AMERICAN CIVIL WAR ROUND TABLE OF AUSTRALIA
(NEW SOUTH WALES CHAPTER)

NEITHER AN EXACT SCIENCE NOR AN OXYMORON MILITARY INTELLIGENCE DURING AMERICA'S CIVIL WAR

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It is hard to imagine a country less prepared for war than the United States was in late 1860 – early 1861. The strength of the army was only around 16,000 and most of these were posted in the western parts of the country remote from the Eastern Theatre where the War would eventually erupt. With the exception of two senior officers, Winfield Scott and John E Wool, no officers had commanded forces the size of which would classify them as an 'army' in the 1860's context. Indeed, the command experience of the younger officers was restricted to company and field grade appointments on the western plains and on the Pacific coast. Furthermore, although a majority of West Point graduates were to remain with the Union, various other military schools, including VMI in Lexington and the Citadel in South Carolina, provided a wealth of graduates for the Confederacy at company and field grade levels, a situation that was to significantly influence the early successes of Confederate forces.

Importantly, there was no organisation or even a set of formalised procedures that today we would refer to as 'military intelligence' activities that would assist commanders in their planning and decision making by providing information about the enemy and the battlefield environment. Furthermore, the availability of accurate maps, particularly for Union forces invading the Southern States, was to be a major problem throughout much of the War. Contributing to this lack of appropriate cartographical resources was the long standing military tradition that maps were deemed 'Secret' and their availability treated accordingly.

In this paper, the evolution of military intelligence practices throughout the Civil War are outlined, first, by providing a context for the intelligence activities and then with some examples of the successes and failures It is not intended that this paper be an exhaustive treatment of the subject but illustrative of the way that intelligence initiatives evolved during the Civil War period.

In researching this paper, it was soon recognised that there is a dearth of authoritative references to military intelligence in the Civil War era. What has been written focused mainly on the memoirs of men and women who claimed to be spies for the Union or Confederacy and there had been a tendency to equate 'intelligence' with 'espionage'. It was not until 1959 that Edwin C Fishel made a discovery of previously undisturbed papers in the National Archives Office that led him to author a detailed and authoritative "intelligence history" that is regarded still as the "bible" of Civil War intelligence. The assistance provided by Fishel's book in preparing this paper is gratefully acknowledged. So too is the assistance of Civil War historian and friend, Dr Lynda Crist from Rice University in Houston for her help to me in obtaining access to some of the key references used in the paper and for her ready willingness to critically review the drafts of the paper. Matthew Brazil took the trouble to read and comment on an early draft of the paper and his knowledge of US intelligence processes and organisations were particularly helpful in ensuring I had a more accurate and balanced coverage in the paper. His observations and questions provided, also, a clear focus for the presentation. Thanks Matt!

It is my hope that those reading the paper will be interested to follow up some of lines of inquiry that have emerged over the time I have spent researching this fascinating topic.

John Cook

Introduction

'Military intelligence' can be thought of as:

"… the art of knowing one's enemies"

It involves a process of collection, collation, analysis and interpretation for an army commander of information on the enemy and the battlefield environment that must be confronted. Intelligence is as old as warfare itself and, although its methods have expanded with the invention of telegraph communications in the 19th Century and their supersession by radio with the advent of the electronic age in the 20th Century, intelligence continues to be an important factor for success in warfare.

An early example of its use is seen in the Persian defeat of the 300 Spartans at Thermopylae in 480 B.C. King Leonidus and the 300 Spartans comprising his personal bodyguard had held the pass at Thermopylae successfully against the 100,000+ army of Xerxes for three days but were betrayed and defeated when the Persians were given information of a goat track that provided an alternative route around the pass and the Spartans' defensive position. Xerxes sent his 'Immortals' by this alternative route overcoming the Greeks guarding it and they were then able to use their superior numbers both forward and at the rear of the Spartan position to kill all 300 defenders of the pass and move onto Athens.

Julius Caesar's success in his campaigns against Gaul (58 – 50 B.C.), were as much a result of his effective use of both strategic and tactical intelligence as of his legions' superior fighting skills. As noted by Keegan, Caesar took great trouble to assemble economic and regional intelligence and:

> *"… was a coldly cynical assessor of the Gauls' ethnic defects, their boastfulness, volatility, unreliability, lack of resilience; he was equally cold in exploiting his knowledge of their weaknesses afforded… he also had a highly developed system of tactical intelligence, using short and medium range units of scouts to reconnoitre up to 30 kilometres in advance of his main body, to spy out the land and the enemy's dispositions…"* [1]

Whilst he did not invent the Roman system of intelligence, Caesar did much to institutionalise some of its most important features, notably the right of direct and personal access of the scouts to the force commander.

During the five centuries[2] of the Roman Empire's greatness there was little change to the intelligence processes and the timely provision of intelligence to army commanders remained a significant issue. Reconnaissance was by hearing and sight, communication was by written despatch or word of mouth and the maximum speed of transmission was governed by the speed that a horse could travel. These characteristics of intelligence in Roman times were to remain true for the next 1,500 years!

Until the 19th Century 'military intelligence' was only practised in times of war, its methods of collection, analysis and interpretation were quite primitive and commanders tended to be sceptical about the reliability of information received from various sources (spies, scouts, own troops). The United States did not acquire a permanent peacetime intelligence organisation until 1885 some 20 years after the end of the Civil War and the oldest of today's military intelligence units can trace its lineage back only as far as the eve of World War II. The US Army did not formally recognise intelligence as a distinct professional discipline until 1962 and today's Military Intelligence Corps

[1] Keegan, John, ***Intelligence in War:*** New York, A Borzoi Book published by Alfred A Knopf, a Division of Random Books Inc., 2003, p 9.

[2] viz., First Century B.C. – Fourth Century A.D.

incorporating all military intelligence personnel and units into a single, large regimental structure did not come into existence until 1987.

There is sometimes a tendency to regard 'espionage' and 'spying' as synonymous with 'intelligence' due possibly to many books and films produced about spying activities and the fact that the early intelligence agencies were known by terms such as the "secret service". There is no doubt that 'espionage' and 'spying' are significant components of intelligence activities, particularly the 'collection of information' phase, but there are other aspects, also, which are considered to be basic to the process.[3]

This paper seeks to provide readers with an outline of some of the intelligence activities that were developed and operated during America's Civil War, first by providing a context of intelligence initiatives and then with some examples of the successes and failures. It is not intended to be an exhaustive treatment of the subject but illustrative of way intelligence initiatives evolved during this period of warfare from 1861 – 1865. In researching the subject, it soon became obvious that whilst more than 50,000 books have been published about the Civil War, there is a dearth of scholarly historical research in the area of military intelligence of this period. There is a sad array of "potboilers" described by Stephen Sears as:

> *"… books descended from the memoirs of men and women who claimed, not all of them truthfully, to have been spies for the Union or Confederacy"* [4]

Furthermore, Sears notes that:

> *"… later writers have added liberally to the numerous fictions and occasional facts in these books"* [5]

and that the resulting product focuses primarily on the spies' trials and tribulations and where their stories refer to the outcome of battles, they exaggerate the contribution of the spy with little or no insight into the force commander's decisions and actions.[6]

It was in October 1959, nearly a century after the Civil War, a remarkable discovery was made at the National Archives in Washington. The late Edwin C Fishel found amongst miscellaneous records of the Army of the Potomac the operational files of that Army's Bureau of Military Information. These files, which had been undisturbed since the end of the War 94 years before, were to form a basis for the first authentic history of military intelligence in the Civil War. Fishel went on to examine other sources for his historical research including reports by Alan Pinkerton contained in George McClellan's papers and privately held papers of Joseph Hooker, who set up the Bureau of Military Information in 1863. Using his some 30 years' experience in the US intelligence service,[7] Fishel was able to craft an "intelligence history" of eight of the major Civil War campaigns and, for the first time, provide:

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[3] In this regard, it is somewhat disappointing to find that the authoritative work of the Library of Congress's ***Civil War Desk Reference,*** edited by Margaret E Wagner, Gary W Gallagher and Paul Finkelmen and published in 2002, restricts its discussion on intelligence gathering to the outline of the activities of some well known spies from both sides of the conflict

[4] Fishel Edwin C., ***The Secret War for the Union: The Untold Story of Military Intelligence in the Civil War:*** New York, Houghton Mifflin Company, 1988, in the Foreword, by Stephen Sears, p xiii.

[5] ***ibid,*** p xiii.

[6] In the November 2004 issue of *America's Civil War,* (Volume 17, No.5) William Marvel presents, by way of some case studies, a persuasive argument for caution in taking Civil War memoirs at face value. He concludes that few Civil War reminiscences satisfy the standards of reliability that a historian should demand. Although not directly relating to intelligence issues, this article is well worth a read.

[7] Fishel's service in intelligence started during World War II and included postings as Chief Intelligence Officer with the National Security Agency and he worked previously for the NSA's predecessor and component agencies, the Signal Intelligence Service and the Army Security Agency.

"… answers to some of the most tantalizing 'whys' of the war." [8]

Fishel's analyses provide, also, a useful listing in tabular form of successes and failures of both Federal and Confederate intelligence up to and including the Gettysburg Campaign.[9]

A Specification of Terms

The notion of 'military intelligence' has been defined previously as "… the art of knowing one's enemies" and the central role of intelligence is to provide decision makers at all levels of command with the most complete understanding possible of the enemy. This involves knowledge of an enemy's goals, intentions, capabilities, methods of operation, vulnerabilities and sense of value and loss. It involves, also, knowledge of the enemy's culture and customs and knowledge and an understanding of the terrain of operations. Importantly, it involves an understanding of the likely enemy reactions to one's own force's operational initiatives. Essentially, there are three levels of intelligence which are each defined by the level of user of the intelligence and not the level of the staff that produce it. These levels are:

> **Strategic intelligence** is that required by strategic commanders/policy makers formulating policy /plans/operations at a national level;
>
> **Operational intelligence** is that required by operational level commanders planning/conducting operations within a specified theatre of operations; and
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> **Tactical intelligence** is that required by commanders for planning and/or conducting lower level operations.

These different levels of intelligence are not mutually exclusive with the coverage of a particular piece of intelligence not necessarily having to be restricted to one level only. At times, particular intelligence focusing primarily on one of the levels will support or be supported by the other levels.

In Civil War times the major source of intelligence was from what is now called 'Human Intelligence' or *'HUMINT'*, viz., intelligence derived from information collected and provided by human sources, primarily what has been seen or heard. In a number of ways the Civil War marked a transition from traditional to modern warfare and is characterised by many "firsts". With the introduction of the telegraph for many communications during this period, "Signals Intelligence' or *'SIGINT'* began to emerge, also, as an important, but not yet indispensable source of intelligence. This brought with it an expanded need for codes and ciphers and changed forever the nature of intelligence as we know it today. Furthermore, the brief use of balloonists during the Civil War to observe enemy positions, ORBAT[10] and movements on the battlefield represents an initiative, albeit primitive and limited, that can be regarded as the genesis of the present day "eye in the sky" satellite technology used by the major powers and other countries for both military intelligence and various non-military purposes.[11]

In today's military lexicon a distinction is drawn between the terms *'information'* and *'intelligence'* where:

> **Information** is unprocessed, unevaluated material of any description that may be used to produce intelligence; and
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> **Intelligence** is the result of a process of analysis, evaluation, synthesis and interpretation of disparate pieces of information.

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[8] ***ibid,*** p xiv.

[9] Fishel's book, as referenced previously in footnote (4) is regarded by many as the "bible" of Civil War intelligence and is highly recommended.

[10] ORBAT stands for 'Order of Battle' which, in this context, would be a listing of the enemy force's identification, strength, command structure and disposition of the personnel, units and equipment.

[11] An interesting application of this technology is presently being used by the Queensland Government to identify pastoralists who have illegally cleared their property of trees and other vegetation.

Given these definitions, it is noted that *'intelligence'* differs from *'information'* and since it is a result of judgments made, all intelligence should be open to challenge. Furthermore, it is most unlikely that intelligence will ever be complete, viz.; there will always be some unanswered questions.

In the 19th Century, however, no such distinction was made with the term 'intelligence' being given a meaning of new information or news on any subject. The nearest equivalent in the 1860s to the modern use of the term of 'intelligence' was 'secret service' (without initial capitals) but this encompassed, also, non-military detective initiatives. The 'Army Intelligence Office', which the Confederacy established in 1862, was commanded by a chaplain and tasked to inform families of wounded Southern soldiers about their care and disposition.

Importantly, there was no organisation in the United States responsible for what we now refer to as intelligence activities. Indeed, the early names for agencies set up for both the US and Confederate Governments tended to use such terms as "Bureau of Military Information" and did not involve 'secret service' terminology.

The 19th Century Context

During the Mexican War (1846 – 1848), the US Army's Corps of Engineers undertook tasks that, in present day parlance, are part of the intelligence units' responsibilities as "… investigators of terrain features and the enemy's man-made defenses (*sic*)".[12] It is noted that "… the association of engineers with intelligence work was becoming a tradition but it was an activity without a name or an identity."[13] Interestingly, Captain Robert E Lee and Second Lieutenant George B McClellan, both engineer officers and future commanders of opposing armies in the Civil War distinguished themselves in this intelligence role during the Mexican War.

In contrast to the British tradition, cartography in 19th Century America was quite primitive. The army had its Corps of Topographic Engineers, the navy its Hydrographic Office and the federal government a Coast Survey but each of these organisations was small and, by 1861 an accurate survey of the whole country had not been made. There were, of course, local maps but a comprehensive "triangulation"[14] process of the whole country, which would allow these local maps to be accurately connected together, had not been undertaken. A lot of work had been undertaken by these agencies of government in mapping the eastern coastline of the country, the Great Plains west of the Mississippi and the flat land of the Midwest by reference to astronomical observations of latitude and later, by longitude readings. Such mappings, however, were not systematic and, without triangulation, did not connect with one another nor were they able to usefully depict height or contour in the Appalachian Mountains and the coastal areas to the east of this mountain chain.

Compounding this unsatisfactory situation was the long standing tradition that maps were regarded as military secrets. The Confederacy was able to use this situation to its advantage, particularly in the first two years of the War and the North's operations were to be hampered throughout much of the War by its lack of access to accurate military maps.

With the Coming of War…

At the beginning of the War the Army's General-in-Chief was the aging, obese and sick Winfield Scott (1786 – 1866). A hero of the Mexican War and many of the other 19th Century campaigns,

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[12] Fishel Edwin C., ***op cit,*** p 9.

[13] ***ibid,*** p 9.

[14] This triangulation process, which provides measured distances between a series of points, allowing for the curvature of the earth, yields a grid from which accurate maps can then be drawn.

Scott had been the commanding general of the US Army since 1841. He was a remarkable strategist, an unusually capable diplomat for an army officer and a gifted tactician and in October 1860, was advocating to the Government, albeit unsuccessfully, the need for preparedness for war. Scott recognised the need for an 'intelligence' capability (or, what he called a 'secret service') as war became an inevitability but had a major problem in progressing the initiative as he had surrounded himself with Southern officers and officers with Southern sympathies.[15] It was necessary, therefore, for Scott to go to quite extraordinary lengths in setting up and maintaining his 'secret service' to keep its operations secret from the officers closest to him.

The War Begins

Notwithstanding these efforts by Winfield Scott to establish a 'secret service' capability, a unified national intelligence system did not emerge. Intelligence operations on both sides of the conflict were to be "decentralised" with individual commanders free to devise their own operations. One of the earliest intelligence systems of the War was that set up and co-ordinated by Alan Pinkerton, a private detective from Chicago who had had helped foil a plot to assassinate Lincoln whilst serving as Lincoln's bodyguard when the President elect had travelled from Illinois to Washington for his inauguration. Pinkerton had worked for the Illinois Central Railroad whose president was George B McClellan and when McClellan took command of the Army of the Potomac, Pinkerton became his intelligence chief. Pinkerton's background as a detective provided the sound basis for his counter-intelligence work in apprehending Confederate spies and uncovering plots against the US Government and his interrogation of prisoners, deserters, contrabands and refugees provided useful information for the Federals. Although he acted as "spymaster" to a number of operatives who conducted short-term missions, mainly to Richmond, he did not have permanent spies located in Confederate territory. This is possibly one of the reasons for the exaggerated estimates of Confederate strength that Pinkerton provided on a regular basis to McClellan. Is it any wonder that these inflated estimates coupled with McClellan's over-cautious nature resulted in little being achieved in battle for the Union by the Army of the Potomac during McClellan's tenure of command?

When Lincoln "sacked" McClellan in November 1862, Pinkerton and his intelligence organisation went too. Lafayette Baker assumed responsibility for counter-espionage activities around Washington D.C. and after a period of uncertainty[16] the responsibilities for intelligence operations within the Army of the Potomac were taken on by Colonel George H Sharpe. Colonel Sharpe was to command the newly designated 'Bureau of Military Information' established by Joseph Hooker in early 1863. Sharpe provided Hooker, leading up to the Battle of Chancellorsville and, later, Meade during the Gettysburg Campaign, with highly accurate information on the strength and movements of Lee's Army of Northern Virginia. Sharpe's *modus operandi* was in stark contrast to that of Pinkerton. He sent spies, both soldiers and civilians, to penetrate enemy lines and established regular contact with Union sympathisers living in Confederate controlled territory.[17]

In the Western Theatre, Ullysses S Grant appointed one of his divisional commanders Major General Grenville M Dodge to coordinate intelligence gathering. Dodge proved to be most adept

[15] In this regard, the Quartermaster General was Joseph E Johnston and the Adjutant General was Samuel Cooper who, whilst a Northerner, had Southern sympathies and would later join the Confederate cause also. That is to say, these senior officers with overall responsibility for the routine payment of all civilian staff, including the 'secret service' operatives and for the Army's information systems could not be trusted and needed to be kept out of the "loop".

[16] When Burnside replaced McClellan, John C Badcock served as the Army's intelligence Officer under supervision of the Provost Marshall and he proved to be very effective in obtaining accurate information from captured soldiers and deserters. With the appointment of Joseph Hooker replacing Burnside in February 1863, Badcock wrote a "job description" for a proposed "secret service department" of the AoP which was the basis of the organisation that became a reality commanded by Colonel Sharpe. Badcock continued service as one of Sharpe's principal assistants.

[17] In this regard, his contact with Elizabeth Van Lew (Crazy Bet) in Richmond and Samuel Ruth, the Supervisor of the Richmond, Fredericksburg and Potomac Railroad, provided valuable information to Union forces throughout the War. Their contributions are outlined in a later part of this paper.

for this task. He formed a "Corps of Scouts" who were carefully trained to avoid the exaggerations and miscalculations of Confederate strength that were characteristic of Pinkerton's operations. He went to extreme lengths to ensure that the identity of his operatives – around 120 in all – was kept secret, even from his most trusted staff officers and he was the only person to read the agents' reports. At one point Dodge's immediate superior demanded to know the names and locations of all of his agents. Dodge refused and appealed to Grant for support. Even Grant did not have this information but was aware of the vital nature of the information Dodge's agents provided and supported Dodge's refusal.

Another officer who was to distinguish himself in the intelligence field was James A Garfield, a lawyer from Ohio who was later to be elected as the 20th President of the United States in 1880. Garfield was promoted Brigadier General at 31 years of age and was appointed as Chief of Staff to Major General William S Rosecrans, Commander of the Union Army of the Cumberland in Tennessee. Whilst each of the divisional commanders had their own intelligence operatives, the Army of the Cumberland had no means of coordinating the vast amount of information that needed to be analysed and ensuring the timely provision of the intelligence produced to those most needing it. Garfield organised for all such information to be passed to him, he read the reports, evaluated the information and prepared what are now called INTSUMs (intelligence summaries) for Rosecrans. It was not long before Garfield became an expert in information management and the intelligence he provided, particularly with respect to estimates of enemy strength and location, had significant benefits for the Union forces. His greatest achievement was to produce the intelligence that allowed Rosecrans to conduct his Tullahoma Campaign.

Like the Union's approach to intelligence operations, the Confederacy had no coordinating agency and its intelligence initiatives, at best, could be described as "decentralised". Davis, the Secretaries of War and the Navy and individual generals all had their own agents but the vast amount of information available but simply not used or, if made available to field commanders, not in a timely fashion to be of use.

Notwithstanding this situation, there were a number of very capable men and women who gave sterling service to the Confederacy in its intelligence operations. One of the best was Colonel G Moxley Sorrel,[18] who served as a volunteer aide to Longstreet at the First Battle of Manassas (or Bull Run). Sorrel was to become Longstreet's Chief-of-Staff and in this position had responsibility to supervise Longstreet's intelligence operatives (spies and scouts). One of these operatives was the mysterious Harrison,[19] who in June 1863, discovered the Union's Army of the Potomac north of the Potomac River and much closer to Lee's Army of Northern Virginia than Lee thought and provided the information that Meade had replaced Hooker. This resulted in Lee ordering his invading forces to concentrate in the Cashtown – Gettysburg area, thus precipitating the Battle of Gettysburg in the following days.

In October 1864, Sorrel was promoted Brigadier General and given a field command. Although fulfilling this combat role with distinction, the Confederacy lost the services of one of its best intelligence officers. After the War, Sorrel published his memoirs titled *'Recollections of a Confederate Staff Officer'.* This book remains one of the few reliable memoirs about intelligence/espionage in the Civil War.

The activities of the CSA Signal Corps and, in particular, the contribution of one of its officers, William Norris, from the time of its establishment in the spring of 1862, has eluded systemic and extensive study by historians. Whilst a major role of the Confederate Signal Corps was the transmission of messages via visual communication using flags similar to that used by the Federal armies, it may be seen from a 'missions and functions' statement for Norris himself that the Signal Corps had a major military intelligence role within the CSA. Indeed, it has been asserted that the

[18] At the outbreak of the War, Sorrel was a 23-year-old Bank clerk and a Private in the Georgia state militia.

[19] Henry T Harrison was a native of Mississippi born around 1832 was eventually "sacked" for drunkenness and disappeared. Longstreet tried unsuccessfully to find him when his I Corps was sent to the Western Theatre in September 1863. Harrison eventually settled in Montana where he died in 1900.

Bureau of which he was to eventually be its Chief was "… the world's first formally organised military signal corps." [20] For the three years until the end of the War, Norris provided a range of espionage and other intelligence services to the Confederacy that remain obscure except for the fact that it is now becoming recognised that:

> *"…few, if any of his rank bore… the responsibilities, held the position of trust and performed such unique and unsung service to their government as this Marylander to the Confederate States of America."* [21]

Intelligence Sources

The major part of intelligence used in the Civil War was what is now called HUMINT (or human intelligence) collected mainly through what was seen and what was heard. HUMINT has been defined by one contemporary scholar as:

> *"… processed information collected by or from overt, semi-overt and covert (clandestine) observers, informants, informers, documents and/or agents. Also from periodicals, journals, wire services, newspapers, other printed material or broadcast material"* [22]

This definition highlights the scope of HUMINT sources and reinforces the assertion made earlier in this paper that intelligence is more than that derived from espionage activities. Accordingly, the HUMINT in Civil War times involved information collected was through a variety sources including the use of:

1. Spies;
2. Scouts;
3. Cavalry reconnaissance;
4. Captured documents and mail;
5. Newspapers;
6. Interrogation of enemy prisoners, deserters, refugees, contrabands (fugitive slaves) and ordinary civilians; and
7. Balloonists and Signals Corps stations of observation.

Each of these sources from which intelligence was derived in Civil War times is now discussed in some detail and, where appropriate, examples provided to give a more complete picture of the emerging context for intelligence activities over the period of the War (1861 – 1865).

Spies: The use of spies as a source for intelligence is as old as warfare itself. In America's Civil War, the task of the spies on both sides of the conflict was made easier by the fact that both sides shared a common language and the cultural differences were not so large that regional/sectional

[20] Gaddy David W., ***William Norris and the Confederate Signal and Secret Service:*** in Maryland Historical Magazine, Volume 70, No. 2, Spring 1975. p 167.
[21] ***ibid,*** p 167.

[22] Carl, Leo B., ***CIA Insider's Dictionary of US and Foreign Intelligence, Counterintelligence and Tradecraft:*** Washington DC, NIBC Press, 1996.

practices could be readily learned. Furthermore, the geography of the country was so extensive that passage from one side to the other could be made relatively unhindered by the enemy.

There was certainly a great divergence amongst Civil War spies. Some were quite famous, at least in part, because they wrote their memoirs, others were unknown and remain so even today. The vast majority of those who wrote their memoirs made extensive use of hyperbole, embellishing the accounts of their contributions at the expense of basic facts of time, place and what specific information was gathered. Whilst they were able to recall, verbatim, conversations that took place years before, something that was almost always impossible to authenticate, their ability to recall the basic facts of the intelligence operations were flawed.

Probably the most famous of the Civil War spies were Rose O'Neal Greenhow and Belle Boyd. Both women worked for the Confederacy, both were prepared to use "womanly wiles" in their work and both published their memoirs, Greenhow in 1863 and Boyd in 1865. Greenhow operated in Washington and Boyd's exploits occurred in the Shenandoah Valley. Greenhow's fame rests on messages she sent to Beauregard warning him of a Union army advance on him in July 1861. Her information, however, was only one of the many sources used here by Beauregard. Although she had engaged in some intelligence gathering operations, Boyd's fame relates to a wild dash she made in May 1862 to alert Jackson to the small size of the Union forces at Front Royal. This was not an act of espionage and only confirmed what Jackson already knew. As Maslowski notes:

> *"… their accomplishments were modest and Union counterintelligence quickly neutralized both of them, but they nonetheless became the war's (and not just the South's) most famous female spies."* [23]

In contrast to these women's exploits, was that of Elizabeth Van Lew and Samuel Ruth both who spied for the Union throughout the War. Neither Van Lew nor Ruth published their memoirs and their pro-Union work, which commenced early in the War, had its greatest significance during the siege of Petersburg from June 1864 – April 1865 with their information being sent on a regular basis to Colonel George Sharpe, the chief intelligence officer with the Army of the Potomac.

Van Lew was born in New York in 1818 and had grown up in Richmond, Virginia, where her abolitionist ideals led her and her mother to free the family's slaves after the death of her father. At the outbreak of the War, she was rich, unmarried, very plain looking[24] and had decided she wanted to serve the Union cause in some way. Initially, she took food and clothing to Union POWs located in and around Richmond, something that the Richmond citizenry regarded as quite odd. Van Lew compounded this by dressing carelessly and by expressing openly her opposition to the Confederate cause. Such eccentric behaviour was the source of amusement to her neighbours and she was nicknamed "Crazy Bet". Importantly, her behaviour was regarded as harmless, which provided good cover for her intelligence gathering activities. She was able to glean valuable information from her frequent visits to Union POWs in Richmond's prisons which she passed through to Union authorities. On occasion, she helped Union soldiers escape from their Confederate prison hiding many of these escapees in a secret room in her house – the same house in which she rented a room to the head warden of one of Richmond's Confederate prisons! Perhaps Van Lew's most valuable source of information, however, was Mary Elizabeth Bowser, a former family slave, for whom Van Lew was able to find work as a domestic in the Confederate White House. Bowser was no ordinary slave. An educated, free woman she provided Van Lew with reports of what she had seen, read and heard each day and this was then passed through Confederate lines to Union forces outside Richmond.

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[23] Maslowski Peter, ***Military Intelligence Sources during the American Civil War – A Case Study:*** in "The Intelligence Revolution – A Historical Perspective; Proceedings of the 13th Military History Symposium, US Air Force Academy 1988: Washington DC, Office of Air Force History, United States Air Force, 1991

[24] The author is mindful that reference to Van Lew as "plain looking" might contravene the present day standards of "political correctness". The point needs to be made, however, that as a result of her "plainness", coupled with her other eccentric behaviours, she was often overlooked and not seen as a threat by the Confederate authorities.

Despite considerable resentment and even hostility from her Richmond neighbours, Van Lew remained living in Richmond after the War. She had spent most of her fortune supporting the Union cause and slowly sank into poverty. In 1869, President Grant appointed her Postmistress of Richmond but she lost this appointment in 1877 when Grant left office. After that, she was supported by donations from soldiers she had helped to escape from prison during the war years and she died in 1900, a very lonely old woman.

Samuel Ruth was one of Van Lew's operatives working out of Richmond. As Superintendent of the Richmond, Fredericksburg and Potomac Railroad, he was responsible for the rail movement of troops and supplies for the Confederate forces in Virginia. Besides being able to delay rail movements, Ruth was able to provide valuable information to Colonel Sharpe, about Confederate plans gleaned from troop movements, supplies and the condition of rail network for which he was responsible.

Scouts: The second category of HUMINT sources is the use of scouts. As with the use of spies, scouting had long been used in warfare and is frequently indistinguishable from spying. Indeed, the word "scout" was often used interchangeably with the word "spy" since soldiers designated as scouts often combined legitimate scouting operations in their own uniform with actual spying in enemy uniform or civilian dress. The Confederacy made its position clear on this matter in its General Orders No.100 in stating:

> *"… Scouts or single soldiers, if disguised in the dress of the country, or in the uniform of the army hostile to their own, employed in obtaining information, if found within or lurking about the lines of the captor,* ***are treated as spies****, (*emphasis added*) and suffer death."*

Scouting was decentralised with some individual commanders establishing specialised units of scouts whilst others used trusted aides, staff officers or specialist professionals to fulfil the scouting roles. Early in the War, Dodge formed a *Corps of Scouts* selected from troops of the 24th and 25th Missouri Regiments. "Stonewall" Jackson sent his mapmaker, Jedediah Hotchkiss on scouting missions in the Shenandoah Valley during 1861-62 and later in the War Sheridan established a scout battalion[25] under command of Major Henry J Young.[26]

Scouts were to perform a number of roles. At times the scout battalions conducted irregular operations similar to those of the organised guerrilla units including anti-guerrilla operations. They were responsible, also, for sabotage missions destroying facilities behind enemy lines and acted as couriers. The primary role of the scout, however, was the collection of information about the enemy's strength, location, movements and ORBAT. Commanders kept their scouting parties active and well forward of their forces' positions because as in Lee's words they needed to be mindful that:

> *"… our own movements must be in a measure regulated by the enemy…"*

There are numerous examples from both sides of the conflict of the impact that scouting operations had on the results of Civil War battles and even campaigns. Both Rosecrans and Sherman had their scouts scouring the rebel held territory well ahead of their forces bringing back valuable information on Confederate fortifications and troop strengths, movements and locations. Importantly, they were able to report on "… the condition of Confederate cavalry horses and the shortages of forage and meat in the South's interior."[27]

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[25] This scout battalion's strength was fewer than 60 men when it became operational in August 1864 and had lost 10 of these men by the time Lee surrendered in April 1865.

[26] It would appear that the establishment of specialist scouting units enabled training of the personnel in observation and strength estimation. Such training would then address an early problem encountered with both spies and scouts. Here, the reliability of information provided by these personnel was often questioned as the operatives' reports were often based on rumour rather than facts, viz., observations.

[27] Maslowski, ***op cit,*** p 45

Confederate scouts had a reputation for being audacious to the extent that Grant had reason to worry about his personal safety as one of them, a Frank Stringfellow, claimed he was so close to a group of Union officers, including Grant, that he was able to hear their conversation. Another claimed that he and six Southern scouts, dressed in blue uniforms ",,, went within one hundred yards of Sheridan's headquarters…"[28]

Cavalry Reconnaissance: The third and most important source of HUMINT in Civil War times was that of using cavalry to gain information about the enemy's position, movements and strength. The advances in weaponry, particularly artillery, had rendered the traditional dashing cavalry charge something of the past and the reconnaissance role was becoming the *raison d'être* for a cavalry capability. For both the Union and Confederate armies no source of military intelligence was more important than cavalry reconnaissance and whilst it could not guarantee success in battle, the absence or misuse of it was often a critical factor in defeat.

At the beginning of the Pope's campaign that ended with the Second Battle of Manassas, many of his 4,000 cavalrymen and, particularly their horses, were still recovering from unrelenting service during the Valley Campaign. Pope continued to drive them hard despite the heat and their exhaustion so that when the battle began his cavalry were in such deplorable condition, that he had only 500 mounts available for service. This was simply not enough to provide the necessary combat intelligence in the fluid situation confronting him and, as a consequence, a chance for a decisive victory was lost.

Hooker's planning that led to the Battle of Chancellorsville (April 30 – May 6. 1863) was superb except for one fatal flaw – he sent most of his cavalry on a raid against Lee's lines of supply and communication lines. This left the Union infantry unable to monitor Confederate cavalry reconnaissance around their defensive position and, importantly, prevent Stuart from discovering their vulnerable right flank. The rest of the story is history!

Union commanders were not alone in the misuse of their cavalry resources, thus contributing to their own defeat. During the second invasion of the North by his Army of Northern Virginia, Lee expected that JEB Stuart's cavalry would keep him informed of the movement north of the Army of the Potomac and hearing nothing surmised, albeit incorrectly, that the enemy had not yet left Virginia. Lee did not choose to use the remaining two brigades of cavalry under his command for reconnaissance missions to the east of his line of advance, such was his faith in Stuart, and, as a consequence, was drawn into battle at Gettysburg at an unexpected time and place and without the valuable tactical intelligence to which he was accustomed.[29] Stuart's captured wagons provided little compensation for the loss of intelligence!

Captured Documents and Mail: Scouts and cavalry often provided this fourth source of intelligence – captured documents and mail. The pockets of dead enemy were searched, also, and sometimes revealed important information. For example, after the Battle of Piedmont, Virginia, in June 1864, where Brigadier General William (Grumble) Jones was killed, his body was searched and contained a report allowing Union intelligence staff to establish the strength and composition of Jones's command.

An often quoted example of captured documents occurred when Stuart raided Pope's headquarters at Catlett's Station in August 1862 and captured Pope's official papers. Lee was able to establish that Pope had only 45,000 men and that he intended to wait until reinforced by

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[28] ***ibid,*** p 64, Note 49.

[29] To Lee's credit, he did act promptly when Harrison's information was made known to him through Longstreet.

McClellan before he attacked. On the basis of this information, Lee ordered a pre-emptive strike against Pope, defeating him at Second Manassas.

Potentially, the most damaging captured document during the War was Lee's "Lost Order", a copy of orders intended for General D H Hill for the Antietam Campaign. This document was found by a Union private soldier, Barton W Mitchell, wrapped around three cigars and left in a field recently occupied by Hill's division. The information contained in these orders could have enabled McClellan to deal a decisive defeat to Lee by moving against each element of his divided forces and defeating them in turn. McClellan's characteristic overcautious and slow response enabled Lee to concentrate his forces and, as a consequence, the Lost Order" had little if any effect on the tactical outcome of what was to become the costliest one-day battle of the War.[30]

Newspapers: Highly prized by both sides of the conflict as a reliable source of intelligence were the newspapers produced throughout the country. Northern papers published so much information considered of value to the enemy that William T Sherman, well known for his antipathy to journalists, was moved to write that correspondents:

> *"… should be treated as spies …* (because they reveal)*… all plans and are worth a hundred thousand men to the enemy … Napoleon himself would have been defeated by a free press"*

Yet Sherman was able to discern the Confederacy's intentions for the Western Theatre in 1864 by reading published accounts of President Davis's speeches. According to Sherman, Davis:

> *"… thus gave us the full key to his future designs … To be forewarned was to be forearmed, and I think we took full advantage of the occasion."*

With so much valuable information being printed, it is important to note that neither side was able to impose an effective and consistent system of censorship on the press despite repeated requests for discretion. Although the Southern papers tended to be more discreet than their Northern counterparts, the situation that emerged showed the ineffectiveness of voluntary restraint and self regulation.

In the summer of 1861, the primary task of Confederate intelligence operatives posted to Washington D.C. was to obtain copies of the Northern newspapers. The information gleaned from these papers enabled the assignments and the unit strengths up to divisional level to be established for the Confederacy.

Both Grant and Lee were avid readers of the enemy's newspapers with Grant receiving the Richmond papers at his headquarters on a daily basis during the latter part of the War. Grant considered the information these papers contained to be reliable and not only did he read them but had summaries of military information contained in them, something now called an INTSUM, telegraphed to key personnel in Washington. Matching Grant's scrutiny of the Southern papers was Lee's study of the Northern papers and it was his custom to forward to President Davis the papers drawing the President's attention to matters of special interest. Lee advised his senior officers to obtain copies of the Northern papers as the contents provided a sound indication of the enemy's future initiatives.

Given the use made by both sides of gleaning information from newspapers, it is not surprising that the newspapers became very important purveyors of false information and, therefore, faulty intelligence planted by both governments' agents and sympathisers. It is worth mentioning, also,

[30] It is worth noting, however, that although Antietam was not a tactical victory, it was a strategic Union victory, albeit dearly purchased, with Lee's forces withdrawing south, out of Maryland and it discouraged European recognition of the Confederacy.

the 'Personals' in the newspapers were "loaded" with intelligence data in key words, names and dates.

Interrogation of Prisoners etc: The sixth source of HUMINT was a lot less "sexy" than 'spying' and certainly less dangerous than 'scouting' or 'cavalry reconnaissance'. Much of the time it was as mundane and boring as reading the enemy newspapers. This was the interrogation of a range of people associated with the War in some way and included spies, scouts and soldiers captured during operations, deserters, contrabands (escaped slaves) and refugees. These interrogations were found to be particularly valuable in providing detail about enemy unit location and movements provided that the information could be processed and forwarded to the relevant friendly forces commanders in a timely fashion. Furthermore, contrabands and those still slaves, were great sources for the invading Union forces for information on Confederate strengths, disposition etc, and for local topography including roads and railroads.

Lee sought to address the "leakage" of such information to the Union forces when prior to the 1864 campaigns he issued a directive to his troops advising them, if captured to:

> "… preserve entire silence with regard to everything connected with the army, the positions, movements, organizations, or probable strength of any portion of it…[31]

Lee may well have believed that the major source of such "leakages" was through the black population but, in the last year of the War, the worst "information haemorrhage" regarding the Army of Northern Virginia came from POWs and deserters from that Army!

Balloonists and Signals Corps Stations of Observation: The final HUMINT source to be considered might be termed "visual observation" and in the context of America's Civil War involved two newer methods that warrant special mention:

- The use of balloons; and
- Signals Corps Observation Stations.

The use of war balloons had a short history beginning in France at the end of the 18th Century. At the same time, the United States started to use of balloons for non-military purposes and sparked considerable interest amongst a small group of American enthusiasts with the first ascent occurring in the country in January 1793.

Suggestions that balloons might be used for military purposes during the Seminole and Mexican Wars came to nought but during the Civil War both sides used balloons for aerial reconnaissance although the resource poor South could not compete with on anything like equal terms with the industrialised North. The few Confederate balloons were built early in the War and saw service from June 1861 until the end of 1862. The most famous Confederate balloon was the so-called "Silk Dress" balloon, built in Savannah according to tradition[32] from donated dresses and transported to Richmond where it made daily missions during and after the Seven Days Battles until it was captured by Union forces on July 4, 1862. The South then built only one more balloon which it used in the Richmond and Charleston areas before being blown away by a strong wind. This ended the Confederacy's brief and limited use of aerial reconnaissance in warfare.

In the North, civilian balloonists came to Washington to offer their services. Amongst those volunteering was Professor Thaddeus Lowe who gained the support of Joseph Henry from the Smithsonian Institution and subsequently, George B McClellan. By early 1862, Lowe's Aeronautic Corps and had at least seven balloons operational during the Peninsula Campaign and the Seven Days Battles. Although this balloon corps was inactive during the Second Manassas and

[31] Maslowski. Peter, ***op cit,*** p 49.
[32] Actually this balloon was built from lengths of new silk purchased in Savannah's shops.

Antietam Campaigns, the balloons played a modest role in both the Fredericksburg and Chancellorsville Battles. Immediately after Chancellorsville, Lowe resigned due to a number of factors including his poor health, the fact that his patron McClellan was no longer in command and his view that his dedication was being undercut by army red tape and a reduction in pay. Lowe's resignation ended abruptly the balloon corps' existence.

The value of the balloon as an intelligence source lay in its elevation above the battlefield. From an elevation of 500 feet or more it was possible under favourable conditions and with competent observers to glean a comprehensive picture of the enemy's strength, deployment and movements. Furthermore, the use of a balloon in this way provided a measure of security not available to ground-based intelligence sources. Notwithstanding this advantage, the requirements for *'favourable conditions'* and *'competent observers'* indicate that balloons had limitations as an intelligence tool. High winds could keep the balloon from attaining sufficient height to be effective and affected the stability of the observers' basket rendering observation difficult. Fog and haze, battlefield smoke and rain hindered vision from the balloon. The North's use of civilian balloonists brought with it the problem, also, of their not being able to accurately estimate the strength of enemy forces. It was for this reason that Union commanders often went aloft themselves or sent trusted staff officers to make ascents.

Despite these limitations on their use, the advantages balloons offered were recognised by commanders on both sides but, after May 1863, neither side used balloons again, the Confederates because they could not afford the expense, the Federals because they could not convince Thaddeus Lowe to return to active duty.

Although the use of balloons lasted only from the spring of 1862 to the spring of 1863, Signal Corps Stations of Observation were used throughout War. Prior to the War, the United States Army had only one Signals Officer, Major Albert J Myer. Prior to the War, Myer had devised and successfully field-tested a system of visual signalling developed with the assistance of Lieutenant Edward Porter Alexander. When war came Myer remained loyal to the Union while Porter Alexander "went south". Both men introduced *ad hoc* signals services into their respective armies involving stations of observation and communications.

The observation stations had a number of similarities with the use of balloons. Height was a *necessary* but *not sufficient* condition for their effective utilisation and the choice of high ground (mountain and hill tops, tall trees) was supplemented by the use of man-made structures including rooftops, court-house cupolas and church steeples. Height did not guarantee unimpeded observation, however, and as with the balloon, atmospheric conditions and enemy fire played a significant role in the results that could be obtained.

Importantly, observations in themselves were of little or no value unless the observations could be communicated to the unit/formation commanders in a timely manner. This requirement led to the observers sending signals using telegraphic facilities or for shorter ranges signal flags. The use of signals for this purpose brought with it a necessity for the enemy to try to intercept the signals, which in turn forced signallers to use codes and ciphers to foil any attempted interception and the use of codes and ciphers led to the establishment of "code-breaking" facilities within the signals agencies. Thus, the need to communicate both efficiently and effectively pushed Civil War armies beyond HUMINT into the realm of SIGINT, another one of the Civil War "firsts" that became an integral part of modern warfare in the 20th Century.

Myer's Signals Corps provided front-line communications for Union forces by sending messages using one of methods:

- Using coloured flags waved to imitate the dot/dash concept of telegraphy (day-time use);
- Replacing the flags with torches burning with turpentine for use at night;
- Using coloured lights and rockets; and

- Using a field telegraph system[33] that required neither batteries nor trained operators.

The introduction of field telegraphy by Myer brought the Signals Corps into a "territorial dispute" with the newly established United States Military Telegraph (USMT) Corps which was headed by the pre-war superintendent of the Western Union Company, Anson Stager.[34] The USMTC, which utilised Morse code for its communications, had been tasked to operate existing commercial lines and to build new lines as required. Initially, the USMTC provided only medium and long range communications but it made little sense to have Signals Corps personnel to transmit battlefield telegraphy and longer-range messages wired by USMTC, particularly when Myer took the decision to convert to Morse telegraphy. In the power struggle that followed, Myer lost! He was ordered to hand over all his field telegraph equipment to Stager and, from November 1863, Signals Corps personnel were used for visual signalling only.

The use of the telegraph was of great importance to the conduct of the War. For the fiscal year ending June 30, 1863, Stager reported that USMT had sent or received 1.2 million messages ranging in length from ten to more than a thousand words. Over the whole period of the War an average of 4,500 military and government telegrams were processed daily.

Codes and Ciphers

Both sides of the Civil War conflict used codes and ciphers to conceal the meaning of messages they sent during the War, although the use of 'ciphers' was much more common than any 'codes that were devised. Essentially the difference between a 'code' and a 'cipher' is that a code uses a system of random letters or numbers to represent words and requires a special dictionary or "code-book" to encode and decode a message. Words or phrases may be substituted whole as linguistic units. Each code-book contains a large list of words, each of which has its own grouping of letters and/or numbers and there is no logical connection between the code group for a word and the actual word. Codes are both difficult to break, tedious and difficult to construct and require a lot of work to use. As a consequence, genuine codes were not used extensively during the Civil War.

The most common form of "secret writing" used during the War was the cipher, which can be thought of as a system of "scrambling the contents of a message to conceal its meaning. A cipher is not as difficult to break as a genuine code since it is essentially a method for scrambling the alphabet. It may take a skilled analyst (cryptographer) only a handful of messages to break the cipher, particularly when it is recognised that:

- Only a few words have two letters;
- Only a few more have three letters; and
- Some letters occur in patterns such as "th", "tt" and "qu".

Presented overleaf, is an actual cipher used by Elizabeth Van Lew during the War. It was found written on a small piece of paper hidden in the back of her watch after her death.

[33] This system was based on a device invented by George Beardslee and used magnets to operate it rather than batteries.

[34] Stager developed for McClellan's 1861 West Virginia Campaign the first military cryptographic cipher that fitted on a single card. This original system was refined progressively throughout the War, primarily by the War Department's cipher operators. The twelfth and final version of the cipher became operational in March 1865, its code-words and plain English equivalents filled 48 printed pages.

Elizabeth Van Lew's Cipher Grid

First Digit (Row No.)	**6**	R	N	B	H	T	X
	3	V	I	U	8	4	W
	1	E	M	3	J	5	G
	5	L	A	9	O	I	D
	2	K	7	2	Z	6	S
	4	P	O	Y	C	F	Q
Second Digit (Column No.)		**1**	**3**	**6**	**2**	**5**	**4**

It is noted that both the rows and the columns are numbered randomly. To encipher a letter or number the digits of its row and column are recorded. For example, if the message to be enciphered was:

SEND 12 HORSES

The letter "S" is in row 2, column 4 and is written as "24"; the letter "E" is in row 1, column 1 and is written as "11"; the letter "N" is in row 6, column 3 and so on. Enciphered, the phrase would read:

24116354 3326 624361242324

The ciphered message may be made more difficult to decipher if the message is broken into sets of four or five letters. Since a message might not divide evenly into groups of four or five, additional numbers, called *'nulls'* are added to the end of the message. In this case, the message would read:

24116 35433 26624 36124 23243 26479

Where the last six digits, viz., "3 26479" are the nulls and are without meaning for the message.

Van Lew's cipher had several shortcomings. First, a copy of the grid was needed to use it. Importantly, it appears that she used the same cipher for all her messages. In this regard, she was very fortunate that none of her messages were intercepted since it would not have taken long for a skilled cryptographer to break the cipher and compromise her espionage operation.

The main cipher used by the Confederates throughout the War was the so-called "*Vigenere Table",* named after its 16th Century inventor. A copy of this Table is presented with explanation of its use as APPENDIX-A to this paper.

The Vigenere Table uses a key phrase to generate the cipher and the Confederates blundered in that they did not change the key phrases to be used often enough. Indeed, only three phrases were used throughout the entire War – *"Manchester Bluff", "Complete Victory"* and at the very end of the conflict for only a relatively small number of messages, *"Come Retribution".* This flaw was to prove fatal with the Confederacy's Vigenere cipher being broken by three young telegraph operators working with the USMT Corps. These three men, David Home Bates, Albert Chandler

and Charles Tinker, were teenage telegraph operators at the beginning of the War. Nicknamed the "Sacred Three" by the end of the War, these three were routinely deciphering all Confederate messages coming their way and provided enormously valuable information for the Union hierarchy.

An Intelligence Case Study: Jackson in the Shenandoah Valley

Context: In March 1862, the Union cry "On to Richmond" led the ever-cautious George Brinton McClellan, commanding the 155,000 strong Army of the Potomac, to conduct an amphibious advance on Richmond. He moved the Army by sea to Fort Monroe on the Virginian Peninsula between the York and James Rivers with a view to moving his troops up the Peninsula the sixty miles to Richmond. Various Federal forces under command of Nathaniel Banks comprising about 30,000 troops were tasked to protect Washington and in the Appalachian Mountains to the west other Union generals, Frémont and Shields, deployed forces of various strengths.

At this time, Joseph E Johnston with his Army of Northern Virginia (40,000 troops) were at the Rappahannock River some forty miles north of Richmond and would subsequently deploy to meet the threat from McClellan moving up the Peninsula.

Confronting the Union forces around Washington and in the mountains but, also, threatened by them, was a hero of First Manassas, Thomas J (Stonewall) Jackson, with his Valley Army[35] of fewer than 5,000 men. Jackson, a West Point graduate (Class of 1846), was a "Valley" man as were many of his men, particularly those of the "Stonewall" Brigade. He had resigned his commission in early 1852 and from 1851 – 1861 was Professor of Artillery Tactics and Philosophy at the Virginia Military Institute in Lexington at the southern end of the Shenandoah Valley. A key member of Jackson's staff at this time was a civilian, Jedediah Hotchkiss, a former school teacher, whose interest in map-making had been used previously by Lee in 1861. Hotchkiss was introduced to Jackson who was impressed by his local knowledge and appointed him to his staff. Jackson's first order to Hotchkiss involved making:

> *"… a map of the Valley from Harper's Ferry to Lexington, showing all the points of defense and offense between those two points"*[36]

Although untrained in cartography, Hotchkiss was very methodical. He surveyed the Valley's terrain on horseback and prepared sketches and notes from his observations that enabled him to compile a map for Jackson. The finished product displayed all of the defects of American maps of the period – it had a "messy" unfinished appearance, there were no contours or spot heights and it had both too much and too little detail. It provided Jackson, however, with a map based on both local knowledge and contemporaneous observation[37], something that the Union enemy simply did not have.[38]

Jackson was tasked to protect Johnston's flank, to hold the Federal forces in the mountains and to deter Banks from bringing his force defending Washington south to support McClellan's intended advance on Richmond. What Jackson achieved in the months of March, April, May and June 1862 is described by Keegan as defying:

> *"…every probability in the most brilliant exercise in manoeuvre warfare, depending wholly upon superior use of intelligence, in the broadest sense, perhaps ever achieved"* [39]

[35] Jackson's force was formally the 'Army of the Shenandoah Valley District'.

[36] Keegan John, ***op cit,*** p 79.

[37] Essentially, Hotchkiss's map indicated where the gaps in the mountain ranges were, bridges and fords over rivers, roads and distances between towns/villages.

[38] Indeed, even in 1864, when General Sheridan was conducting operations against Jubal Early in the Shenandoah Valley, Sheridan was using a 30-year-old inaccurate civilian map of the Valley.

[39] Keegan John ***, op cit,*** p 81.

Jackson's orders were to avoid pitched battle but to operate so that Banks could not reinforce McClellan as he marched on Richmond. Although Jackson was to fight a number of pitched battles he did achieve the outcome of preventing Banks reinforcing McClellan.

Early Battles – Tactical Defeats but Strategic Victories: On March 12, 1862, Banks crossed the Potomac River at Harper's Ferry and moved into the Shenandoah Valley where his forces occupied Winchester. By March 20, however, Banks and two of his three divisions were moving east out of the Valley en route to Manassas. McClellan wanted to redeploy Banks' force to defend Washington, thus freeing other units for his Peninsula Campaign.

On March 23, Jackson moved against Banks' third division at Winchester. Just south of Winchester, at Kernstown, Jackson attacked what he thought was a four-regiment rearguard but came up against the entire 9,000-man division. The ensuring battle was a tactical defeat for the Confederates with Southern losses of 455 KIA and WIA and 263 taken prisoners. Whilst the Union losses were 568 killed and wounded, Jackson's Valley Army had come off proportionally worse and was forced to retreat from the field. This *tactical* defeat, however, became a *strategic* victory for the South. Jackson's Valley Army attack was perceived as a threat to Washington and resulted in not only the orders for the move of Banks' two divisions to Washington being cancelled but had 35,000 men under command of General Irvin McDowell detached from McClellan's command to be kept guarding Washington while Banks' two divisions returned to the Shenandoah Valley.

The Campaign Continues: Jackson's withdrawal south from the Kernstown/Winchester area was not followed up aggressively by Banks, whose three divisions were now back in the Shenandoah Valley. Jackson took up a defensive position near Mount Jackson on the North Fork of the Shenandoah River where, during the period April 3 – 17, both sides engaged in minor skirmishing with Jackson content to keep Banks "in the game" in this way.

At dawn on April 17, however, Banks launched a surprise infantry attack supported by cavalry. Outnumbered nearly two-to-one, Jackson's Valley Army had no other option available but to withdraw quickly further south. Two days of forced marching brought Jackson to Swift Run Gap, one of the key passes through the Blue Ridge, out of reach of the Union pursuit and where he would establish his force's new defensive position.

Although Union forces dominated much of the Shenandoah Valley, Jackson believed the Valley Army could still manoeuvre successfully and defeat them in a mobile campaign.

From April 30 until June 10, 1862, Jackson's Valley Army or "foot cavalry" as they became known, travelled nearly 700 km, most on foot but some by rail, and fought successfully a series of battles that was to prove decisive in thwarting McClellan's plans to capture Richmond. The key to this rapid and skilled movement of the Valley Army was the thorough knowledge of the Valley's geography by Jackson and his staff something that could not be matched in the Union forces they were confronting.

From the end of April 1862, Jackson set out to support Edward Johnson's small force from attack by Frémont coming east out of the Allegheny Mountains. By May 6, the Valley Army had concentrated at Staunton and left the next day to join Johnson. On May 8, skirmishes started between the Valley Army and a detachment of Frémont's forces commanded by General R H Milroy. Jackson had hoped to surprise Milroy but failed to achieve this and in the confused fighting that followed the Confederate losses were heavy. Whilst this was a Confederate victory in the sense that Milroy broke off the action and withdrew from the field of battle, Jackson recognised it was a costly victory and reproached himself for his management of the battle. It was a mistake that Jackson would not make again in the Valley campaign.

By mid-May, Jackson had two other factors in his favour; first there was Ewell's division was now available for Jackson, bring the total strength of his forces to around 16,000. Importantly, there was, also, the deteriorating quality of Northern intelligence. In this regard, Banks was unsure of the Confederates, locations and the situation would get worse. By May 21, Banks had Jackson

15 km west of Harrisonburg and Ewell in the Swift Run Gap some 60 km apart and with the gap widening. Actually, by then Jackson had moved east to the Luray Valley, via the Massanutten Gap where Ewell had joined him and their combined force was moving northwards for the first of the series of successful engagements (May 24) – against the Union detachment at Front Royal that was guarding the Manassas Gap railroad bridges east of Strasburg.

Subsequently, Jackson's forces were to out-manoeuvre and defeat Union forces at Winchester (May 24 - 25), Cross Keys (June 8) and Port Republic (June 9) and drive them out of the Shenandoah Valley.

Jackson was then in a position to take his Army to Richmond where he supported Lee's efforts during the Seven Days Battles to drive McClellan from the Peninsula.

In summarising Jackson's success in his 1862 Valley Campaign, Keegan provides a most useful analysis that highlights the value of Jackson's intelligence resources to the success of the Campaign:

> *"… Jackson's success was due in large measure to his ability … to think faster and more clearly than his opponents and to calculate more moves ahead, making good choices, rejecting bad. That ability, however, rested on his possession of superior knowledge of the Valley's geography and of superior local intelligence, constantly refreshed by the work of a busy intelligence chief, Jedediah Hotchkiss and a friendly population. The best generals have always valued detailed knowledge of the topography, almost above any other sort of intelligence. Jackson was a better general than any of his opponents and his operations in the Valley, assisted by McClellan's refusal to profit by any of the advantages the North's material superiority gave him, assured the successful defence of Richmond… The proof of his generalship was demonstrated above all, however, by his exploitation of the secrets of place and passageway in the complexity of the Shenandoah Valley, which he possessed and the enemy did not. He deserved his triumph."*[40]

Whilst there are many factors influencing success in warfare, sound military intelligence provides a foundation from which the conduct of successful operations at all levels is built. Conversely, poor intelligence or the lack of it is a recipe for operational disaster. Nowhere are these principles more evident than in Jackson's Valley Campaign where the superior local knowledge and topographical facilities available to the Confederates were in stark contrast to what the Union forces utilised.

Finally, How Accurate Was Civil War Intelligence?

There is little doubt both sides of the Civil War conflict were not prepared in terms of a military intelligence capability when war began in 1861. Coming from the lowest of resource and knowledge bases, much was achieved over the four years of the War. Indeed, a significant component of modern day intelligence practice had their origins and early development during this period particularly with respect to HUMINT and, to a lesser extent, with SIGINT. Yet despite the many achievements with these sources of intelligence and the efforts of dedicated and clever men to analyse, evaluate and interpret the information collected, Civil War military intelligence was always less than perfect, as evidenced by the numerous and successful surprise attacks occurring over the whole period of the War.

In seeking to establish some reasons for the intelligence successes and the failures during the Civil War, it is suggested that the fragmented organisation for intelligence activities on both sides

[40] ***ibid,*** p 97 - 98

was a limiting factor in the effectiveness of the processes, particularly at the higher levels (Corps and Army levels). It was only when some coordination of the intelligence activities was initiated at the higher levels of command that the effectiveness of the processes could be in any way deemed as acceptable. Interestingly, a major source of sound and relevant intelligence, in some respects unique to this conflict, related to an comprehensive understanding of the enemy commanders' likely battlefield behaviour and performance gleaned from officers at all levels having served together in the earlier Mexican and/or Indian Wars or having studied together as cadets at West Point prior to commissioning.

Furthermore, despite the emphasis given to espionage by memoir writers and later Civil War authors, it was the knowledge and understanding of the enemy within the various battlefield environments, established by means other than with spies, that resulted in the more significant intelligence successes of the War.

The ability to communicate relevant intelligence in a timely manner to be useful to commanders at various levels was another limiting factor of Civil War intelligence due primarily to the limitations of speed of transport of the time and the primitive nature of available technology. Successful intelligence initiatives, however, usually involved the force commander in the initial specification and briefing of the task/operation and the results of the operation were provided directly to him by his intelligence operative(s) with minimal or no filtering of the information by staff officers.

As with today's intelligence, America's Civil War had its successes and its failures and it is the failures that receive the most scrutiny and comment. By its very secret nature the successes in military intelligence often receive little or no recognition and it is difficult, therefore, to assess the effectiveness of intelligence resources and organisations in the same way that other organisations are evaluated.

Furthermore, is it, therefore, just a rationalisation to assert that intelligence is, by its very nature, always incomplete or is it true that there are always some unanswered questions?

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APPENDIX A: THE VIGENERE TABLE

The principal cipher used by the Confederates during America's Civil War was based on the following table:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
A	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
B	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a
C	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b
D	d	e	f	g	h	l	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c
E	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d
F	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e
G	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f
H	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g
I	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h
J	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i
K	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j
L	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k
M	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l
N	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m
O	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n
P	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
Q	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
R	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
S	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
T	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s
U	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t
V	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
W	w	x	y	z	a	b	c	d	e	f	g	h	l	j	k	l	m	n	o	p	q	r	s	t	u	v
X	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w
Y	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x
Z	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y

This table is called the *Vigenere Table,* bring named after Blaise de Vigenere who was from the court of Henry III of France in the sixteenth Century. He first proposed the table as the basis for a cipher that uses the so-called "poly-alphabetic" substitution. It will be noted that each row of this table corresponds to a "Caesar Cipher", viz., each row has a fixed shift of the letters of the alphabet, which in this case the shift is "0" for Row 1, "1" for Row 2 and so on… and the last row, Row 26 or Z, the shift is '25". Unlike the Van Lew cipher table, the *Vigenere Table* can be generated from this algorithm.

The Vigenere Cipher uses this table together with a keyword or phrase to encipher a message. As noted in the paper (page 15), the Confederacy used only three Key phrases during the Civil War and although this was better than Van Lew's cipher, it was compromised and messages sent using it were able to be read by the enemy.

To demonstrate how the Vigenere Cipher worked consider the following simple message:

'enemy forces are retreating'

The plain text message is placed with the key phrase (in this case the Confederate's "come retribution" is used and the ciphered message generated from the Vigenere Table as follows"

Key Phrase: c o m e r e t r i b u t i o n c o m e r e t r i b u t i o n ....

Plain Text Message: e n e m y f o r c e s a r e r e t r e a t I n g ....

Ciphered Message: **g b q q j h i k f n t z s e g h d i r x b e o**

For any message, the intersections of the row of the key phrase letters and the column of the corresponding plain text message letters (or vice versa) yield the cipher text letters. Thus, in this message the first letter is "c" for the key phrase and "e" for the plain text, the intersection of which is "g" ; the second letters are respectively "o", "n" and "b"; the third letters "m", "e" and "q" and so on …

Deciphering the message involves a similar process with the key phrase letters and the cipher-text letters being used for the rows and columns respectively which gives the intersections as the plain text letters as follows:

Key Phrase: c o m e r e t r i b u t i o n c o m e r e t r i

Cipher-text Message: g b q q j h i k f n t z s e g h d i r x b e o

Plain-text Message: e n e m y f o r c e s a r e r e t r e a t i n g

The Vigenere Cipher has features that make it a useful field cipher in that its key and table are "portable", it requires no special equipment to use and is simple to apply. The encryption and decryption processes involved, however, are slow and would not be of particular relevance or application in the heat of battle.