America’s first war. With the previous statement as a guide, this paper will examine the early American information environment, and discuss how both military and civilian leaders of that period used information to fight a foreign power. The purpose of this study is to illustrate the timelessness of the modern doctrine that governs the application of information superiority.

Of the available American conflicts to discuss information superiority before the information age, the American Revolution, 1775 to 1783, is particularly useful for three reasons.
First, the combatant nations possessed the same information technology level, language, history, and culture. This peer relationship resulted in an environment without an information hegemon; in that environment, information superiority was fleeting. Second, the conflict took place between an imperial super-power and a fledgling nation. The American Rebels were forced to compensate for military weakness by harnessing the power of information. Finally, the participants on both sides of the American Revolution maintained thorough records of the conflict; the resultant wealth of information allows for detailed analysis today.

Joint Publication 3-13, *Information Operations*, defines information superiority as “the operational advantage derived from the ability to collect, process, and disseminate an uninterrupted flow of information while exploiting or denying an adversary’s ability to do the same.” Information superiority is achieved through successful application of four components. The first of these components is known as intelligence, surveillance and reconnaissance, or “ISR.” ISR is designed to help develop knowledge about an environment. The second of these components is comprised of the Army information tasks. This component is commonly referred to as “information operations” and is made up seventeen separate capabilities intended to shape the environment, eight of which are discussed in this paper. The third component is information management, the science of using information systems. The final component is knowledge management, the art of using information to increase situational understanding.

The above doctrinal terms were written in the modern age of warfare; no leader in 1776 ever discussed information superiority in the above definitions. However, with the exception of those capabilities that deal explicitly with computer systems, Continental leaders employed the current doctrinal components of information superiority as listed above. Although the importance that American commanders placed on information superiority can be found
throughout the entire conflict, this study will focus on the first full Continental campaign season. During that year, the Continental forces harnessed the full capabilities of information to materially offset the British military might. In doing so, they proved that information superiority was just as crucial to the Continental forces of 1776 as it is to the modern American military.

Intelligence, reconnaissance and surveillance make up the first component of information superiority. Effective military action requires surveillance and reconnaissance; the processed information from those efforts becomes intelligence. Lieutenant General George Washington, the commander of the Continental Army, actively sought to collect information about the disposition of British forces in the early winter months of 1776. Washington’s efforts at the beginning of the year focused on an information network made possible by the growing anti-British sentiment in Boston. For example, Washington learned from a local source in the first days of January that the British intended to sail from Boston. Upon learning this, he sent a letter to John Hancock, the President of the Continental Congress, that detailed the locations of British ships and troops. The General included that “5 Transports & 2 Bomb Vessels, with about 300 marines & Several Flat bottom’d Boats” were thought to be headed to New York. Since Washington saw New York as the key to the country, he wrote several additional letters over the next few days to warn others of the British intention, including two governors, and John Adams, and Major General Charles Lee. To Lee, Washington gave guidance to travel to New York, collect volunteers and available New Jersey militia, and establish a defense. Washington added that without action, the British might easily take New York because its citizens had a “disposition to aid and assist in the reduction of that Colony to Ministerial Tyranny.”

Washington’s collection and dissemination of intelligence in this situation gave the Americans an operational advantage. Because the British did not sail from Boston until they were forced
out on March 17th, Rebel forces had ample time to plan against an impending attack in New York.

After the British left Boston, the ability of the Rebels to maintain accurate information on the enemy decreased. The Rebel leaders still received information about British locations, but the reports often contradicted each other. Some sources purported that the British were headed to Nova Scotia, while other information suggested that they were, in fact, headed to New York. The divergence in reported British destinations strengthened Washington’s resolve to correct his new-found information deficit. He relayed his collection gaps to Josiah Quincy in a letter on March 24th. Washington wrote that he had already hired guard boats to “prevent any intercourse with the ships and the main land,” but feared that the British might still be able to land a ship anywhere and off-load “trusty soldiers, sergeants, and even commissioned officers in disguise” as spies.6 In order to prevent the British from gaining an operational advantage through their collection abilities, Washington asked Quincy to hire men to “haunt the communication between Roxbury and the different landing places nearest the shipping.”7 Regardless of his efforts, Washington still remained unsure of British intentions or locations. He wrote to Major General Philip Schuyler on April 3rd that “We have no certain account of their destination.”8 Not until the end of April did the Rebels know the whereabouts of their enemy to be Nova Scotia. On June 10th, Washington’s understanding of the enemy changed, as he reported to the President of Congress that between intelligence from a frigate from Halifax and “a thousand incidental circumstances, trivial in themselves but strong from comparison,” he expected the enemy to land at New York hourly.9 The British landed there nineteen days later.

Once the British arrived at New York, the volume of intelligence about the British increased. Some of this intelligence came from concerned citizens who sought out American
leadership to pass their observations to. For example, Brigadier General William Livingston received a letter on the fifth of July that told of "three thousand men landed at Amboy this day." Other intelligence came from British and Hessian deserters. These deserters freely gave key pieces of information about planned British troop movements. It was through deserters that the Rebels learned on July 7th that the British troops were all in good health, but would make "no attempt till Lord Howe arrives." Not all of the information collected that summer was accurate. Washington wrote on August 14th to James Bowdoin, a Congressional delegate, that intelligence from a deserter suggested that "a very few days will determine the fate" of New York. A week later, as the enemy had conducted no substantial action, the validity of intelligence had to be questioned. Washington's aide, Lieutenant Colonel Tench Tilghman, wrote on August 19th of the landed British forces that "I am certain something must be the matter or they would have attacked." Within days of Tilghman's statement, however, General Livingston informed General Washington that he had sent a spy into Staten Island. The hired gentleman gathered information about the British need for supplies and the growing Tory disaffection with their guests. Livingston's action, coupled with the decline of usable information from other sources, inspired Washington to create a human intelligence network. On the 1st of September, he directed his Generals to establish a "Channel of Information" to gain "intelligence of the enemy's designs."

Establishing a new intelligence network proved easier said than done in the New York area. Prior to Livingston's success, other generals had tried to employ spies to no avail. For example, in mid-July Brigadier General Hugh Mercer attempted to recruit an intelligence network in New York. However, as he explained to Washington, he could not find anyone "ready to undertake the business of a Spy on the island." Regardless, Washington continued to
push his subordinates to obtain “intelligence of the enemy’s motions” since “much will depend upon early intelligence, and meeting the enemy before they intrench.”17 Captain Nathan Hale of Knowlton’s Rangers answered the call and entered the world of espionage, bound to spy on the British at Long Island. However, on September 15th, the Rebels were evicted from their New York headquarters at Manhattan. The newly recruited spy moved to and entered the city now under British control. He was unable to send any usable intelligence, however, as he was quickly captured and hung on September 22nd. Fortunately, a man named Joshua Davis volunteered to spy for the Rebels, and did so with success at the end of September.

When the rebels were unable to supplement their intelligence with spies or deserters, they were forced to rely on surveillance and spot reports. Washington’s surveillance package essentially consisted of “constant lookouts (with good glasses),” who gave warning of British movements.18 In conjunction with surveillance, the Americans collected information from post-battle reports. Following engagements, commanders submitted their understanding of events to their higher headquarters. Just like today, this action served to give the senior commander an understanding of the battle so that he could make further decisions. Also just like today, the reports were not always complete or helpful. Sometimes, an officer was forced to tell his superior that “I can learn no satisfactory accounts of the action.”19 Without supplemental intelligence even the best spot report and surveillance still did not give a complete understanding of the enemy. Spot reports gave information about an action that had already occurred, and surveillance told of enemy maneuvers as they occurred. Unlike reports from spies, neither of these two methods gave generals information about an event before it happened.

In the early winter months, Washington desperately needed to get into the enemy’s decision cycle. In the first days of December, Washington led his forces to escape the British by
crossing the Delaware River. The British, under the command of Lieutenant General William Howe, stopped the pursuit and occupied the town of Trenton instead. Washington, from his position opposite Howe, could only overwatch the “fords” of the Delaware and “keep a face towards” the town of Trenton. From his position across the river, Washington constantly worried about an impending attack by the British. To make such an attack, he knew that the British would need boats. In preparation to escape across the Delaware, Washington made an effort to procure or destroy all boats within miles to prevent the British from attempting such an attack. However, Washington was not sure whether the Hessians in Trenton had begun building new boats. On December 10th, Washington sent a spy into Trenton to look for boats, or signs the enemy were building any. The spy returned and reported no signs of boats or their construction, and Washington concluded he was safe from an amphibious assault for the moment. The General continued to call for his subordinates to “spare no pains, nor cost” to discover the enemy’s “designs.” As luck would have it, Howe issued a proclamation of pardon to Rebel soldiers in mid-December that inadvertently helped Washington’s intelligence collection. The enemy discovered only too late, that many would-be-deserters had “come only to look around and spy.” This opportunity allowed Washington to not only understand the current state of troops arrayed against him, but also the British plan to seek winter quarters and end the campaign season rather than attack. This instance of information superiority emboldened the Rebel commander to plan and launch his daring attack against Trenton.

While the Continentals collected intelligence, they also tried to prevent the British from doing the same through operations security. Operations security (OPSEC) today is a sub-component group of the information tasks, and includes the capabilities physical security, operations security, and counter-intelligence. The first of these, physical security, is the easiest
to describe in terms of the importance Continentals placed on it. It is, and was, the action taken
to prevent unauthorized access to a location, person or object. Although Washington most likely
did not have to stress its importance to his subordinates, he still felt it necessary to tell them to
"keep proper Patroles going." Maintaining a guard alone only prevented someone from getting
in. The operation security capability kept information from getting out.

The post-Christmas American attack at Trenton had few examples of Rebel OPSEC. On
Christmas night, prior to Washington's crossing, an American reconnaissance party engaged
some Hessian pickets just north of town. The aggressors fled and the defenders increased the
security presence at that position. Luckily, the terrible weather conditions prevented the Hessian
commander at Trenton from believing the event to be anything more than an isolated skirmish.
The next morning, as Washington learned of the events, he became enraged and told the captain
in charge of the raid, "You, sir, may have ruined all my plans by having put them on guard." 26

Fortunately the plan was not ruined. Oddly enough, the Commander had only himself to blame for this breach in OPSEC. Washington kept the mission so well under wraps that when it came time to execute the offensive, "none but the first officers knew where we were going, or what we were about." 27 While that statement may have been true for soldiers in the Continental Army, it didn't appear to be true for the enemy. British Major General James Grant wrote to the Hessian commander Colonel Carl Emilius von Donop that "Washington has been informed that our Troops have marched into Winter quarters and have been told that we are weak at Trenton and princetown and Lord Stirling expressed a wish to make an attack upon these two places." 28

Perhaps the greatest OPSEC wonder has to do with the means of crossing the river.
Washington began looking for boats to use on the Delaware at the end of November, as he intimated to John Hancock in a letter on December 1st, "I have sent forward Colo. Humpton to
collect proper boats and craft at the Ferry for transporting our Troops.”29 Washington also gave
the order to collect “every other craft” in order to keep the boats out of enemy hands. Once the
rebel forces escaped from the British, Washington had the foresight to retain the boats, and had
them “hidden behind the wooded Malta Island.”30 In order that “no Intelligence may be
conveyed to the Enemy that can be avoided,” Washington forbid his soldiers to pass over the
river while he developed plans for future operations.31 This order, along with the hidden boats,
seems to have given Washington the advantage he needed. The importance he placed on OPSEC
prevented the enemy from improving their defenses while the Rebels staged boats to carry 2,400
soldiers across a river on Christmas afternoon.

Unfortunately, physical security and OPSEC are only effective when people entrusted
with access to information are worthy of that trust. Recent events like the Fort Hood shooting, or
the CIA operatives killed by an informant in Afghanistan illustrate the need for counter-
intelligence operations. In 1776, the Continental forces learned the same lesson, and luckily had
a less tragic outcome. The British leadership, just like the Rebels, recruited or sent spies in the
enemy’s camps. In mid-May, a gentleman named Isaac Ketcham and his colleagues were
arrested for counterfeiting in New York. Coincidentally during that time, Thomas Hickey, a
member of Washington’s Guard, was arrested for trying to pass counterfeit money and placed in
the same cell as Mr. Ketcham. As the two talked, Hickey confided to his jail-mate that he, and
several other men close to General Washington planned to “turn against the American Army
when the King’s troops should arrive” in New York.32 Ketcham passed the information along to
his captors, which unraveled a deeper conspiracy that involved several others of Washington’s
Guards and the New York mayor. On the 26th of June, the court martial proceedings found
Hickey guilty of “exciting and joining in a mutiny and sedition, and of treacherously
corresponding with, inlisting among, and receiving pay from the enemies of the United American Colonies.” He was sentenced to die by hanging.

In December, while Washington pushed to get information on the intentions of his enemy, he warned his generals to be “particularly attentive to the boats and other vessels and suffer no person to pass over to the Jerseys here without a permit.” That order, similar to previous ones, was geared to prevent the enemy from reconnoitering his forces and learning Rebel intentions. With or without Washington’s prodding, subordinate officers worked to counter enemy efforts by sending out scouting parties; they occasionally had good effects. However, the Rebel counter-intelligence operations apparently were not able to stop all British spies from gaining information. Late in the evening on the night before Christmas, British Major General James Grant sent a warning about a possible attack by the rebels to the Hessian commander Colonel Carl Emilius von Donop. Fortunately for Washington’s forces, the Hessian officer charged with the defense of Trenton, Colonel Johann Rall, did not take the warning seriously and therefore passed on the opportunity to exploit the operational gains the information provided. The identity of Grant’s spy is unknown; however, through Grant’s letter to von Donop, it appears to have been someone close enough to Washington to get reliable information. Grant explained in his letter, “I think I have got into a good line of intelligence.”

The stories of Thomas Hickey and Grant’s informant illustrate the importance of counter-intelligence to Rebel leaders. First and foremost, the Hickey story shows the importance that Washington placed on preventing espionage in his ranks. Washington used Hickey’s execution as a warning to every soldier in the Army to produce “many salutary consequences, and deter others from entering into the like traitorous practices.” Next, these examples show that even though Washington was wary of spies, he could not prevent all infiltrations. As discussed in
previous paragraphs, the Rebel counter-intelligence effort consisted of patrols to counter
uniformed reconnaissance units, or British soldiers in disguise. While these efforts were overall
effective, in both New York and at the banks of the Delaware River, the British were able to
influence people close to the American Commander in order to collect information. Finally,
while luck prevented disaster on the part of the Continentals in both cases, the fact remains that
there were only two cases of espionage against the Rebels during 1776 to discuss. It is
impossible to show how many other plots the Rebels deterred or stopped but the low number of
known incidents suggests that the Rebel use of patrols, in conjunction with the threat of death,
helped prevent infiltration by the enemy on a large scale.

In order to mitigate further the amount of usable information the British could collect on
them, the Continental forces incorporated military deception into their operations. Military
deception, like operational security, is one of the Army’s information tasks. It is integrated into
operations to “mislead an enemy commander deliberately as to friendly military capabilities,
intentions, and operations.” In modern warfare, deception is used in situations as simple as
scout insertions, to operations as complex as division level feints. A good deception plan can
lead to overwhelming success, as Washington proved on the nights of the 2\textsuperscript{nd} and 3\textsuperscript{rd} of March.
While still defending Boston, the General needed to allow his soldiers to fortify the Dorchester
Heights unhindered. He therefore ordered cannons placed at Roxbury, Cobble Hill and
Lechmere Point. Through the cover of darkness and cannonade, his soldiers moved to and
fortified Dorchester Heights “without the least interruption or annoyance.” As previously
stated, the intent of deception was to influence the British by misleading them. The Continentals
also focused on influencing other audiences away from the battlefield.
In contemporary America, the focused efforts to understand and engage key audiences that allow the United States to advance its interests through coordinated messages are referred to as strategic communications. These efforts are not just military, but national efforts. While the Department of Defense uses strategic communication to “promote awareness” of its operations, the United States’ government writ large uses strategic communications to synchronize the instruments of national power. These communications can take the form of a local radio station in Afghanistan explaining a coalition operation, a press release about the success of Iraqi Army training techniques, a Facebook message to the families of deployed soldiers, or the President announcing a policy change on television.

The world in 1776 had a very limited venue for propagating information; the Continental Congress and the Army had only the printing press to distribute information for public consumption. Thus, newspapers carried the important news of the day. In various correspondences from 1776, some people looked forward to reading newspapers, while others lamented that newspapers were the only source of information. Either way, newspapers were the accepted source for current events and communicating to audiences. Like the media outlets of today, the newspapers of early America contained their own individual biases. Some printers maintained their allegiances with the King, while others published stories in line with the rebel cause. Newspapers communicated to a wide range of audiences, ranging from international to local, and from friend to foe.

Understanding the significance that the public placed on newspapers, and having information to disseminate, the Continental Congress used the printing press to get its messages out to its various audiences. No better document shows the legislative body’s strategic communication efforts than the Declaration of Independence. The Declaration itself was an
effort to communicate an official change of policy, effectively creating a fledgling nation. Similar to a television Presidential press conference discussing strategy changes in a conflict, the document was intended to have the widest circulation. Locally, the document spoke to revolutionary, British and loyalist audiences alike. A day before Washington had the document read to his troops, Lieutenant General Howe wrote to his boss in England that a local newspaper told of how Congress “had declared the United Colonies free and independent States.” Of course the document made it to its primary target, the British King. Its circulation did not stop there, however. The Declaration, like most other news from America, made it to the other interested parties of Europe.

Congress ensured they maintained an uninterrupted flow of information to the European audiences. In particular, Congress worked to gain French support against the British. Because success begets success, positive stories about battles printed in newspapers helped the cause. Likewise, negative stories hurt it. Benjamin Franklin, as the American ambassador to France, intimated to John Hancock in December that the French were “a good deal dejected with the Gazette accounts of advantages obtained” by the British. The French apparently put stock in the battle reports of American newspapers. Congress, understanding the audience they were trying to influence, wasted no time in sending to the French government a report after Washington’s success at Trenton, complete with an enclosed newspaper to give the details.

Similar to strategic communications today, the Continental civil authorities alone did not hold usage rights over the media. The military, in support of policies and interests of the nation, used the available media to communicate with its multiple audiences. General Washington used the newspapers to disseminate his orders and messages to multiple audiences quickly. On some occasions, his audience was his own military. While he could have relied on orders and letters to
inform his Army, he chose newspapers because of their wide distribution and the extent with which they were read. From Crown-Point, Continental Army Colonel Thomas Hartley updated Major General Horatio Gates on the military situation in the area, and closed the September letter with "I would be glad if a newspaper could be sent to me." Even the average enemy soldiers and leaders felt the same way about staying current on events. In a letter from a British captain to a peer, the former sent the latter a copy of a local newspaper that contained "some account of our proceedings here." In early January 1776, Washington harnessed the power of the media by placing a newspaper advertisement to communicate to the officers, noncommissioned officers and soldiers "absent upon any leave, or pretence whatsoever to join their respective regiments, at Roxbury and Cambridge." This advertisement targeted soldiers, leaders and most assuredly, soldiers' neighbors, as Washington wanted that "no person may plead, or be allowed to plead Ignorance thereof." Directing communication to the general public seems to have been of some concern to the civil-military leader. That summer, just ten days before his army faced the forces of General Howe in the Battle of Long Island, Washington placed a strong recommendation in the New York Journal to the "women, children and infirm persons" of New York, in order to escape an attack by the "cruel and inverterate enemy," should leave the city. Washington felt it necessary to communicate with the public in lesser matters as well. In a letter to General Gates on April 4, Washington gave Gates specific instructions about what was to be done with any "captures made by the Continental Armed Vessells." He told his subordinate officer that "No Condemn'd property [is] to be sold 'till the day of sale is three times advertized" in local newspapers.

While Congress and its Army did use the media to actively pursue its goals, the media did operate outside of governmental oversight. To this end publishers did not always get the
story straight, whether by design or accident. However, in order to gain the informational advantage over the enemy, it was imperative to set the record straight quickly. Following the “unfortunate attempt against Quebeck,” an anonymous writer sent a letter for publication to the New-York Gazette in order to clear up “many contradictory accounts.” The writer, although known only as “A soldier,” seemed to have intimate knowledge of the battle as well as a gift for writing. Regardless of the identity or background of the “soldier,” he seemed to fully understand the need to inform the Gazette’s audience of the continental army’s message. In contrast, there were occasions when a permissive attitude towards misprints actually furthered the cause of the revolutionary soldier. The Rebel Commander intimated to Samuel Washington that the positive accounts of the army were not what “you have been taught to believe by the Gazettes.” He explained to his brother that soldiers “were eternally coming and going without rendering the least Earthly Service.” Washington did not challenge publicly the erroneous information about Rebel soldiers. He let those accounts mingle with other inspiring publications of the day.

Central to the revolution and increasingly in the minds of those fighting for it, are the ideas contained in the essays written by the transplanted Englishman and Rebel, Thomas Paine, especially his most well-known work, “Common Sense.” The widely circulated essay called for those “that dare oppose not only the tyranny but the tyrant, stand forth!” Paine’s stirring publication moved the American people to resist Britain, just as that military hegemon escalated its military involvement against the rebellion in America. “Common Sense,” initially published anonymously in January 1776, helped to establish the information environment that Continental leaders reaped the benefits of throughout the year.

Although the printed word was the dominant media vein for information, Continental leaders also placed faith in another venue to perpetuate their cause. Current doctrine teaches that
professional and disciplined “interaction of soldiers with the local populace among who they operate has positive effects.” In December, Washington decided to use his subordinate leaders to engage local populations in order to win over loyalty as well and gain reinforcements. To this end he requested and received from Congress permission to send Brigadier General John Armstrong to Philadelphia and Brigadier General William Smallwood to Maryland. The gentlemen were instructed to use their popularity to engage with the people in order to “animate” them to support the continental army. This use of leader engagement shows a Continental army concerned with public opinion and the maintenance of its recruiting base. Although effective, America’s propaganda resources did not end with overt uses of popularity.

Psychological operations (PSYOP) are the subversive realm of the Army’s Information tasks. The ultimate goal of PSYOP is “to induce or reinforce foreign attitudes and behavior.” Put simply, to change the enemy’s mind for him. There are a variety of ways to use PSYOP, limited only by a good imagination and the laws of war. Modern examples of common PSYOP usage include broadcast messages and leaflets. While the modern military’s truck mounted speaker system did not make its battlefield debut until two centuries after the American Revolution, the leaflet finds its early roots in the printed broadside.

Early in 1776, the continentals discovered that the British elicited the service of multiple German provinces to put down the American insurgency. The so-called German troops, although feared by the Americans as disciplined and well trained soldiers, had two exploitable weaknesses. First, the German language was not unique to the mercenaries. For example, in mid-December of 1775, Congress resolved to print a discourse on the conflict between Britain and America, as well as the instructions for making “saltpetre” in the “German tongue” in order for the subject matter to reach a wide audience. German immigrants were so abundant that
average Americans believed that "those [mercenaries] who do not get their brains knocked out will insist upon staying among their countrymen." Second, the mercenaries were, after all, hired soldiers. They were "an army of entrepreneurs who assumed risk for the sake of profit." The need for money kept them in the ranks, but the offer of a better deal could draw them out.

Congress decided to create such a deal.

In early May of 1776, Congress established a committee to look into ways to deal with the foreign mercenaries. As Benjamin Franklin said, "The German Auxiliaries are certainly coming. It is our business to prevent them from returning." Congress became so consumed with its concern over the Hessian mercenaries that one politician remarked to another "that it is not possible to get them to attend to smaller matters." Congress was not alone in devising ways to attack the Hessians in a non-lethal manner. In May, George Washington recommended raising "Companies of our Germans to send among them, when they arrive, for exciting a spirit of disaffection and desertion." On June 27th, Congress did just that by authorizing the creation of a German regiment composed of eight companies. Congress did not stop there, however. On the 14th of August, Congress resolved to give fifty acres of unappropriated land to "all such foreigners who shall leave the armies of his Britannic majesty." As with previous resolves, Congress ordered their resolution to be translated to German and given to the foreign troops. Shortly after the broadsides found their audience, a Hessian officer, in line with the Hessian proclivity for plunder, suggested that Congress offer be based on rank. On August 27th, Congress adjusted their offer to reflect that recommendation.

The day before Washington's forces abandoned Brooklyn, the General intimated to the President of Congress that as for the offer to the Hessian officers, "Perhaps it might have been better had the offer been sooner made." Similarly, Tench Tilghman pointed out, "The German
troops are kept so very ignorant of what would be their happy situation in this country that I do not expect much from their desertion." The psychological operations did not cause the immediate and wholesale abandonment of Hessian lines in 1776 that its creators had hoped; the full success was not seen until the end of the war. Day by day, however, small numbers of Hessians left the enemy lines in search of a better life in America. These deserters brought with them intelligence that described the composition and disposition of the units they just left. With this constant cycle of information collection, processing and dissemination, the Rebel leaders possessed an information environment that had to be managed.

Information management is the component of information superiority that ensures that the right information gets to the right person in a timely manner. Knowledge management is the component concerned with the application of information to increase situational awareness and situational understanding. Today, staffs create information and knowledge management procedures to ensure the unimpeded flow of information through a unit. Without these measures, commanders can quickly become bogged down in the myriad of details available. In comparison, modern commanders have the ability to access information much more quickly than their counterparts of the eighteenth century. However, the speed of information did not lessen the propensity for Continental commanders to suffer from information overload. General Washington recognized this early on, and subsequently published a very early version of an information management plan in his General Order from the first of January:

As the great variety of occurrences, and the multiplicity of business, in which the General is necessarily engaged, may withdraw his attention from many objects and things which might be improved to advantage, he takes this opportunity of declaring, that he will thank any officer, of whatsoever rank, for any useful hints or profitable informations; but to avoid trivial matters, as his time is very much engrossed, he requires that it may be introduced through the channel of a General Officer, who is to weigh the importance before he communicates it.
Washington’s General Orders were his primary means of disseminating timely and relevant information to his commanders in order to develop situational understanding. Continental subordinates relied on Washington’s daily General Orders for pertinent information. Washington’s commanders could count on almost daily updates from their senior officer throughout the year. The General Orders not only gave officers explicit directions, but they also served to maintain situational awareness throughout the ranks. Signs and counter-signs, the essential passwords that helped Washington maintain operational security, were distributed almost daily as part of the General Orders. Also included in the General Orders was information designed to promote and maintain situational awareness and understanding. As the year progressed, much of this information became focused on matters of good order and discipline, reiterating the General’s policies on various crimes, as well as publicizing punishments of those who committed the crimes. If commanders needed to get a message across to a wide audience, they used General Orders or the newspaper. When commanders needed to scope their messages to a very specific audience, they used letters.

The use of letters to promote situational understanding was an important means of developing information superiority. Routing specific information to the appropriate audience is not only what Washington ordered in his aforementioned information management plan, but it also is one of the key foci of information management today. For example, letters served as Washington’s primary means of communication throughout the year. In any typical month, Washington’s correspondence with individual commanders was at least double the amount of General orders published. Specifically, in December 1776, the Commander penned at least 115 separate letters, while his headquarters only released two General Orders. All of this personal correspondence allowed Washington to “interface” with his subordinate commanders to get their
analyses. Through Washington’s letters, we can not only see that he understood the importance of selective information routing, but also the information’s application.

While information management is the science, knowledge management is the art; it deals in systems and relevance. The systems aspects seem, at first glance, difficult to apply to 1776. Obviously, the continentals did not have the complex, technologically based information systems that we use today. However, the fact that we can look through the correspondences of so many eighteenth century leaders today proves the importance they placed on collecting, processing, disseminating, protecting and storing information. In order to stress information relevance, commanders today develop their critical information requirements (CCIR); that data that they need to make decisions. Washington frequently formed CCIR, although he did not address them as such. For example, he instructed one of his subordinates to “Use every possible means without regard to expence, to come with certainty, at the Enemys strength, situation and movements; without this we wander in a Wilderness of uncertainties and difficulty, and no plan can be formd.”\(^{65}\) In planning the attack at Trenton, Washington focused intelligence collection in the enemy camp to boats to determine the enemy’s ability to attack him first. The Commander was not alone in demanding information that met certain criteria. John Adams for example, explained his constant “vexations” over poor information provided to him by generals. Adams explained to his contemporary, William Tudor, that information should be “simple”, “exact, particular and constant.”\(^{66}\) By today’s doctrine, information must be not only relevant, but also accurate, timely, usable, complete, precise, and secure.\(^{67}\) The requirements for information relevance today are similar to those espoused by Adams centuries ago.

The Continental forces placed great importance on gaining information superiority over the British in 1776. During that conflict of course, tactical satellite radios did not connect the
various Rebel headquarters, nor did Generals have access to real time persistent surveillance from unmanned aerial vehicles. However, two hundred years ago, the early Americans relied on the same functions those tools provide today. For intelligence, Continental Generals relied on the surveillance provided by lookouts, and the reconnaissance provided by battle reports and spies. The Continental forces shaped their operational environment by creating a psychological campaign to subvert the German mercenaries, and using newspapers for public affairs and strategic communication for various audiences. They shaped the situation further by maintaining operations security, attempting to counter the enemy's intelligence collection efforts and deceiving the enemy about whenever possible. Washington early on recognized how encumbered he would become, and established a knowledge management plan. Finally, in order to ensure that all the knowledge collected helped to establish a better situational understanding, Washington established CCIR and Congress emphasized the need for quality in information. Operations in 1776 took place in an information environment, and just like commanders of today, the Continental leaders made every effort to understand and shape that environment. For these reasons, information superiority was just as crucial to the Continental forces of 1776 as it is to the modern American military.


30 George Scudder Mott, History of the Presbyterian Church in Flemington, New Jersey, for a Century: With Sketches of Local Matters for Two Hundred Years (New York: Wilbur B. Ketchum, 1894), 15.


