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While current cavalry leaders are trained experts in tactical reconnaissance, they are lacking in the training and understanding of the tactical military intelligence collection disciplines and the intelligence collection assets employed by the military intelligence personnel in their units. Although many people in the military and defense community argue that the most valuable intelligence collection can simply come from sensors and drones, this paper argues that the most valuable reconnaissance and intelligence collected comes from human intelligence (HUMINT), and further demands that cavalry leaders in reconnaissance organizations have an adequate knowledge and understanding of the tactical collection, analysis, planning, and management of HUMINT, OSINT, and SIGINT. Small adjustments in the program of instruction in the Army's reconnaissance schools aimed at improving the understanding of cavalry leaders in these intelligence disciplines will increase tactical effectiveness and operational planning in reconnaissance organizations.

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RECONNAISSANCE AND INTELLIGENCE:
TRAINING THE CAVALRY LEADER FOR THE FUTURE BATTLEFIELD

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
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Executive Summary

Title: Reconnaissance and Intelligence: Training the Cavalry Leader for the Future Battlefield.

Author: Major Justin D. Malone, United States Army

Thesis: The U.S. Army's Armor Branch reconnaissance schools have focused on training cavalry leaders in reconnaissance and security tasks, however they are neglecting to fully prepare them for the increasing tactical intelligence collection and analysis demands required to conduct reconnaissance in future conflicts. Furthermore, U.S. Army Cavalry schools should include instruction focused on tactical intelligence collection, analysis, planning, and management of human intelligence (HUMINT), open source intelligence (OSINT), and signal intelligence (SIGINT).

Discussion: Many U.S. Army Cavalry organizations are organized and equipped for intelligence, surveillance and reconnaissance (ISR) missions to combat unconventional threats in support of counterinsurgency operations. Although some in the Armor and Cavalry community argue for the return of a heavier armored cavalry organization, trends in modern warfare indicate the increasing demand for properly manned, equipped, and integrated ISR organizations. Current ISR organizations are reasonably manned with military intelligence specialists and equipped with the latest intelligence and surveillance technologies. Concurrently these units are heavily manned with cavalry scouts (19 D), and mainly led by armor officers (19 A) who have received training from the Army's reconnaissance and cavalry schools. While these cavalry leaders are trained experts in tactical reconnaissance, they are lacking in the training and understanding of the tactical military intelligence collection disciplines and the intelligence collection assets employed by the military intelligence personnel in their units. Although many people in the military and defense community argue that the most valuable intelligence collection can simply come from sensors and drones, this study argues that the most valuable reconnaissance and intelligence collected comes from human intelligence (HUMINT), collected by the cavalry scout who should be trained and equipped to combine technological forms of collection with HUMINT. Additionally this study argues that trends in unconventional or small wars further demands that cavalry leaders in reconnaissance organizations have an adequate knowledge and understanding of the tactical collection, analysis, planning, and management of HUMINT, OSINT, and SIGINT.

Conclusion:
To properly apply the fundamentals and principles of reconnaissance, the cavalry leader should be an expert at managing information and intelligence. The demands of hybrid threats and asymmetric warfare will only increase into the future. Therefore the reconnaissance leader must especially be an expert in collecting, analyzing, and exploiting HUMINT, OSINT, and SIGINT. Cavalry leaders must learn to manage these forms of intelligence simultaneously in a tactical environment. To adequately do this, the Army must realize the stark connections between the Armor and the Military Intelligence Branches. Only with more cross-branch cooperation can the Army properly organize, train, and equip its reconnaissance elements to be prepared for future conflicts.

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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 MARINE CORPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

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Preface

With twelve years as an Armor officer in training, leading, and planning assignments mainly in reconnaissance, it has been difficult for me to call myself a tanker. My first five years were spent as a scout platoon leader and staff officer in reconnaissance units and training at the Army's reconnaissance schools: the Reconnaissance and Surveillance Leader's Course and the Cavalry Leader's Course. In an effort to be an expert in my field, I have endeavored to study and analyze the organizations in which I have served. In that pursuit I attended graduate school to acquire a Master of Public Administration degree. My intention was to prepare myself for higher levels of organizational leadership and responsibility. The focus of my study was national security, and through it, I was able to learn a great deal about organizational, training, and management issues within the intelligence community. It was over a year ago, while studying the intelligence community, that I realized how valuable a better understanding of the military intelligence collection disciplines would have been in helping me plan and lead reconnaissance operations at the company level. It was due to this realization that I decided to undertake this study.

Several people deserve thanks for assisting me in writing this paper. To Dr. John Tidd, thank you for encouraging me to pursue this study. To Dr. Joseph Ryan, thanks for your guidance and direction throughout the research and writing process. To the staff at the United States Army Heritage and Education Center, thank you for the world class support and assistance. To the world's greatest and longest serving English teacher I know, thank you, mom, for helping me work to improve the grammar of this paper. To my wife Ashley, I am truly blessed to be called yours, and I thank you for your unconditional love and support during this academic year and for always being a faithful editor of anything I attempt to write.

Introduction

"How can any man decide what he should do himself, if he is ignorant of what his enemy is about."- Baron Antoine Henri von Jomini

Cavalry forces have been using mobility to conduct reconnaissance, security, and deep strike missions for centuries. However, with the demise of the horse cavalry and the dawn of mechanized infantry, the Cavalry lost its control over mobility in the U.S. Army. Nevertheless, the U.S. Armor Branch has emerged as the leading branch of mounted maneuver, and has maintained the traditional roles and spirit of the cavalryman. Regardless of the operational environment or the advances in technology, the cavalry has adapted and remains the primary provider of valuable tactical reconnaissance and intelligence.

The nature and principles of reconnaissance are timeless, but the means by which it is conducted are changing. Advances in technology continue to increase the speed and transfer of information, as various disciplines in intelligence collection place increasing demands on the cavalry leader. While the U.S. Army's Armor and Cavalry schools have placed a premium on training leaders in the traditional reconnaissance and security tasks, they are neglecting to fully prepare future cavalry leaders for the increasing tactical intelligence collection and analysis demands required to conduct reconnaissance in future conflicts. Furthermore, Army reconnaissance schools should include instruction focused on tactical intelligence collection and analysis in the forms of human intelligence (HUMINT), open source intelligence (OSINT), and signals intelligence (SIGINT).

The U.S. Cavalry Debate

To build the case for the addition of intelligence training into Army reconnaissance schools, an examination of the historical debate over the primary role of U.S. Cavalry is

informative. Historical examples demonstrate how reconnaissance has successfully built the intelligence picture in conventional and unconventional warfare. Historical theory for the implementation of the U.S. Cavalry coupled with a review of the doctrinal context of reconnaissance training for the cavalry scout, illustrates the historical connection between the reconnaissance and intelligence communities. The final section provides analysis of the current operational environment, a review of Armor Branch's reconnaissance schools, and the argument for additional intelligence collection and analysis training for the U.S. Cavalry leader.

The U.S. Army Cavalry has been conducting reconnaissance and security missions since its inception. However, since the interwar period and the transformation from horse to mechanized cavalry, two groups within the community have emerged. One group has argued for the presence of a lighter cavalry force with the primary role of reconnaissance, where covert surveillance and information collection are the main focus. The other group has argued for a heavier cavalry force focusing on offensive maneuver and security missions.[1] The emergence of the airplane further complicated the discussion, pushing the role of strategic reconnaissance into the realm of the Air Force. Regardless of the debate, historical cavalry successes confirm the value of the ground reconnaissance element which provides operational and tactical intelligence. History also confirms the need to have cavalry forces organized and trained for both reconnaissance and security missions.[2]

Before entering into the discussion, it is necessary to understand, in a general sense, what reconnaissance and security mean. Although there are various types of reconnaissance in doctrine, reconnaissance generally takes on two major forms, one covert and the other overt.

[1] Matthew D. Morton, *Men on Iron Ponies: The Death and Rebirth of the Modern U.S. Cavalry*, (Dekaulb: Northern Illinois University Press, 2009), 8-9.
[2] Robert S. Cameron, "Losing Our Way: The Disassociation of Reconnaissance and Security Organizations from Screen, Guard, and Cover Missions," *Military Review*, November-December (2014): 33.

When discussing reconnaissance and surveillance doctrinally, tacticians are most commonly referring to the independent reconnaissance conducted by cavalry scouts in small units or teams. This form is used to collect information about the enemy and is intended to be done covertly. The second form is called a reconnaissance in force and is accomplished by a larger cavalry force, which has the intention to fight for information and develop the situation for a larger combined arms force. Finally, security consists of screen, guard, and cover missions. Through security missions, a cavalry force protects the main fighting force in a maneuver, provides early warning of enemy in the area of operation, or simply prevents an enemy force from obtaining information on friendly forces.[3] For clarity, security missions are simply a method for conducting counter-reconnaissance.

The Historic Importance of Reconnaissance and Intelligence

General George S. Patton said, "You can never have too much reconnaissance." Reconnaissance should be pursued with vigilance not only prior to, but all the way through mission execution. Since the enemy has a will and since a measure of uncertainty about the enemies' intentions always exists, the pursuit of intelligence through reconnaissance should be one of the combat leader's most important objectives. Furthermore, success or failure in battle is almost always dependent upon the accuracy or inaccuracy of intelligence. Intelligence is dependent upon reconnaissance. To illustrate the central value of reconnaissance and intelligence collection, it is important to use historical examples to highlight how reconnaissance has enabled battlefield success in both conventional and unconventional conflicts.

One of the earliest and most vivid examples can be found in General John Buford's use of the 1st U.S. Cavalry at Gettysburg. Buford's force provided the forward security element for the Army of the Potomac as it followed the Confederate forces north into Pennsylvania. His scouts

[3] David Henderson, *The Art of Reconnaissance* (London: Murray, 1911), 10, 11.

were able to see the enemy's movements[4], and Buford sent valuable reports of the enemy's composition and disposition to Union corps commanders. Additionally, he analyzed the landscape, occupied the key terrain around Gettysburg, and developed the situation for the Union Army. Buford's boldness in holding key terrain against a larger force and reporting timely and accurate information about the Confederate forces enabled a Union victory at Gettysburg.[5]

While Buford's service at Gettysburg provides a conventional example of the value of the cavalry's reconnaissance and security mission, the long range reconnaissance patrols conducted by U.S. Army Rangers in Vietnam provides an equally valuable unconventional example. United States forces in Vietnam quickly discovered that different reconnaissance and counter-reconnaissance tactics were needed to defeat the insurgent forces. The Viet Cong used the jungle terrain for camouflage, but they also made use of the human terrain by blending into the local population.[6] To counter these insurgent tactics the Special Forces, as well as the Rangers Long Range Reconnaissance Patrols (LRRPS), conducted reconnaissance and counter-reconnaissance patrols along the borders of North and South Vietnam, Laos, and Cambodia. Their tasks were to provide intelligence on enemy movements and early warning for larger combat units about the probability and location of an enemy attack. In this context their intentions were to use stealth and avoid open combat with the enemy, maintain visual contact, and report timely and accurate information.[7] Although the Vietnam War ended in a strategic loss for the U.S., the efforts of the

[4] Due to General Lee's lack of cavalry forces covering his movements during this operation. General J.E.B. Stuart was in the process of conducting disruption operations deep into Northern territory threatening critical Union lines of communication but neglecting his critical operational role of providing vital reconnaissance and security to Lee's main forces.
[5] Paul J. Laughlin, "Reconnaissance and Security," *Armor: Mounted Maneuver Journal, January-March* (2013): 47.
[6] Phillip H. Stevens, *Search Out the Land: A History of American Military Scouts* (Chicago: Rand McNally, 1969), 177.
[7] Ibid, 179.

LRPPS led to many tactical and operational successes for U.S. forces and therefore, provide an example of unconventional reconnaissance and intelligence operations worth emulating.

Operation Neptune Spear, the special forces operation that led to the killing of Osama Bin Laden provides one of the most recent and vivid examples of how reconnaissance and intelligence are central to defeating the enemies of the United States. This operation consisted of a "whole of government" approach combining all the instruments of intelligence collection to destroy a strategic target, the leader of Al Qaeda. The bulk of the reconnaissance was conducted with aerospace technological collection sources, the bulk of the human intelligence collection and analysis for this operation was accomplished by the Central Intelligence Agency (CIA), and the tactical execution for it was conducted by special operators.[8] The valuable lessons learned from the interagency team success in this operation can have wider applications for how conventional reconnaissance organizations can best be used to conduct counter-insurgency and counter-terrorism operations. In small wars the number of insurgents and targets are simply too high for only special operators to act on. Conventional reconnaissance organizations working in coordination with special operations forces and members of the intelligence community can also respond to a large volume of tactical reconnaissance and intelligence demands, but they must have leaders who are equipped with the knowledge to do so.

Cavalry Doctrine, Theory, and the Reconnaissance and Intelligence Link

Historic cavalry doctrine and theory further reinforce the foundational link between reconnaissance and counter-reconnaissance, and intelligence and counter-intelligence. Whether conducting offensive or defensive operations, reconnaissance and intelligence functions have been intimately connected. From the very beginning of the U. S. Cavalry, doctrine focused on

[8] Ajey Lele, "Operation Neptune Spear and the Role of Technology,"*Journal of Defence Studies, Vol. 5, No. 4, October, 2011*, 124.

the scout's ability to conduct reconnaissance and collect vital human intelligence. The doctrinal publication, *Security and Information*, sets forth the importance of the cavalry in reducing uncertainty about the enemy in order for the commander to make operational decisions. The commander must rely upon cavalry reconnaissance. "To screen his own movements and positions, and to gain a knowledge of those of his opponent, a commander must depend mainly upon reconnoitering bodies, and upon the zeal, daring, prudence, and skill of these bodies, and the intelligence and promptness with which their reports are collated." In other words, the commander's ability to make successful decisions in war is directly dependent upon the cavalry's ability to build the intelligence picture of the enemy on the battlefield, through highly detailed, timely, and accurate reporting.[9] Another early doctrinal publication for U.S. Cavalry scouts, *Handbook for Scouts*, written in 1912 by Captain H.J. McKenney, lists the most important information for a commander to obtain prior to committing to decisive action: "(1) The strength, intentions, positions, resources, and morale of the enemy. (2) The topography of the country. (3) The resources of the country."[10] Additionally, McKenney argues that the chief function of the cavalry is reconnaissance, and that, regardless of advances in technology, nothing can substitute for the skill and expertise of the cavalryman who is specially trained in reconnaissance. He subsequently argues that, although aero reconnaissance can provide technological enhancement to the scout's collection, it is limited by weather and restricted by a one dimensional perspective.[11] Regardless of the doctrinal focus on the necessity of reconnaissance provided by the cavalry, by the time the U.S. entered World War I, the operational circumstances prevented the cavalry from having a significant role in the war. The

[9] Arthur Wagner, *The Service of Security and Information* (Kansas City: Kimberly, 1903), 1.
[10] Phillip H. Stevens, *Search Out the Land: A History of American Military Scouts* (Chicago: Rand McNally, 1969), 9.
[11] H.J. McKenney, *Exercises for Systematic Scout Instruction* (Menasha, WS: Banta, 1916), vii.

stalemate on the Western Front and the limited means of maneuver left the allied forces largely reliant on aerial forms of reconnaissance.[12]

The years following World War I were tumultuous and formative for the U.S. Cavalry Branch. The Great War brought advances in technology as well as changes in maneuver tactics which brought questions about the employment of the cavalry in future wars, and threatened the branch's survival. The interwar period was also beset by limited budgets. However, leaders within the cavalry were able to convince Army senior leaders and Congress to invest in its future. While the mobility platform was a significant variable in question, the roles for the cavalry remained unchanged. In 1922, the commandant of the U.S. Army Cavalry Schools, Colonel Hamilton S. Hawkins listed ten functions of the cavalry, in his essay, "*Why Is the Cavalry Indispensible*?" At the top of the list was, "obtain information," followed by, "guard against surprise, hold terrain until infantry arrives, hide the movement of the infantry, pursue the beaten enemy, attack and delay the enemy's attempt to commit his reserve, and keep away enemy cavalry." Hawkins believed that modern methods and technologies could be integrated into the cavalry's mission, but the cavalry was still the right organization for the mission of reconnaissance.[13]

In 1924, Major George S. Patton Jr. added credence to the vitality of the reconnaissance function of the cavalry. He argued that the leading detachment for any mechanized force should be the "reconnoitering detachment." This detachment, whether platoon, troop, or squadron, would vary in size based on the need or size of the main fighting force and would be responsible for "covering its immediate front and, on advice given by them, securing information of the

[12] John J. McGrath, *Scouts Out: The Development of Reconnaissance Units in Modern Armies* (Fort Leavenworth: Combat Studies Institute Press, 2006), 50.
[13] Matthew D. Morton, *Men on Iron Ponies: The Death and Rebirth of the Modern U.S. Cavalry*, (Dekaulb: Northern Illinois University Press, 2009), 17.

enemy main body."[14] Patton was rightfully clear about the importance of a detachment of scouts deployed in front of the main maneuvering force. However Patton's argument was slightly misguided, because he was equally adamant that the scout had to be deployed by means of the horse cavalry. His argument continued into 1930 as he lobbied to keep the horse against those who argued for the use of motor vehicles for the modern cavalry reconnaissance element. In less than complimentary terms he argued that the "self-styled mechanists, "scientific warriors," and "gasoline neophytes," would be placing the cavalry in a precarious position. Referring to his experiences with tanks in World War I, Patton argued that motor vehicles and tanks were constricted by weather and terrain, and that the cavalry community should not make its decision for employment solely on the advances in armor and mechanization.[15]

Despite Patton's arguments, the German *blitzkrieg* of World War II ruled out the use of horse cavalry for reconnaissance and maneuver and ushered in the era of the armored cavalry. The rapid advances in mobility, firepower, and armor, as demonstrated by the axis and allied forces further proved the growing obsolescence of the horse cavalry in modern conventional warfare. However, when considering the case holistically, Patton's argument was valid for preparing the cavalry force for all types of contingencies in all types of terrain, and Colonel Allen Hulse, an influential staff member of the U.S. Army Cavalry School during the years preceding World War II, supported Patton. He wrote in 1944, while deployed in combat, "The

[14] George S. Patton Jr., "*Armored Cars With Cavalry," The Cavalry Journal, Volume XXXIII*, January (1924): 8-9.
[15] George S. Patton Jr., "*Motorization and Mechanization in the Cavalry," The Cavalry Journal, Volume XXXIX*, July (1930): 333. Due to his own personal experiences and background as an expert horseman, Patton was also emotionally connected to the idea that the horse cavalry could never fully be replaced. To Patton the usefulness of the horse cavalry ran deeper than just a means of mobility for the army or simply the heritage, legacy, or status of the cavalryman. There was an extreme reluctance on his part to give up the horse cavalry due to the personal affection he maintained for horses as well.

principles of reconnaissance are not changing. Modern equipment and methods have simply required different application of some of the principles."[16]

Patton and Hulse both understood several critical rules for which military leaders should consider when planning, preparing, and training for future warfare. First, although the basic nature of war is unchanging, lessons learned from recent war experiences often indicate changes in the characteristics of war. Second, changes in technology alone should not be the driving force for adjustments in doctrine, employment, or training for the cavalry. Only the rigorous study of the history of warfare, and a careful analysis of evolutions in the characteristics of war should precede major adjustments in organization and training of the force.[17] Furthermore, the study of the historic doctrine and theory of the U.S. Cavalry reinforces the importance of the reconnaissance mission for cavalry organizations and the foundational connection between reconnaissance and intelligence. Influential cavalry leaders from the past to the present have emphasized the timeless connection between the reconnaissance and intelligence functions, and they have proven to be integral to the mission of the U.S. Cavalry regardless of the means of mobility, the size of the unit, the operational environment, or the technologies employed.

Current doctrine and theory for the cavalry extrapolates the connection between reconnaissance and intelligence collection. Doctrinal publication 3-20.98, *Reconnaissance Platoon* states, that "the primary mission for the reconnaissance platoon is to gain information, and survey enemy territory."[18] As seen in both the historic discussion of theory and current army doctrine, though the cavalryman's tools have changed over time, the primacy of the reconnaissance mission has not changed. Regardless of the type of conflict, the U.S. cavalryman

[16] Allen D. Hulse, *"Principles And Modern Methods of Reconnaissance," Modern Reconnaissance: A Collection of Articles from the Cavalry Journal* (1944): 8.
[17] Carl Von Clausewitz, *On War,* (Princeton, Princeton University Press, 1976), 89.
[18] Headquarters, Department of the Army, *ATP 3-20.98, Reconnaissance Platoon*, April, 2013, 3-1.

has been relied upon to conduct thorough and valuable reconnaissance, providing critical situational awareness for the entire force. Additionally, the U.S. Cavalry scout has always been required to collect information about the enemy, and the cavalry leader has, likewise, been required to analyze that information and translate it into intelligence to enable the commander's decision-making. Conversely, there are some theorists that argue that the demise of the horse cavalry and the transformation of the U.S. Army into the modular force structure denote a change in the nature of reconnaissance. Proponents of this theory believe that the habit of linking the task of reconnaissance to the specialized cavalry unit has changed. They argue that because combat arms units within the modular brigade combat team are similarly equipped to the current cavalry squadrons with armored vehicles, specialization of the cavalry in reconnaissance is obsolete.[19] However, this argument falls catastrophically short when considering the human element in warfare. Following this logic would rule out the validity of reconnaissance and intelligence collection on the battlefield, its fundamentals found in doctrine, and the necessity to maintain soldiers in any form who are specially trained and educated in the art of reconnaissance. It would be similar to arguing that because a mechanic, transporter, or cook carries a rifle in a combat zone, that they could conduct offensive combat operations and therefore there is no need to train and equip infantrymen to specialize in assaulting an enemy position. Taking this position could lead to the downfall of many valuable occupational specialties within the force, and lead to the degradation of valuable war-fighting functions. If anything, the Armor Branch should look for further specialization in reconnaissance. The value of the mission of reconnaissance for the current operational environment requires forces that are organized, trained, and equipped to conduct a broad range of reconnaissance missions. Merely having a mobile platform or being a

[19] John J. McGrath, *Scouts Out: The Development of Reconnaissance Units in Modern Armies* (Fort Leavenworth: Kansas, Combat Studies Institute Press, 2006), 203-204.

soldier does not make one an expert in mounted maneuver or reconnaissance. The U.S. Army Armor Branch is not merely hanging around because of heritage. It is vital because of the commitment to developing experts in the art of mounted maneuver warfare, security, and most importantly, reconnaissance. For this reason the Armor Branch should prioritize their ability to provide the force with experts in the principles of reconnaissance through the use of various platforms, over varied terrain, using the latest surveillance technology. Moreover, training cavalry leaders to be experts in reconnaissance requires empowering them with knowledge in all the forms of intelligence collection. Intelligence preparation of the battlefield (IPB) for future small wars and conflicts requires cavalry leaders equipped in this manner.

The Operational Environment and Reconnaissance Training

Trends in modern warfare further illuminate the need for cavalry leaders in reconnaissance formations to understand how to plan for and implement the use of tactical intelligence collection disciplines. During the interwar period, Major George S. Patton Jr. wrote, "While I do not hold with those who consider the World War as the sealed pattern of all future efforts to maintain peace, it is, nevertheless, our most recent source of information, and the tactical tendencies shown will most certainly color to a considerable degree our initial efforts in the next war." As an avid student of military history and theory, Patton realized at an early point in his illustrious career, the professional officer's role in organizing, training, and preparing the force for future conflict. In his opinion, the use of tanks, armored vehicles, and airplanes orchestrated in combined arms maneuver would play a role in the next conflict to some degree. Similarly, current trends in conflict foreshadow future engagements where U.S. forces have to conduct operations against hybrid threats, where initial operations may begin against a state conventional force and later transition to counter-insurgency. Although conventional conflict is

certainly possible, the wars in Iraq and Afghanistan as well as other examples of intrastate warfare suggest that unconventional warfare, or some hybrid of the two, is inevitable for the future.

Much of the army's training has adjusted in recent years to refocus from unconventional tactics back to conventional tactics. The demands of waging counter-insurgency (COIN) warfare in Iraq and Afghanistan required most of conventional army forces to focus training on COIN related tasks, thereby leaving a void in the training of the core military occupational specialty (MOS) tasks necessary for waging a conventional war. Much has been done recently to retrain and recertify soldiers in their core MOS tasks. However, when deciding how to focus training, it is important to continue to consider the type of war you are most likely to fight in the future. The probability of conducting COIN in the future, and the difficulty inherent in conducting COIN successfully, necessitates a long term commitment to the continued training of conventional forces in COIN. In an unconventional conflict, scout platoon leaders and troop commanders are conducting reconnaissance missions that have the potential to make a strategic impact. Simultaneously, the enemy is using real-time technologies to attack with both kinetic and non-kinetic means. Whether it is using cellular capabilities to communicate, initiate improvised explosive devices and 107 mm rockets, or using them to capture videos of U.S. forces operating in villages, the enemy is constantly adapting. Additionally, the widespread use and explosion of information technologies on the battlefield is shrinking the historic buffer between tactical, operational, and strategic decision-making. Experiences conducting counterinsurgency operations in Iraq and Afghanistan further illustrate the difficulty of making use of valuable intelligence before it becomes invalid.

The enemy's use of information technologies to communicate and coordinate attacks is a large reason why the Department of Defense has invested in the development of reconnaissance and intelligence tools and technologies. One technological system investment was the Future Combat System. The program was launched in 2003, and it was intended to upgrade both manned and unmanned combat vehicles with robust communication and networking capabilities and technologies. This system would have improved the ability of cavalry units to "develop situations out of contact, engage the enemy in unexpected ways, maneuver to positions of advantage with speed and agility, engage enemy forces beyond the range of their weapons, and destroy enemy forces with advanced fires and assault at times and places of their choosing."[20] Due to lack of funds, Future Combat Systems transitioned to a more moderate plan in 2010 called the Army Brigade Combat Team Modernization Program. This program is intended to provide the commander with a new and robust package of command, control, communications, computers, intelligence, and reconnaissance (C4ISR) interfaces. These systems could be integrated and networked into the latest versions of combat vehicles as well as connected to dismountable mobile systems the ground trooper could use. The ability to use such technology effectively on the battlefield would greatly enhance the mission command war-fighting function.[21] However, due to budget constraints, the potential effectiveness of such force modernization programs has yet to be fully realized.

Another significant commitment the Army has made in the development of intelligence, surveillance, and reconnaissance in recent history is the organization and implementation of the Battlefield Surveillance Brigade (BFSB). The BFSB was designed to respond to the demands of

[20] Charles A. Cartwright and Dennis A Mullenburg, "Future Combat Systems – An Overview," Future Combat Systems, accessed online at www.army.mil/fcs/articles/index.html, 2006.
[21] Scott Gourely, "Army Establishes Structured Approach to BCT Modernization: New Network Foundation Built Atop Ashes of Future Combat Systems," *Defense Systems Forum, Knowledge Technologies and Net-Enabled Warfare*, July 24 (2012): 2.

intelligence collection in the rapidly advancing cyber and digital information environment. Initiated in 2006 and transferred to the direction of the U.S. Army Armor Center in 2008, the BFSB integrated the disciplines of intelligence, surveillance, and reconnaissance into a robust division-level intelligence collection element. In one integrated organization it combined the traditional reconnaissance missions conducted by cavalry units with the technical and human intelligence operations performed by military intelligence units. Aside from a robust headquarters company, signal company and support company, the BFSB's premiere units are the reconnaissance and surveillance squadron and the military intelligence battalion. The reconnaissance squadron is organized into a headquarters troop, two HMMWV mounted troops, and unique to the BFSB, fifteen Long Range Surveillance (LRS) companies. The Military Intelligence Battalion is organized by six specialized intelligence companies, each providing a enabling platform and a different intelligence discipline. The three most significant specialized companies are the signal intelligence company, the unmanned aerial surveillance (UAS) company, and the counter intelligence (CI) and human intelligence (HUMINT) company. While the development of this type of advanced intelligence, surveillance, and reconnaissance (ISR) organization is a step in the right direction for integrating reconnaissance and intelligence functions, it is very much still a work in progress.[22] The most common criticism revolves around the lack of heavy armor, the limited survivability of the HMMWV and the need to develop a new mobile platform for the reconnaissance squadron. Some critics also point to the deficiency in firepower, which would prevent the cavalry element from having the ability to fight for information. Further value would be added to the BFSB if the military intelligence (MI) military occupational specialties (MOS) were further integrated into the smallest units possible of the

[22] Major Jaren K. Price, "The Battlefield Surveillance Brigade, The Future of Division-Level Intelligence, Surveillance, and Reconnaissance," *The Cavalry & Armor Journal,* November-December, 2008, 34-35.

reconnaissance squadron. Due to some of these criticisms and due to the need for more firepower and balance in the organization, the Army announced the transition of the BFSB into the Expeditionary Military Intelligence Brigade. Nevertheless, the creation of the BFSB and the subsequent transition to the Expeditionary Military Intelligence Brigade, signifies the Army's intent to continue to integrate reconnaissance and intelligence functions, and thus denotes the need for more coordination and synchronization between the Cavalry and Military Intelligence communities in regards to training and education. Since the Army and the Armor Branch are planning to continue to supply these intelligence and surveillance heavy units with cavalry leaders (19A armor officers) and scouts (19D), they need to make some training adjustments to adequately prepare them for the integration of military intelligence personnel and assets.

Regardless of the needed improvements in the force modernization programs, the emergence of integrated intelligence, surveillance, and reconnaissance organizations signifies three important truths for the future of the U.S. Armor and Cavalry Branch. First, that the Army is committed to developing a force specializing in reconnaissance and intelligence. Second, that the Army still sees the Armor Branch as proper entity within the force to best manage the reconnaissance mission. Finally, that the Armor Branch must make a commitment to ensure that it provides cavalry leaders to the force who are experts at reconnaissance and are versed in awareness and understanding of the intelligence collection disciplines.

The History of Cavalry Scout Training

While an analysis of current operations is valuable to inform future changes in training and education for the U.S. Armor Branch reconnaissance school training, it is equally valuable to review historical references of U.S. Cavalry training to provide context. To prepare cavalry

leaders for the future battlefield we must develop them to be experts in critical thinking as well as experts in employing and managing their reconnaissance and intelligence collection assets.

The importance of providing well rounded training and education for the cavalryman in a broad range of skills is not a new concept. Since the origination of the U.S. Cavalry, the scout has been required to be proficient in many technical and tactical tasks. Due to the demands of reconnaissance, the requirement for accurate and detailed reporting, as well as the management of information, the scout has always been considered one of the most demanding military occupations, requiring individuals with strong cognitive, analytical, and physical qualities.

Captain H.J. McKenney, one of the pioneers of early cavalry training, laid out the personnel requirements necessary to become a scout. According to McKenney, in his *Handbook for Scouts,* scouts must be physically fit, moral, educated, possess a good memory, learn quickly, and observe accurately. In his analysis the job of cavalry scout was a thinking man's job. The scout had to conduct a wide variety of tasks both tactical and technical, while also possessing a higher level of moral responsibility in operating at a distance from the command post.[23] He also argued that only a well trained cavalryman could conduct complete and comprehensive reconnaissance. Scouts were trained to conduct a "thorough military examination in hostile territory, among other things, he must be trained in the methods of examination and observation; in the value of military features; in trailing; in concealment and use of cover; and in form for reporting."[24] For McKenney and for the U.S. Cavalry in 1916, reconnaissance, analysis, surveillance, and reporting were critical skills to be trained and mastered.

In 1944, Lieutenant Colonel Hulse, a former instructor of reconnaissance and intelligence at the Cavalry School at Fort Riley and an influential cavalry squadron commander

[23] H.J. McKenney, *Exercises for Systematic Scout Instruction* (Menasha, WS: Banta, 1916), vii.
[24] Ibid, viii.

in World War II, added further weight to the requirements for the cavalryman. Due to the modern environment of World War II the same basic mission of reconnaissance became more dynamic in execution. Cavalry scouts now had to coordinate with air reconnaissance and other non-military reconnaissance and intelligence agencies to provide "mutual cooperation," and to avoid "duplication of effort." Hulse made several other prudent recommendations to include selecting reconnaissance personnel with "great care," and conducting centralized reconnaissance training. Using German Army reconnaissance training as an example to emulate, Hulse highlighted a valuable passage on reconnaissance found in a German Army professional journal in 1941. It read, "Reconnaissance requires of both officers and men a degree of decision, of independent thinking and action, of broad technical knowledge and military skill, such as is required of no other soldier."[25]

While the words of McKenney and Hulse allude to the elite qualities and skills that the cavalryman should possess, additional historical theory and doctrine confirm the necessity of the cavalryman to adapt to numerous contingencies. The very term "scout," is derived from the Latin word *auscultare*, which means "to listen." Throughout history it has come to describe a soldier that is skilled in a broad range of military disciplines.[26] The U.S. cavalry scout is, therefore, not merely tied to the heritage of the horse or any other specific military vehicle but has his identity in the skill of reconnaissance. With this in mind, Hulse recommends that reconnaissance units be trained and equipped to operate in all types of terrain, using various mobile platforms. In "What the World War Did For Cavalry," Patton contributes to the argument that the cavalryman must receive specialized reconnaissance training using a diverse

[25] Allen D. Hulse, *"Principles And Modern Methods of Reconnaissance," Modern Reconnaissance: A Collection of Articles from the Cavalry Journal* (1944): 17.
[26] Phillip H. Stevens, *Search Out the Land: A History of American Military Scouts* (Chicago: Rand McNally, 1969), 9.

set of vehicles and tools. In Patton's opinion the cavalryman must not only know the basics of his profession but must also adapt and become an expert in the weapons, technologies, and vehicles that are developed to give him access to the changing operational environment. He states,

> "not only must he know his own tactics, but he must know how to use the various instruments with which his unit is equipped to ply its trade, and he must know each better than any of his men. Further than this he must have thought and practiced the use of his complicated instrument, so that it plays equally well under his hand the simple one-step of the set-piece attack or the complicated tango of the open-war fight. He must think, teach, and practice the tactics of his arm."[27]

In Patton's mind, there was no time in combat for "on the job" training, especially for the leader. Patton's principle for training is equally true for the cavalry leader today. The cavalry scout leader must not only be an expert in reconnaissance of all types, but he must also master all of the weapons and technological enablers that he will be equipped with in order to be optimally prepared for command. Furthermore, the cavalry leader must be trained and knowledgeable in the most advanced tactical collection methods and be ready to employ the military intelligence assets that will be available in any cavalry formation.

Preparing for the Future Battlefield

With the understanding that warfare presents complex problems that transcend a simple military force solution, senior Army leadership has recently emphasized the need to focus training and education on developing leaders who can critically and independently think. Lessons from history, recent actions in Iraq and Afghanistan, as well as U.S. Cavalry doctrine and theory all illustrate the importance of training and preparing cavalrymen to be well-rounded and adaptable. General David Perkins, the commander of U.S. Army Training and Doctrine Command, in his *2014 Force 2025 White Paper* announced the Army's plan to begin a new

[27] George S. Patton Jr., "What the World War Did For Cavalry," *The Cavalry Journal,* April (1922): 167.

professional military education (PME) system, which will be called "The Army University." In the paper he writes, "Historically we have always 'guessed wrong' when envisioning future conflicts and prepared our military to fight the last conflict again."[28] Although we cannot solely apply the lessons learned from recent conflicts to the Army's future training plans and professional military education, it is important that army leaders capitalize on the lessons learned from recent conflicts and include them in the total analysis. Ignoring the lessons of the last conflict, in efforts to prepare for the type of war we would prefer to fight would be as detrimental today as it has proven to be historically. As evidenced in the past half-century, through Vietnam, Somalia, Iraq, and Afghanistan, the U.S. Army has struggled through counter-insurgencies due to a strong tendency to focus peacetime training on conventional doctrinal tasks against a predominately conventional enemy threat. An examination of the training plans for the Army Reconnaissance Course (ARC) and the Cavalry Leader's Course (CLC) would illustrate that this overcompensation is happening in part in Armor Branch reconnaissance schools. General Perkins paper also states, "The Army must reverse the traditional process of leading with material too heavily focused on specific threats, then building leaders to fit the equipment." While it is important for reconnaissance schools to balance their training to focus on threats across the entire spectrum of conflict, it is even more critical that they place emphasis on training to combat current and emerging threats. It is also necessary for those preparing the curriculums of reconnaissance schools to provide opportunities for training cavalry leaders in the employment and management of the latest reconnaissance, surveillance, and intelligence technologies. As previously discussed, the widespread use of digital and cyber technologies by both conventional and unconventional enemy forces, and their impact on reconnaissance and

[28] David G. Perkins, the Commander of Army Training and Doctrine Command, "The Army University White Paper, In Support of Force 2025," September (2014), 3.

intelligence, highlight a change in the characteristics of warfare. Cyber warfare and the use of digital technologies on the battlefield illustrate a shift where the synchronization of human intelligence and technological intelligence collection becomes critical to making timely and accurate tactical and operational decisions. The information management demands placed on tactical and operational commanders have become extreme and indicate the need for further adaptation in both training and organization for reconnaissance, surveillance, and target acquisition units (RSTA). While further integration of military intelligence collection enablers and personnel are needed down to the smallest units with reconnaissance organizations, military intelligence integration in training and education for reconnaissance leaders is paramount. Additionally, ARC and CLC require adjustments in curriculum that balances training to address both conventional and unconventional threats and prepares the cavalry leader for the operational environment where reconnaissance and the tactical intelligence collection disciplines of HUMINT, OSINT, and SIGINT are increasingly intertwined and interdependent.

HUMINT, OSINT, and SIGINT Defined

Before examining ARC and CLC and explaining how instruction in HUMINT, OSINT, and SIGINT would improve the school curriculums, it is important to define these intelligence collection disciplines to provide context.

Human Intelligence (HUMINT) at its core is spying or espionage, and it can take on five steps. Step 1: Conducting targeted observation of enemy personnel or conducting surveillance on individuals who have information about the enemy is one form. Scouts do this when watching a named area of interest (NAI), a high valued target (HVT), or high valued individual (HVI). At times they will simply observe family members or friends of a possible target to develop the situation. Step 2: Assessing a source by developing a relationship with a possible

informant, gaining their trust, and determining their value to HUMINT collection. Scout leaders assisted by HUMINT soldiers have become accustomed to doing this in recent conflicts. They will often have meetings with individuals they believe are connected with the target or they will detain targets and tactically question them to develop HUMINT. Step 3: If a source seems exceptionally reliable they might recruit this individual for a job that would enable more frequent contact from which to continue to question and gather intelligence. Step 4: Handling the source. This step is the most difficult for the cavalry scout leader to conduct, and is done largely with the help of the HUMINT specialist. The management of HUMINT sources is vital for mission success and has been a significant weakness for reconnaissance leaders. Therefore it is an important area within the HUMINT collection discipline that cavalry scout leaders need training in. Step 5: The last step is termination, which consists of ending the relationship with the source due to the completion of a mission, change of PIR, or the demonstrated unreliability of a source.[29]

Human intelligence is the most important intelligence discipline for the cavalry scout to master, and the growing threat of global terrorism and the propensity to be drawn into future small wars accentuates this reality. Of the sixty-four wars that the U.S. has been engaged in over the last century, only four have been conventional wars, while sixty have been small wars or unconventional actions.[30] Regardless of the type of war, the human dimension will always be involved. Carl von Clausewitz stated that war is "an act of force to compel our enemy to do our will," and that war is "a continuation of policy by other means."[31] The difference in small wars and conventional wars is that the former requires a large investment in human interaction, rather

[29] Mark M. Lowenthall, *Intelligence: From Secrets to Policy* (Sage Publications, Inc. 2012), 102-103.
[30] SWJ Editors, "What is a Small War?" *Small Wars Journal*, July, 2008, 2.
[31] Carl von Clausewitz, *On War*, ed. Michael Howard and Peter Paret, trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1989), 75.

than mere military force to achieve victory. Unconventional wars and small wars require a deliberate commitment to HUMINT. Although a large portion of intelligence collection today relies on technical intelligence assets and disciplines, technical collection methods are often limited in their ability to penetrate the human dimension to get a complete intelligence perspective. HUMINT, although it takes time to develop and is susceptible to deception, is invaluable.[32] The preponderance of small wars increases the demand for HUMINT collection, and therefore, it is quickly becoming again the centerpiece for all tactical intelligence collection. In the absence of HUMINT, other technical means of collection are incomplete and often impotent. Without the influence of HUMINT, many tactical, operational, and strategic mistakes are made in conventional actions, and even more in unconventional actions[33]. In order to get better as a military, as an army, and as a branch a larger commitment to training HUMINT for reconnaissance and intelligence specialists must occur. Therefore, the common impediments of branch parochialism, budget protection, and secrecy must all be overcome.[34] Reconnaissance leaders must be collectors, producers, consumers, and analysts of current tactical HUMINT.[35]

A large portion of information about adversaries today can come from freely available and numerous unclassified sources. Open source intelligence (OSINT) includes media, public data, and professional sources. Media sources, in the form of newspapers, magazines, radio, television, and internet sources, are some of the most valuable means of gathering OSINT. Public data includes valuable public records, official legal documents, legislative hearings, press

[32] Mark M. Lowenthall, *Intelligence: From Secrets to Policy*,5th ed. (Los Angeles: Sage Publications, Inc. 2012), 108.
[33] Robert D. Steele, "Human Intelligence:All Humans, All Minds, All The Time," *Strategic Studies Institute Journal*, (May 2010): 11.
[34] Ibid, 8.
[35] Ibid, xix.

conferences, and speeches. Professional OSINT includes information saved in executive summaries from conferences, academic papers, and articles.[36]

While public and professional OSINT is valuable, the use of media, especially web-based sources will become particularly valuable for the reconnaissance leader. Following the Cold War, the availability of web-based OSINT increased exponentially.[37] The prevalence of digital devices and smart phones in the operating environment used by both combatants and noncombatants on the battlefield makes OSINT a readily accessible collection method, one which provides a complement to HUMINT. One of the hallmarks of the post Cold War era is what many political media pundits are calling a "digital revolution" or the "information age," wherein groups of people are increasingly organizing and communicating through social-media networks. Since September 11, 2001, global terrorist organizations like Al Qaeda have made use of the internet and social media sites to recruit members, organize resources, and coordinate attacks. The current social media recruiting campaign and strategy of the Islamic State in Iraq and Syria (ISIS) indicates a growing sophisticated effort to use social media as a tool for warfare. ISIS has been using social media outlets such as Youtube, Facebook, and Twitter to spread anti-Western propaganda for the last six months with a high degree of success.[38] They have accumulated approximately 20,000 recruits from around the world with 3,400 coming from western countries.[39] One of the most significant problems in countering these groups is that OSINT and HUMINT have been underdeveloped and mismanaged at the strategic and operational levels of the U.S. military, and a serious effort must be made to emphasize them in

[36] Mark M. Lowenthall, *Intelligence: From Secrets to Policy*,5th ed. (Los Angeles: Sage Publications, Inc. 2012), 110.
[37] Ibid, 111.
[38] Nutella Meme, "Islamic State Pushes Social-Media Battle With West," *The Wall Street Journal.Com*, August 22, 2014, http://www.wsj.com/articles/isis-pushes-social-media-battle-with-west-1408725614.
[39] Associated Press, "ISIS drawing steady stream of recruits, despite bombings," *New York Post.Com*, February 11, 2015, http://nypost.com/2015/02/11/isis-drawing-steady-stream-of-recruits-despite-bombings.

military policy, doctrine, acquisitions, and operations. Furthermore, the Army, the Armor Branch, and the Military Intelligence Branch need to bolster efforts to reorganize, train, and equip to make use of valuable OSINT and HUMINT[40]. At the tactical level, all of this web-based communication can be translated into valuable and time-sensitive OSINT and can be and often is exploited to a modest level by intelligence bureaus and counter-terrorism law enforcement entities around the world. One of the most significant problems in the military is the location and communication gap between analysts who are gathering OSINT and the cavalry scout leader who is operating tactically on the battlefield. In an unconventional conflict, a reconnaissance element, given the technological capabilities and an assigned and integrated OSINT analyst at the smallest unit, could make valuable use of OSINT combined with HUMINT to identify, locate, and detain or destroy the enemy. Additionally, the cavalry scout would be able to quickly evaluate the perceptions that the local population might have regarding U.S. operations in the area using an interpreter as needed. This combined construct would shorten the gap in communication, and shorten the time gap to allow the decision-maker on the ground improved situational awareness and the opportunity to destroy or capture time sensitive targets (TSTs). Therefore, the U.S. Army should work to equip reconnaissance organizations with OSINT collection capabilities at the lowest level, and reconnaissance schools need to train and educate leaders to effectively use and manage OSINT to fulfill the commander's PIR.

Signals intelligence (SIGINT) consists of intercepting communications of a variety of types, but its most common form in the military deals with electronic emissions and frequencies which can be monitored or tracked by ground, aerial, or satellite systems.[41] Like HUMINT and OSINT, SIGINT interceptions are critical to uncovering terrorist plots and countering insurgent

[40] Robert D. Steele, "Human Intelligence: All Humans, All Minds, All The Time," *Strategic Studies Institute Journal*, (May 2010): 15.
[41] Mark M. Lowenthall, *Intelligence: From Secrets to Policy*,5th ed. (Los Angeles: Sage Publications, Inc. 2012), 96.

cells. A large percentage of the populations around the world have cellular phones. In almost every corner of every country around the world people are making calls and text messaging. To monitor all of this traffic or "noise," would be not only impossible but a waste of time and resources. The sheer volume of the traffic is beyond comprehension. Therefore, much of what SIGINT analysis consists of is regarded as traffic analysis which reviews patterns in traffic, with the capability to focus on a threat or target using a key-word search. Recent counter-terrorism efforts across the globe signify a growing need for SIGINT understanding, capability, and training. Terrorists and insurgent cells present smaller signatures than conventional armies and may not be vulnerable to monitoring by remote sensors. Therefore, SIGINT is increasingly reliant upon other disciplines, specifically HUMINT and OSINT for proper employment.[42]

Intelligence, Surveillance, and Reconnaissance organizations, like the Stryker Brigade's Reconnaissance, Surveillance, and Target Acquisition (RSTA) Squadron and the BFSB, are equipped with SIGINT assets such as the Prophet Enhanced. Prophet systems support the overall ISR mission by providing timely and actionable SIGINT through persistent area analysis, situational development, and area over-watch. This system is also equipped with both vehicle mounted and dismountable versions to give increased flexibility to the unit. In theory the ability to dismount the system allows the SIGINT collector to quickly collaborate with reconnaissance leaders on the ground and enables them to quickly exploit the information collected.[43] The use of the SIGINT platoon's Prophet in collaboration with the tactical reconnaissance platoon is brilliant. However, in reality, the number of these systems available on the battlefield are limited. Additionally, reconnaissance leaders have not adequately been trained in the proper use

[42] Mark M. Lowenthall, *Intelligence: From Secrets to Policy*,5th ed. (Los Angeles: Sage Publications, Inc. 2012), 98.
[43] Brandon Pollachek, "Prophet Enhanced offers increased flexibility, survivability, and collaboration," *Army Knowledge Online*, June 9, 2011, http://www.army.mil/article/59218/.

of SIGINT and how it can also be better employed when synchronized with OSINT and HUMINT.

A general understanding of HUMINT, OSINT, and SIGINT and their overall applicability to the tactical reconnaissance mission as employed by the U.S. Cavalry, leads to the need to examine how instruction in these disciplines are lacking in current reconnaissance schools, and more specifically, why additional training in them would be valuable for company level leaders undergoing training at the Army Reconnaissance Course (ARC) and the Cavalry Leader's Course (CLC).

The Army Reconnaissance Course and Tactical Intelligence Collection

The Army Reconnaissance Course is the Armor and Cavalry Branch course that focuses on scout platoon-level leadership and reconnaissance and security fundamentals. ARC is a requirement for all Armor lieutenants who are assigned to any cavalry or reconnaissance organization. The school also targets senior scout section sergeants and scout platoon sergeants. Outside of this community, ARC is recommended for any officer, warrant officer, or non-commissioned officer who is going to be assigned to a reconnaissance unit. The course consists of twenty-six days of training, with the purpose to develop cavalry leaders who have "a higher understanding of the commander's information needs; improved ability to plan and execute reconnaissance and security missions at the platoon level; competence with supporting assets (indirect fire and aviation); confidence at problem-solving; and competence in mission-context problem-solving."[44] Figure 1 depicts the course sequencing for ARC.

[44] Andre L. Mackey, "How to Eat Steak with a Knife and Fork! A Return to the Core Competencies That Make Our Maneuver Force Indomitable." *Armor Journal*, January-March, (2013): 8.

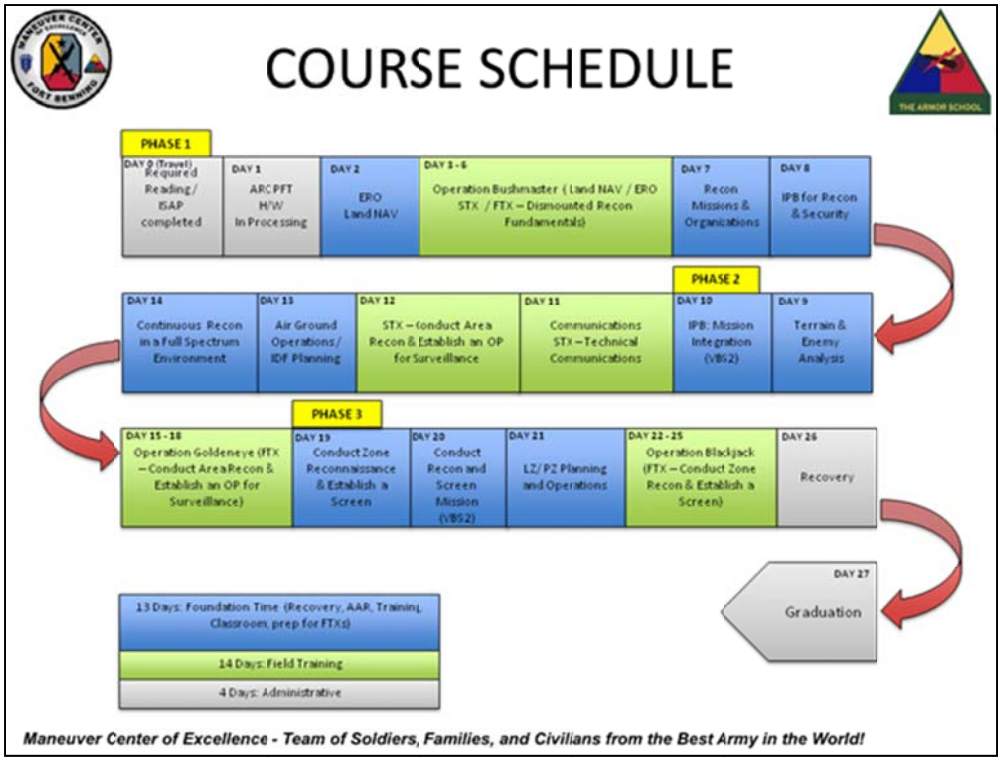

Figure 1. Army Reconnaissance Course Sequencing

An overview of the course layout and purpose for ARC illustrates that although the course is correctly structured to give the cavalry leader a strong background in reconnaissance fundamentals, it is deficient in providing valuable instruction in the application of reconnaissance and surveillance technologies, reporting, and the tactical intelligence collection disciplines of HUMINT, OSINT, and SIGINT.

HUMINT training for the scout platoon leader is critical because of the amount of human interaction that is required in COIN operations, the tactical human intelligence collection and reporting that is required, and the development and management of HUMINT sources. Therefore HUMINT training should be included into the ARC curriculum. Because reconnaissance platoon leaders in all types of reconnaissance units are assigned HUMINT

soldiers and are required to integrate the HUMINT function into their reconnaissance missions, it is paramount that they be trained and educated in tactical HUMINT collection and management.

In the future, OSINT collection technologies should be provided for the reconnaissance platoon. Therefore, the scout platoon leader should be trained and rehearsed in their tactical uses, and it should be included in training curriculum at the ARC. Open source information, which is unclassified on the internet, can quickly provide another perspective to the HUMINT picture, and therefore, reconnaissance platoon leaders should be trained and equipped to simultaneously employ OSINT collection measures with other forms of intelligence collection.

SIGINT training and understanding is valuable for the scout platoon leader because of the growing integration of SIGINT systems and technologies into ISR organizations. Well-trained reconnaissance platoon leaders, in cutting edge cavalry organizations, can use HUMINT and OSINT collection to better employ signal intelligence assets and unmanned aerial collection assets. Improved synchronization of the tactical intelligence collection disciplines could provide a more holistic approach to answering the commander's priority intelligence requirements (PIR). Furthermore, having the cognitive ability gained from training, along with the technological capabilities at the tactical level, would shrink the collection and analysis gap that resides in the military intelligence lines of communication, and it would allow the platoon leader to lessen the time between collection, analysis, and direct action against an enemy target or threat.

The Cavalry Leader's Course and Intelligence Collection Planning

The Cavalry Leader's Course (CLC) is an Armor and Cavalry Branch course which provides training in reconnaissance, operational leadership, and planning for the Troop and Squadron levels. This training is offered to the officers, chief warrant officers, and noncommissioned officers who will be involved in the planning and leading of reconnaissance

and security operations. Graduates of CLC are expected to: 1) be subject matter experts in recon and security fundamentals, 2) apply mission analysis, 3) apply mission command, and 4) integrate supporting assets. The course is executed in fifteen days, and student performance is measured by their ability to apply the four focus areas during a three day Cavalry Operations Adaptive Planning Exercise (COAPEX). The COAPEX requires the leader to plan and brief an operations order for a reconnaissance operation against a hybrid threat. Figure 2 depicts the fifteen day course schedule for CLC.[45]

Figure 2. CLC course schedule

Although there is some instruction given on intelligence, surveillance, and reconnaissance asset synchronization on day three, this instruction mainly deals with how to develop an ISR matrix to ensure the overlap of aerial reconnaissance assets, and there is no instruction given in the planning for and management of HUMINT, OSINT, or SIGINT.

[45] Ryan J. Gainey, Joe Byerly, and Brian J. Harris, "Cavalry Leaders' Course: More Than 25 Years of Training Cavalry Professionals," *Armor Journal*, January-March (2014): 12-13.

Given the complexity of the operational environment, and given the operational planning demands placed on reconnaissance troop commanders and squadron staff officers, it is critical to ensure that all leaders and planners at the squadron level understand how to conduct intelligence targeting, specifically in relating to HUMINT, OISINT, and SIGINT.

An understanding of how to plan and manage HUMINT operations is critical for reconnaissance troop commanders and squadron staff officers, and HUMINT training should be included in the curriculum for the CLC. The link between the squadron intelligence officer (S2) and the reconnaissance staff planner (S3) is significant for the reconnaissance squadron, especially in asymmetric or COIN operations. The large volume of human intelligence collection required for COIN requires that reconnaissance squadron S3s and subordinate staff officers understand how to support, plan, and manage HUMINT collection operations. When troop commanders and staff officers do not understand the planning and management of targeting cycles, source operations, patrol debriefing collection, and sensitive site exploitation, mistakes are made and valuable information is missed[46].

Although the planning and management of OSINT is almost entirely overlooked in tactical reconnaissance organizations, it is likely that it will and should become an area of focus in the future. Therefore, it is important to begin to train and educate reconnaissance troop commanders and squadron planners in how to implement it into the ISR plan as a valuable asset that can enhance the squadron's targeting and collection.

The understanding of HUMINT and OSINT can allow the reconnaissance troop commander and squadron staff planner the capability to achieve the bulk of the tactical and operational intelligence necessary for unconventional operations against asymmetric threats or non-state actors. Successful tactical use of these collection disciplines can amplify situational

[46] FM 2-22.3, Human Intelligence Collection Operations, HQ Department of the Army, September, 2006, 1-4.

understanding and more efficiently and effectively answer the squadron commander's PIR. Therefore, in light of instruction on HUMINT and OSINT, instruction on how to effectively manage and implement valuable SIGINT resources should be included.

After conducting a review of ARC and CLC, the current reconnaissance training and education for the cavalry leader leaves much to be desired in current tactical intelligence collection methods and in methods of analysis for tactical and operational military intelligence. While the intent is not to make the cavalry leader a military intelligence analyst, the operational environment and the organization and implementation of current reconnaissance units like the BFSB, require the cavalry leader to be well versed in the collection, analysis, and application of tactical and operational intelligence. Therefore, adding training in the tactical intelligence disciplines would provide scout platoon leaders and troop commanders with the understanding to better coordinate and employ the HUMINT, OSINT, and SIGINT capabilities at their disposal. This training would not only improve collection efforts, but it would provide cavalry leaders with the cognitive framework to synchronize efforts with the battalion intelligence cell in order to analyze the enemy. This increased understanding of intelligence would also improve their ability to apply intelligence analysis and products into their troop and platoon planning processes. For cavalry leaders to seize and maintain the initiative in this environment they must not only become more technologically equipped and technically proficient, but they must more importantly, become faster at critical threat analysis in order to make timely and sound decisions. For cavalry leaders to become more expedient in critical intelligence collection, reporting, and analysis, a deeper understanding of the tactical intelligence collection methods used in the area of operations is required.

Recommendations and Conclusion

In summary, due to the growing connection and integration of reconnaissance and intelligence functions on the modern battlefield and due to the continuing trends in asymmetric warfare, the following recommendations are made to the Maneuver Center of Excellence (MCOE) and the Armor Branch for the future of Army reconnaissance training and education.

1: ARC- HUMINT, OSINT, SIGINT training should be included into the curriculum for ARC. Providing this training to future scout platoon leaders would improve tactical reconnaissance, technical collection asset employment, and the quick strike capability and element of surprise in cavalry units, against time sensitive targets.

2: CLC- The Cavalry Leaders' Course should add instruction in HUMINT, OSINT, and SIGINT into the curriculum. Educating future troop commanders and cavalry squadron staff officers in HUMINT, OSINT, and SIGINT collection disciplines would improve the operational intelligence, surveillance, and reconnaissance planning of the cavalry squadron.

To facilitate these adjustments requires cooperation with Military Intelligence Branch. Seeking some sort of officer instructor exchange program would be an effective start, which would also have a minimal impact on the budget.

In the effort to achieve victory in Iraq and Afghanistan by "winning the hearts and minds," U.S. Army leaders at all levels emphasized the intelligence collection aspect of the mission and the level of human interaction needed for all soldiers, in what became the popular catch-phrase of "every soldier is a sensor." While this phrase proved valuable in adapting the conventional force toward COIN, it has proven to be counter-productive for developing the much needed specialized and professional reconnaissance organizations required for future conflicts. It has conditioned the force to falsely believe that all soldiers are adequately equipped and trained

to be experts at reconnaissance. To win in future wars, the Army needs to place an emphasis on training and developing reconnaissance and intelligence leaders.

The current reconnaissance platoon leader and troop commander are responsible for a large volume of tactical intelligence collection, analysis, and reporting. Although current formations are equipped with HUMINT analysts, often company level leaders do not understand how to best employ and empower them. It is also critical that they are better prepared to analyze what they see on the battlefield, and therefore, convert information and intelligence requirements into better reports and provide better recommendations or more actionable intelligence to the decision-maker.

While modern cavalry organizations should have the survivability and firepower to fight for information, they must realize the historic, yet increasing connection between reconnaissance and intelligence. To properly apply the fundamentals and principles of reconnaissance, the cavalry leader must be an expert at managing information and intelligence. The demands of hybrid threats and asymmetric warfare will only increase in the future. Therefore, the reconnaissance leader must be knowledgeable in collecting, analyzing, and exploiting HUMINT, OSINT, and SIGINT. Cavalry leaders must learn to simultaneously manage these forms of intelligence in a tactical environment. To adequately prepare the leaders of reconnaissance organizations for future conflicts, the Army must realize the stark connections between reconnaissance and the intelligence warfighting function. Furthermore, as the Armor Branch moves forward at the Maneuver Center of Excellence, seeking to train and educate the leaders of cavalry organizations, it must further account for the impact that military intelligence collection has on modern reconnaissance missions. To meet the needs of the future battlefield, the Armor and Military Intelligence (MI) branches must begin to work together more at the schoolhouse, as

they have in the operational force. To be successful, branch leaders need to avoid possible tendencies toward branch parochialism. Very small changes and further coordination in training between the Armor and Military Intelligence branches can have a significant impact on the future leadership and readiness of intelligence, reconnaissance, and surveillance organizations.

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