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Preface

The research provided has several limitations. The opportunity afforded in Command and Staff College's Fight Club Program gave the authors multiple repetitions of planning and wargaming against peer competitors in plausible and relevant scenarios in a classified setting. The planning was assessed by outside agencies such as the Marine Corps Warfighting Laboratory, Marine Corps Intelligence Activity, the Office of Naval Research and other agencies but the assessment of cognitive impact of deception operations has inherent limitations. Without field testing, this research only assesses likely areas of emphasis and is not all inclusive.

We are very grateful for all of the help received from friends, family, and the faculty of the Marine Corps University. The authors would like to thank Dr. Benjamin Jensen and Dr. Paul Gelpi for their assistance throughout this research project as well as all of the various agencies that enable Fight Club. The additional hours of personal time sacrificed by the entire team to provide relevant feedback have enhanced not only our research but our profession.

Executive Summary

Title: Deception: A Necessity in Modern Warfare

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Thesis: To gain a position of advantage over near-peer competitors, U.S. military commanders must utilize Military Deception to cause either action or inaction that is beneficial to the outcome of the operation. Currently, there is a lack of training, education, and equipment to adequately prepare commander for this task.

Discussion: The art of military deception has always been a part of warfare and is an integral part of planning a successful military campaign. As military weapon systems and tactics have evolved over the centuries so has the character of war and the ability to conduct military deception. However, as growth in technologies over time has enabled more effective and elaborate deception, the study of history shows that the principles of deception operations and the foundational techniques to conduct deception have been consistent throughout the evolution of warfare.

The recent seventeen years of conflict in Afghanistan and Iraq has presented the U.S. Army with a dilemma. In those countries, U.S. forces have largely faced an inferior enemy, incapable of completely denying the freedom of maneuver, let alone utilizing the fusion and integration of various forms of signals and human intelligence to target forces on a large enough scale to inflict politically unacceptable levels of casualties. As a result, the U.S. forces training for and preparing to deploy have not needed to focus their efforts on fighting a near-peer enemy. Even as those conflicts shrink in forces assigned and there is a pivot to the Korean Peninsula and Europe with an added emphasis from the leadership to be prepared to fight a near-peer, the training and education centers have failed to or are incapable of making the transition required for such training.

Command and Staff College's Fight Club examines current, and future capability sets of the Marine Corps and applies them to complex problems using the rapid planning decision process. Once the plan is created a computer-generated wargame or a table-top wargame is conducted. Throughout the computer-generated and table-top map level wargames, the authors of this paper along with their Fight Club teammates experimented with current, and future capability sets to develop and test deception ideas, and throughout Fight Club various insights have been developed that impact the planning and utilization of deception.

Conclusion: The use of military deception has persisted throughout the history of warfare. As modern adversaries close the weapons technology gap and operate utilizing tactics of unmanned surveillance systems linked to mass artillery or missile strikes, the necessity to utilize military deception as a form of protection for U.S. forces is an overlooked necessity. As American refocuses, its efforts to fight China, Russia, and North Korea, threats that have near-peer capabilities, America will have to rely on more than just their firepower.

Introduction

In July 2014, a long-range fire strike from multiple rocket launcher systems (MLRS) executed from across the Russia-Ukraine border destroyed two Ukrainian mechanized infantry battalions in less than three minutes.¹ After action reviews and studies of the Russian-Ukrainian conflict have identified that the Russians possess the ability to target all forms of electronic emissions and couple that with the use of unmanned aerial vehicles (UAVs) to identify high pay-off targets.² This electronic and UAV targeting is then linked with long-range mass fires to destroy targets on the battlefield. If the Ukrainian forces had utilized some form of military deception to confuse the Russian forces about the location or composition of their forces they may have reduced the likelihood of the fire strike. Any artillery or missile strike emits a signature, which is therefore risk. For the Russians to accept the risk and fire the MLRS they needed a high degree of confidence about their target. Military Deception, which reduces the level of confidence and in this case, could have complicated Russian targeting if not stop the attack. To truly gain a position of relative advantage over near-peer competitors, U.S. commanders must utilize Military Deception to cause either action or inaction that is beneficial to the outcome of the operation.

Joint Publication 3-0 *Joint Operations* defines Military Deception (MILDEC) as operations “to mislead enemy decision makers and commanders and cause them to take specific actions or inactions.”³ It continues to describe MILDEC as operations “focused on causing the enemy to act in a desired manner, not simply to be misled in their thinking” thus requiring

¹ P.A. Karber, “Lessons Learned” from the Russo-Ukrainian War [DRAFT]. *The Potomac Foundation*, p. 18.

² P.A. Karber. *Coming to a Theater Near You? Lessons Learned from the Russo-Ukrainian War* (Mons, Belgium, March 28, 2016), PowerPoint Presentation.

³ Joint Chiefs of Staff, *Joint Operations*, Joint Publication 3-0 (Washington, DC: Joint Chiefs of Staff, January 17, 2017) III-21 - III-22.

extensive knowledge of the enemy's employment capabilities, tactics, and decision making processes.⁴ When executed correctly, MILDEC operations can cause the enemy to commit to a particular course of action or, in a battle of signatures, to expose themselves or their intentions. If well thought out and synchronized, the US commander can take advantage of the enemy's reaction to the MILDEC operation through either lethal or nonlethal means. For example, the Germans in World War II deliberately jammed English radio stations every morning for more than a month making it appear as atmospheric interference. As time went by, the radio operators grew accustomed to the interference and dismissed it as just daily atmospheric interference, eventually allowing three German ships to break out of Brest.⁵

The US military has faced relatively inferior enemies in battle over the last fifteen years, and the necessity to engage in MILDEC operations waned as a result. The integration of MILDEC operations into the planning and execution of operations increases in importance proportionally to the peer capabilities of a competitor. To counter the Russian use of electronic targeting coupled with UAV verification US forces could create so many targets using inflatables and false electronic transmissions that the Russians could not achieve the required degree of confidence necessary to risk revealing their artillery positions thus causing inaction. US forces could also utilize inflatables, remotely operated vehicles, and electronic signatures massed in a certain area with the intent of drawing fire from the Russians and forcing them to reveal their positions. Both courses of action are forms of MILDEC, and both are more politically acceptable than the losses that would occur if there was no attempt to deceive Russian forces about the location and composition of US forces.

⁴ *Ibid.*, III-22.

⁵ Office of Research and Development, Central Intelligence Agency, *Deception Maxims: Fact and Folklore*. Washington, DC, June 1981, pp. 13-14. Retrieved from: http://www.governmentattic.org/18docs/CIAdeceptionMaximsFactFolklore_1980.pdf

Furthermore, MILDEC operations are critical to reducing risk during forced entry operations, particularly those in an anti-access and area-denial environment. There are three categories of MILDEC supporting joint military operations: Joint MILDEC, Tactical Deception (TAC-D), and Deception in Support of Operations Security (DISO). The following series of short essays will examine the entire spectrum of MILDEC, the history of and the benefit derived, the applicable doctrine, current educational and training efforts, and shortfalls. Lastly, the authors seek to provide recommendations on how technology, training, and education can improve MILDEC operations.

MILDEC is a deception activity planned and executed by deception planners and commanders. The goal of MILDEC is to cause the adversaries to take certain actions or inaction to give commanders an advantage on the battlefield. Successful MILDEC must make the target believe or think the deception is true. To do this, deception planners use the “See, Think, Do” deception methodology. Does the target *see* the deception event? Does the target *think* the observations are valid? Does the target *do* an action or inaction based on what he/she sees and thinks?⁶ The goal of this methodology is to affect the cognitive process in the deception target’s mind that results in the adversary conducting actions or inactions that a tactical commander can exploit. Consider the use of multiple dispersed inflatables paired with electronic emissions. The Russians *see* the electronic emissions, commit UAVs that see what appears to be US forces on the ground. They then *think* that the US forces are adhering to a logical course of action based on the location, size, and density of what they see, so they *do* commit their artillery to conduct a fire strike, thus revealing their position to US targeting efforts.

⁶ Joint Chiefs of Staff, *Military Deception*, Joint Publication 3-13.4 (Washington, DC: Joint Chiefs of Staff, February 14, 2017)

When planning MILDEC the commander must first decide the deception goal and objective. The deception goal is the “commander’s statement of the purpose of MILDEC as it contributes to the successful accomplishment of the assigned mission.”⁷ The deception objective is a “concise statement of what MILDEC will cause the adversary to do.”⁸ After the commander determines the goal and objective, the commander must figure out who the deception target, the adversary military or decision maker who is in a position to direct action or inaction, is and ensure he/she has a realistic conduit to the deception target. For example, if US forces were conducting offensive operations against Russia within Russian territory, it is logical that they would face significant interlocking and reinforced defensive belts. In addition to robust defenses, US forces operating on someone else's home soil gives the enemy an advantage of human intelligence. To conduct a breach of these defenses and achieve a break through, the US forces would need to deceive Russian forces as to the location and timing of the breaching effort. Thus, the deception goal is to deny the enemy the ability to identify and mass on the point of breach. The objective of the deception operation is to cause the enemy to commit its reserve and mobile forces at a place of advantage for the US forces. This requires that the US forces understand how the enemy commander responsible for the defensive belts receives and processes information so they can exploit those conduits.

Once the deception target is identified a commander must determine the best deception means to achieve the desired outcome. Deception means are the “resources, methods, or techniques used to portray selected information and indicators to the deception target.”⁹ Deception means can be broken up into three categories: physical, technical, or administrative.

⁷ *Ibid*, I-5.

⁸ *Ibid*.

⁹ *Ibid*, I-10.

Physical means are used to “convey or deny information or signatures normally derivable from direct observation or active sensors by the deception target,” technical means present information and signatures to the deception target by “manipulation electromagnetic, acoustic, or other forms of energy or through olfaction,” and administrative means are “selected written, oral, pictorial, or other documentary information or signatures to or from the deception target.”¹⁰ Commanders will use a combination of the three deception means to sell their deception story to their adversary. In the scenario of US forces attempting to breach and achieve a breakthrough of Russian defensive belts, physical means could be fake or modified vehicles coupled with sustainment or rear echelon troops that wear the insignia and claim to be in a front-line unit. The local populace would see and report on combat equipment and front-line troops in a location that they are not. The US commander could couple this with technical means, utilizing robotic, unmanned vehicles and systems that emit larger electronic signatures, replicating companies and battalions of forces to create the electronic presence of a much larger force. Lastly, the US commander utilizes administrative deception through the initiation of contracts for food, water, housing, etc. that would logically support offensive operations in that area. This administrative information would travel back to the enemy commander through human intelligence and complement the physical and technical deception efforts to mislead the enemy as to the actual location of the breach.

Lastly, the tactical commander must determine what deception technique or combination of techniques to use. There are four deception techniques: feint, display, demonstration, and ruse. The design and implementation of the deception technique is the essence of MILDEC, and the use of historical examples is the best way to describe them. The following chapter will define

¹⁰ *Ibid*, I-11.

each one of these deception techniques and provide historical examples of how commanders used them to accomplish their MILDEC objectives. Ultimately, the goal of MILDEC is to target the enemy commander's perception and alter his/her decision cycle so that the US commander may gain a position of cognitive advantage over the enemy. Historical cases offer insights into how commanders apply deception and hence a template for future commanders to integrate deception into future operations.

Chapter 1: Historical Insights into Deception

Since the beginning of warfare, military planners have incorporated deception. Sun Tzu in his book *The Art of War* states “war is a game of deception” and he further describes the advantage held by understanding the enemy’s decision process through an assessment and then taking action (or inaction) with the aim of convincing the enemy to commit to a course of action.¹¹ Army Field Manual 3-0 *Operations* describes a vision of Army forces maneuvering to "achieve and exploit position of relative advantage" against enemy forces.¹² One way to achieve this position of advantage is through the examination of enemy capabilities, an understanding of enemy decision-making processes, and the application of MILDEC operations. Historical cases highlight numerous examples of the utilization of deception and its operational effect. For example, through analyzing battles that took place between 1914 and 1967, a military historian determined that successfully employing deception resulted in a friendly to enemy casualty rate of one to six whereas not employing deception led to a near one to one ratio.¹³ This reduction in

¹¹ Sun Tzu, *The Art of War*, trans. Lin Wusun (San Francisco: Long River Press, 2003), 11-12.

¹² Headquarters, Department of the Army. *Operations*, Field Manual 3-0. (Washington, DC: Headquarters, Department of the Army, October 6, 2017), ix.

¹³ Joint Chiefs of Staff, *Military Deception*, Joint Publication 3-13.4 (Washington, DC: Joint Chiefs of Staff, February 14, 2017) I-2.

casualty rates can be partially attributed to the fact that utilizing deception enabled surprise to be achieved against the enemy 94 percent of the time.¹⁴

This chapter begins with a literature review to discover what deception scholars have uncovered and then examines the use of military deception (MILDEC) amongst peer or near-peer armies to illustrate the utility of MILDEC in providing friendly forces a position of relative advantage over the enemy.

Literature Review

The art of military deception has always been a part of warfare and is an integral part of planning a successful military campaign. As military weapon systems and tactics have evolved over the centuries so has the character of war and the ability to conduct military deception. However, as growth in technologies over time has enabled more effective and elaborate deception, the study of history shows that the principles of deception operations and the foundational techniques to conduct deception have been consistent throughout the evolution of warfare. The next several pages will use history to uncover the principles of deception, the techniques of deception, and how a country's strategic culture affects an army's ability to conduct deception.

Principles of deception

The first two principles of deception are focus and credibility. The enemy decision maker, usually the enemy commander, should be the focus of the deception, and the deception planners must ensure the enemy decision maker is getting the required information to enable the deception to work. However, usually, a commander does not receive information directly from a

¹⁴ Office of Research and Development, Central Intelligence Agency, *Deception Maxims: Fact and Folklore*. Washington, DC, June 1981, p 9. Retrieved from: http://www.governmentattic.org/18docs/CIAdeceptionMaximsFactFolklore_1980.pdf

source, but rather through several different intelligence agencies. Thus, the deception information, whether is it visual, audio, electronic or other means needs to be passed to a trusted enemy intelligence agency to ensure the enemy decision maker receives it. This requires knowledge on how the enemy decision maker gets his information and through what trusted sources. Without this knowledge, it will be hard for deception to work.¹⁵ In addition to focus, the information must be credible to the enemy; “no matter how good a deception plan is, it will fail if the enemy does not believe that the story it tells is possible.”¹⁶ Often actual operations that were planned but never executed are the best deception operations. The Marine amphibious demonstration during the Gulf War was a very credible threat to the Iraqis because the Americans seriously considered it.¹⁷

A good example of these principles in action was during Operation Fortitude North and South during World War II. The goal of these operations was to prevent the Nazis from knowing the true beach landing locations for the Allied D-Day invasion. Hitler and the German High Command received much of this intelligence through the use of spies in England. However, the British Intelligence agencies knew this and were able to turn many of the German spies into double-agents. The British and Americans then fed much of their deception operation information through these spies to the Germans; mixed along with the fake information was a lot of true information to keep the credibility of the double-agents. The Operations were a success, and the Germans never knew the actual landing sites for D-Day. The British and Americans were able to deceive the Germans effectively by focusing their deception information correctly, through trusted intelligence sources that reached the German decision makers, and ensuring the

¹⁵ Jon Latimer, *Deception in War* (New York: The Overlook Press, 2001), 60.

¹⁶ Paul B. Janeczko, *Double Cross* (Virginia: Candlewick Press, 2017), 109-175.

¹⁷ *Ibid*, 203-220.

credibility of the double agents by giving the Germans less important but true intelligence on the British and Americans.¹⁸

The third principle of deception is action. If action is done right the enemy will take a specific action or inaction that will benefit one's ability to achieve its mission end state; it is not enough to make an enemy think something if that thought does not drive desirable action.

Thaddeus Holt describes in his book *The Deceivers*, the misinformation you give to the enemy "does you no good if as a result of his misinformation he takes undesirable action."¹⁹ Lieutenant-Colonel Dudley Clark, a British deception expert, learned this lesson in 1940 when conducting an operation code-named CAMILLA.²⁰

The goal of Operation CAMILLA was to drive Italian invaders out of British Somaliland in Africa. The deception was to convince the Italians that the British attack would come from the South when the actual main effort was going to come from the North. However, the deception operation, which consisted of fake reports, maps, and pamphlets, was so effective that the Italians withdrew from the South and reinforced their center and northern defenses creating a more formidable defense making the British mission harder to achieve.²¹ The lesson learned here is deception operations are enabling the actual operation, and the deceivers, to the best of their ability, must present information to the enemy that will cause action or inaction by the enemy that will provide the actual operation a greater chance of success.

The fourth principle of deception is centralized control and coordination of efforts. Early in history, the battlefield commander led the deception effort, but as military organizations have grown, staff groups have been created to oversee execution of deception operations. While

¹⁸ Ibid, 4.

¹⁹ Thaddeus Holt, *The Deceivers* (New York: A Lisa Drew Book/Scribner, 2004), 22.

²⁰ Ibid, 21-22.

²¹ Jon Latimer, *Deception in War* (New York: The Overlook Press, 2001), 61.

current doctrine teaches disciplined initiative enables mission command among other things when trying to portray a complex and delicate deception story to the enemy centralized command and control is important to ensure a subordinate action does not contradict the deception story.²² Coordination of effort is important to ensure different pieces of the deception story do not negate the effort of the others. During the Vietnam War there were thirteen different US and South Vietnamese intelligence agencies supposedly working alongside each other; however, many of the agencies conducted unilateral deception operations without telling the others and inevitably, at times, they ended up working against each other without even knowing.²³ Centralized control of the deception operations is necessary for deception to be effective, and close coordination between the different components of the deception operation is a requirement.

The fifth and six principles of deception operations are security and adaptability. There needs to be a balance in the level of security and with facilitating coordination of efforts. It is important that enough people know to achieve an effective deception story; however, the “mere existence of a deception plan, let alone the details, should be known only by those who need to know.”²⁴ Adaptability is important in deception operations just like it is important in any operation; Von Moltke observed “that no plan survives first contact with the enemy,” and as the enemy adjusts to the deception information or as the weather and terrain change so must the deception plan.²⁵ If the deception plan is too rigid, it will most likely not succeed.

The last principle of deception operations is timing. There must be enough time to prepare for and execute the deception operation, and because deception operations are enabling

²² Ibid, 63.

²³ Michael Dewar, *The Art of Deception in Warfare* (Great Britain, David and Charles, 1989) 14.

²⁴ Jon Latimer, *Deception in War* (New York: The Overlook Press, 2001), 66.

²⁵ Ibid, 69.

operations, there needs to be enough time for the enemy to react in accordance with the desired effect to enable the actual operation. If there is not time to prepare the deceptions across the different avenues of delivery, then it is better to do no deception at all.²⁶ Again, deception is not about getting the enemy to think or to act in any manner; it is done to get the enemy to do a specific action or inaction.

Deception techniques

The next lesson the history of deception operations shows us are a group of deception techniques used by military planners that have enabled successful deception. Fundamental to choosing a deception technique, military planners must determine if they are trying to *cover* or *deceive*. Cover “implies making your opponent behave on the belief that something true is something false.”²⁷ Deception “implies making him behave on the belief that something false is something true.”²⁸ Cover is designed to conceal the truth while deception conveys false information. The two most basic deception techniques that enable cover are concealment, hiding military assets with naturally existing terrain features like buildings, trees, and other foliage, and camouflage, hiding military assets with manmade means like nets and clothing patterns. The four most used deception techniques to facilitate deception are a demonstration, feint, ruse, and display. These four techniques are the only four in current military doctrine and will be discussed in greater detail later. The other techniques to facilitate deception will be discussed now.²⁹

Planting of false information has been a very successful deception technique throughout history. There are two main categories of this deception technique. The first is planting false

²⁶ Ibid 65.

²⁷ Thaddeus Holt, *The Deceivers* (New York: A Lisa Drew Book/Scribner, 2004), 53.

²⁸ Ibid.

²⁹ Paul B. Janeczko, *Double Cross* (Virginia: Candlewick Press, 2017), 4-7.

information through the use of a double agent, news articles, leaked reports, and other similar venues. A good example of this technique is Operation Fortitude North in World War II. The objective of this deception operation was to convince the Germans that the Allies intended to invade Norway; this would cause the Germans to defend Norway and prevent German troop movement to the beaches of France.³⁰

Central to this plan was the creation of the British Fourth Army, a mixture of real and notional soldiers, in Scotland. The British only had several hundred men stationed in Scotland, and to present a credible threat and convince the Germans that an entire Army existed there, the British presented the Germans with a lot of false information. The British released fake information about the plans to attack Norway over the radio that they knew the Germans would be able to easily intercept and decipher. The British also leaked false information about the British Fourth Army to the local Scottish newspapers and had a BBC reporter conduct a report on his observations of the (fictional) division of troops training. The most effective method of spreading false information was using double agents to spread false information to their German handlers. Altogether the false information campaign presented a credible story to the Germans causing them to keep significant troops in Norway.³¹

The second category in spreading false information is planting the information in such a way that the enemy is fooled into thinking it discovered the intelligence because of a mistake or an accident on the part of its adversary.³² One of the more famous examples of this deception technique is the haversack ruse. During World War I, the British Egyptian Expeditionary Force was trying to convince the Central Powers that they were going to attack Gaza when their real

³⁰ Ibid, 109-139.

³¹ Ibid.

³² Ibid, 5.

target was Beersheba. The British planned to deceive the Germans and Turks by having a soldier “accidentally” drop a haversack (a canvas bag) during a patrol within eyesight of Turkish soldiers. The sack was filled with false information about the planned attack on Gaza along with other true documents and a large sum of money to make it seem like the sack was not dropped on purpose. The deception operation worked as the Central Powers became convinced the British would attack Gaza.³³

Another deception technique that has worked well throughout history is the repetitive process. It entails repeating a maneuver or drill in front of the enemy without actually fighting to lull the enemy into a false sense of security making the enemy vulnerable to attack when the maneuver or drill becomes the actual attack plan.³⁴ A historical example of this deception technique occurred during the Yom Kippur War in October 1973 when the Egyptians and Syrians attacked Israel. Beginning in December 1971, both the Egyptians and Syrians conducted a series of demonstrations along their borders threatening an attack on the Israelis, but never going on the offense. By doing so, when the Egyptians and Syrians built up their combat power along Israel’s border in October 1973 the Israelis felt this was just another demonstration and did not position their Army to defend against an impending attack. When the Egyptians and Syrians attacked, they achieved complete surprise.³⁵

Another deception technique is the lure. This involves creating a situation where the enemy will desire to exploit only to be trapped by the opposing force. In 2007, as part of operations in the Iraq war, the US military conducted a cyber offensive campaign against the insurgents. Part of the cyber campaign involved the deception technique lure in which the US

³³ Ibid, 57-62.

³⁴ Ibid, 5.

³⁵ Jon Latimer, *Deception in War* (New York: The Overlook Press, 2001), 85-88.

military would send phony emails to insurgents enticing them to meet at a certain time and place, where unknown to the insurgents U.S. Special Forces would be waiting in hiding to kill or capture them. These cyber lures were so effective that in 2007 alone they enabled the U.S. military to kill four thousand Iraqi insurgents.³⁶

The next two deception techniques are closely related. The first is substitution; this involves conducting a display of fake units to then, in turn, substitute them with real ones or vice versa. The second is arguably the riskiest deception technique, the double bluff. This technique involves giving the enemy your real plan of attack in hopes they think it's "too good to believe" and decide to ignore it.³⁷ Both techniques rely heavily on enemy inaction, and the military planner who designed deception operations using these techniques must have high confidence that the enemy commander will not target his forces given actual troop locations.

The last four deception techniques are the only four in current U.S. doctrine; they are a feint, a display, a ruse, and a demonstration. To gain a better appreciation of each technique that is in current doctrine and the subtleties between them, the following historical cases are dedicated to examining their employment in various historical campaigns.

The Battle of Granicus

The Macedonian Army employed two deception techniques, a feint, and a display, in the Battle of Granicus and won decisively. In 334 BC, Alexander the Great began his next great conquest: the invasion of Asia. In May that year, Alexander and his Army fought the first of three battles against the Persian Army; they clashed along the Granicus River.³⁸ The Persian Army, comprised of 10,000 cavalry soldiers and 5,000 infantry soldiers, defended along

³⁶ Fred Kaplan, *Dark Territory* (New York: Simon & Schuster, 2016).

³⁷ Paul B. Janeczko, *Double Cross* (Virginia: Candlewick Press, 2017), 5-6.

³⁸ John Mixer, "Wars of Alexander the Great: Battle of the Granicus." *Military History*, June 2006, Accessed January 02, 2018 www.historynet.com/wars-of-alexander-the-great-battle-of-the-granicus.htm

Granicus River with the cavalry in front stretching across the entire river bank to prevent a flank attack from the Macedonians. The goal of the Persian Army was to use the Granicus River to their advantage and use their cavalry to destroy Alexander's army as it tried to cross the river.³⁹ The Macedonian Army, comprised of 13,000 infantry soldiers and 5,000 cavalry soldiers, deployed with its infantry phalanxes in the middle and cavalry forces on either side.⁴⁰ Alexander knew his force was at a disadvantage, the Persians had turned the river into a kill zone, and he had to develop a strategy that would move the Persians from their current fighting positions.

Alexander began the Battle of Granicus with a display and a feint. A feint is "an offensive action involving contact with the adversary conducted for the purpose of deceiving the adversary as to the location and/or time of the actual main offensive action" and a display is "the simulation, disguising, and/or portrayal of friendly objects, units, or capabilities in the projection of the MILDEC story."⁴¹ Alexander, knowing the Persians would expect him to lead the main attack, executed a display by positioning himself and his headquarters element along the right flank. This caused the Persians to move some of their forces from the center of their formation to the right flank. Alexander then committed the feint; he ordered his General Parmenion to attack the left flank of the Persians. In response, the Persians reinforced their left flank and left their fighting positions to attack and repel Parmenion and his forces. The Persians were successful in thwarting the attack; however, their actions played right into Alexander's plan. The Persian movement of forces to both their right and left flanks made them weak in the middle. Alexander committed his main attack to the center of the Persian battle line and successfully ruptured the

³⁹ Duncan Campbell. "What really happened at the River Granicus? Alexander's great cavalry battle," *Ancient Warfare VI* (I), Accessed 28 November 2017,

⁴⁰ John Mixer, "Wars of Alexander the Great: Battle of the Granicus." *Military History*, June 2006, Accessed January 02, 2018 www.historynet.com/wars-of-alexander-the-great-battle-of-the-granicus.htm

⁴¹ Joint Chiefs of Staff, *Military Deception*, Joint Publication 3-13.4 (Washington, DC: Joint Chiefs of Staff, February 14, 2017) I-2.

defense and decisively won the battle. The Macedonians lost between 300 and 400 soldiers, and the Persians lost about 1000 cavalry and 3000 infantry soldiers.⁴²

Alexander's use of deception techniques moved the Persians from their positions of strength and helped the Macedonian Army secure victory. A commander in the offense does not want to fight an enemy in their prepared defensive positions and often tries to move the enemy from their defensive positions to increase his/her chances of success. Offensive commanders also look for an assailable flank, and if one does not exist, they try and create one. Deception techniques are an effective way to create an assailable flank and move enemy forces out of their prepared defensive positions. Alexander's use of a feint and a display did just this; however, he created an assailable middle as opposed to a flank. His display moved enemy forces away from the middle to the right flank, and his feint moved enemy forces away from the middle to the left flank. This created a weak middle, and Alexander exploited it. Without the use of deception techniques, Alexander would not have won the battle decisively or at all.

Alexander's understanding of how the enemy commander will receive information and the actions the enemy commander would take with the information presented to him enabled Alexander's TAC-D to be successful. Alexander relied solely on the physical means of deception; he used a feint and a display to show the Macedonian leadership where he intended to attack. Alexander knew the Macedonian leadership, with this information, would move his forces to defend both flanks and in doing so would leave him vulnerable for attack in the center. Alexander took advantage of the mistake by the Macedonian leadership and attacked in the center giving his forces a position of relative advantage that enabled them to achieve victory at a reduced cost.

⁴² John Mixter, "Wars of Alexander the Great: Battle of the Granicus." *Military History*, June 2006, Accessed January 02, 2018 www.historynet.com/wars-of-alexander-the-great-battle-of-the-granicus.htm

The Indianola

During operations along the Mississippi River during the Civil War, Union forces lost control of one of their ironclads the *USS Indianola* to Confederate forces. The Union Forces, led by Rear Admiral Porter developed a ruse to neutralize the *USS Indianola* before Confederate forces could benefit from its possession. Joint Publication 3-13.14 *Military Deception* defines a ruse as a form of MILDEC that is characterized as an attempt to deceive the enemy through a deliberate exposure of false or confusing information and its interpretation by the adversary.⁴³ The ruse conducted by Porter involving the *USS Indianola* illustrates the usefulness of confusing the enemy through the deliberate exposure of confusing information if the commander can anticipate how the adversary will interpret the information and what effect it will have on his decisions.

In 1863, Union forces undertook an effort to control the waters south of Vicksburg. In doing so, the Union Navy dispatched the *USS Indianola*, an Ironclad, to reinforce the Queen and the De Soto which combined, Admiral Porter believed, would all but guarantee the control of both the Mississippi and the Red Rivers.⁴⁴ While underway, on the night of February 24th, 1863, the *USS Indianola* was detected and attacked by the Confederate Navy. In the ensuing battle, the *USS Indianola* suffered a crushed stern that forced the crew to run the ship into the bank and surrendered the ship.⁴⁵ The Confederate forces assembled more than one hundred personnel to form a working party and repair the captured ironclad so that it could be used against the Union, ultimately threatening the Union's fleet at the mouth of the Yazoo.⁴⁶

⁴³ Joint Chiefs of Staff, *Military Deception*, Joint Publication 3-13.4 (Washington, DC: Joint Chiefs of Staff, February 14, 2017) I-9.

⁴⁴ James R. Soley, *Admiral Porter*, ed. James Wilson (New York, NY: D. Appleton and Company, 1903) E-Book, p. 356.

⁴⁵ *Ibid.*, 358.

⁴⁶ *Ibid.*, 359-360.

Artillery batteries in the vicinity of Vicksburg prevented Confederate efforts to sail the river freely as well as impeded their ability to recover the USS *Indianola*. To discover the Confederate artillery battery emplacements along the river, Admiral Porter developed an elaborate ruse to deceive the enemy. Admiral Porter tasked his entire squadron with constructing a raft that was approximately 300 feet long with enormous wooden guns protruding from portholes, canvas wrapped turrets, and smokestacks all designed to mimic the appearance of an ironclad.⁴⁷ The intent was to sail the fake gunboat by Vicksburg to intentionally draw fire so Admiral Porter's forces could accurately identify the location and placement of the artillery batteries.⁴⁸ When completed, the decoy ship's tar furnaces were ignited, creating dense smoke and the decoy was floated down the river where Confederate forces discovered the ship and opened fire from Vicksburg. Vicksburg telegraphed Confederate forces that were downriver repairing the captured *Indianola* to inform them of the ironclad traveling in their direction. The Confederate Navy protecting the working party promptly departed while the working party attempting to revive the damaged *Indianola* scuttled the ship.⁴⁹

Admiral Porter's ruse worked. His deception of the enemy had not only enticed the artillery batteries at Vicksburg to give away their positions by opening fire on the dummy ship, but the enemy also forfeited control of the captured ironclad when it believed it was threatened by another ironclad. All of this was accomplished without committing any friendly forces to battle, yielding the Union forces a temporary position of relative advantage over the Confederate forces. There is debate amongst historians as to whether Admiral Porter knew of the *USS Indianola's* capture before the ruse and whether the ruse was solely oriented towards the

⁴⁷ *Ibid.*, p. 361.

⁴⁸ Steven M. Mayeux, *Earthen Walls, Iron Men: Fort DeRussy, Louisiana, and the Defense of Red River* (Tennessee: University of Tennessee Press, 2007) p. 73.

⁴⁹ *Ibid.*, p. 361-363.

identification of the batteries at Vicksburg.⁵⁰ This argument is irrelevant to the illustration of utilizing the deception technique of a ruse.

Admiral Porter's understanding of how the enemy will interpret information and what actions the enemy would take once faced with this new information enabled his effective ruse. Admiral Porter relied solely on the physical means of deception instead of a combination of technical or administrative. The elaborately constructed decoy presented the enemy forces with a physical representation of an ironclad. Knowing that an ironclad was a high payoff target for Confederate forces, Admiral Porter knew with a high degree of confidence that if the Confederate forces identified an ironclad on the river that they would open fire on it, revealing their positions. When the confederates acted according to Admiral Porter's predictions, he was able to achieve a position of informational advantage over the enemy.

Battle of Kursk

The Soviet Army employed effective deception techniques focused on utilizing displays and feints during the Battle of Kursk in World War II and as a result won the battle decisively. The conditions for the Battle of Kursk occurred in the winter of 1943 when the German Offensive on the eastern front ceased due to the upcoming spring thaw.⁵¹ The Kursk salient, centered on the city of Kursk, was 170 miles wide and extended 140 miles into the German lines.⁵² Through the spring the Germans were planning and preparing for an attack into the Kursk salient and the Soviets were preparing their defense. The German plan was to have their Army Group Center attack North to South from the city of Orel with fifteen infantry divisions and six

⁵⁰ Steven M. Mayeux, *Earthen Walls, Iron Men: Fort DeRussy, Louisiana, and the Defense of Red River* (Tennessee: University of Tennessee Press, 2007) p. 73.

⁵¹ James Elder. *The Operational Implications of Deception at the Battle of Kursk*, (master's thesis, School of Advanced Military Studies, 1989), p. 18.

⁵² *Ibid.*

panzer divisions and have their Army Group South attack south to north from Belgorad with eight infantry divisions and nine panzer divisions.⁵³ The Soviet plan involved seven fronts with a defense in depth on the salient, a major counterattack north against Orel, diversionary attacks south, and a counteroffensive.⁵⁴

The Soviets used deception techniques, displays and feints, to counter the German's ability to mass combat power. Offensive forces want to mass combat power against the defense to overwhelm the defense, penetrate the defensive line, and attack rear area objectives. The displays the Soviets used to prevent the German's ability to mass combat power included the creation of fake airfields, the creation of fake tank and infantry formations, and the use of fake radio communications to enhance to the realism of the fake formations.⁵⁵ The feints the Soviets used comprised of a series of diversionary attacks. In response to the fake formations, the Germans committed aerial assets, both reconnaissance and attack, and artillery fire. The Germans also moved ground combat power to defend against these fake formations. In response to the diversionary attacks, the Germans committed their reserve forces. As a result, the Germans diverted assets they could have used to mass combat power against the Soviet's actual defense.

The Soviets also used deception techniques to "conceal Soviet intentions and capabilities for the counteroffensive."⁵⁶ The Soviets concealed the movements, preparations, and locations of the command and control locations of their counter-offensive force. Additionally, the Soviets were very aware that the Germans were using radio traffic to estimate Soviet troop sizes and locations. To counter this, much of the Soviet counterattack force executed listening radio

⁵³ *Ibid.*

⁵⁴ *Ibid.*

⁵⁵ Dave Glantz, *Soviet Military Deception in the Second World War*, (London, England: Frank Cass and Company Limited, 1989).

⁵⁶ *Ibid.*

silence until the attack began.⁵⁷ Finally, due to the diversionary attacks, when the Soviet counter-offensive began, the German reserve forces were committed elsewhere.

The Soviet deception plan worked, and the Soviets had a much-needed decisive victory. The Soviets “stopped in its tracks the greatest attack the Wehrmacht had ever mounted, on level terms, without the advantage of weather or terrain.”⁵⁸ The Soviets fooled the German commanders into committing many resources away from the main Soviet defense and the Soviet counteroffensive, and the Soviets kept the German intelligence from identifying the massing of the Soviet counter-offensive force.

The Soviet’s understanding of how the enemy receives information and the actions the enemy commander would take with the information given enabled a successful MILDEC. The Soviets relied on the physical and technical means of deception to achieve the desired enemy actions. The Soviets knew the Germans relied on aerial and radio surveillance to gather intelligence, and the Soviet display and concealment activities conducted gave the German commanders credible information that resulted in Soviet desired German action. The Soviet feints also drove desired German force movements. The Soviets understood German doctrine and the type of actions the German would take given certain pieces of information. The Germans did as the Soviet’s deception plans predicted providing the Soviets with a better combat force ratio during the battle. This gave the Soviets a relative advantage on the battlefield which created the conditions for victory.

The Soviets believed that achieving surprise is a major factor in achieving rapid victory or avoiding defeat, and they believed *maskirovka*, deception, is the key to achieving surprise.

⁵⁷ *Ibid.*

⁵⁸ Dennis Showalter. “The Crucible” *MHQ: The Quarterly Journal of Military History*, Spring 2013 Proquest, Page 37.

Russia deception permeates all levels of war and even during peacetime. Influenced heavily by Marxism-Leninism Russians believe they have a moral imperative to achieve Russian goals and that deception during peace and war is morally right because it enables the achievement of their goals.⁵⁹ The importance of deception operations is not lost at any level of war the Russian fight. Current Russian operations in Ukraine are good examples of how effective and committed Russians are to deception operations. Their commitment to deception principles of security and timing allowed them to achieve surprise in their attack to annex Crimea. Additionally, Russia's use of un-uniformed military combatants in Ukraine and their commitment to their information operations has provided the Russian government cover in lethal retaliation from other world powers.

Operation Desert Storm

On August 2, 1990, the Iraqi Army initiated an invasion of neighboring Kuwait triggering the formation of an international coalition opposing the invasion and subsequent occupation of Kuwait by Iraqi forces. This eventually led to what is now commonly known as the Gulf War or specifically, Operation Desert Storm. Multiple courses of action were developed for a coalition invasion of Kuwait to expel Iraqi forces, and General Schwarzkopf selected Operation Desert Storm, a ground invasion from Saudi Arabia with a small fixing force to the south-east and the main effort enveloping the enemy's rear area.⁶⁰ The United States Marine Corps, already deployed offshore of Kuwait would conduct deception operations, executing a demonstration to maintain the Iraqi Army's attention on an amphibious invasion.⁶¹ Joint Publication 3-13.14

⁵⁹ David Glantz, *Soviet Military Deception in The Second World War* (London: Frank Cass and Company Limited, 1989), 1-4.

⁶⁰ Brown, Ronald L., *U.S. Marines in the Persian Gulf, 1990-1991: WITH MARINES AFLOAT IN DESERT SHIELD AND DESERT STORM*; History and Museums Division, Washington, D.C., 1998, 117-118.

⁶¹ *Ibid*, 133.

Military Deception defines a demonstration as a show of force not seeking to make direct contact with the enemy but of sufficient strength and character to cause the enemy to select a COA that is favorable to friendly forces operations.⁶²

Operation Desert Storm commenced on January 17th, 1991 with the beginning of the air campaign targeting and destroying strategic targets and defensive positions for a total of thirty-eight days. Amongst the air strike targets was the destruction of the Iraqi Navy's missile boats in the ports of Umm Qasr and the aerial delivery of mines blocking Iraqi access to the channels on January 30th.⁶³ Though conducted by the Air Force as part of the larger air campaign, these targets were essential if coalition forces hoped to capitalize on the Iraqi Army's preconceived notions that coalition forces would invade from the sea. Another significant issue that required addressing to convince the Iraqis that the threat of an amphibious assault was imminent was demining the Kuwaiti coast. At the time, intelligence estimates suggested that following the Iran-Iraq war Saddam had emplaced more than 1,000 underwater sea mines, which posed an obstacle to any amphibious attack.⁶⁴ Because of the threat posed by the mines, the removal of them was a trigger in the Iraqi military decision cycle to indicate that an amphibious assault was coming. In addition to the naval demining operations, the Marine presence offshore and its operations and small raids to Iraq occupied islands and oil rigs greatly enabled the deception operation.

Navy and Marine Operations off the shores of Kuwait monopolized on Saddam and his military's preconceived notions that the coalition would conduct an attack emanating from the sea. The Navy and Marine Corps amassed a visible presence of more than thirteen ships, and

⁶² Joint Chiefs of Staff, *Military Deception*, Joint Publication 3-13.4 (Washington, DC: Joint Chiefs of Staff, February 14, 2017) I-9.

⁶³ Ronald L. Brown, *U.S. Marines in the Persian Gulf, 1990-1991: With Marines Afloat in Desert Shield and Desert Storm*; History and Museums Division, Washington, D.C., 1998, 137-138.

⁶⁴ *Ibid*, 138.

17,000 Marines creating the image of a valid threat of an amphibious operation.⁶⁵ The coalition did not rely on the presence of the physical force alone; instead, they combined it with demining operations and small raids that historically act as a precursor to an amphibious operation. This series of actions in aggregate convinced the Iraqi Army that the threat was real and they not only left the six Iraqi divisions tasked with defending the coastline in place but they also reinforced the defenses with another division.⁶⁶ Ultimately this occupied the attention of seven total ground divisions while the main coalition effort commenced operations striking deep into the enemy's rear territory.

The use of deception in Operation Desert Storm was resource intensive and timely. It utilized more than thirteen ships and 17,000 Marines, but it accomplished the commander's intent of occupying the Iraqi Army's attention, creating the conditions for the ground attack. Military planners knew that utilizing a demonstration to occupy the enemy's attention must appear as realistic and as threatening as possible. Like other deception operations, this operation reinforced preconceived notions and reduced the ambiguity of how the operation would unfold in the enemy's mind. As a result, the U.S. forces began the Operation Desert Storm from a position of advantage over the Iraqi forces, resulting in the lack of commitment of combat power and the complete surprise of the Iraqi Army on the northwestern front.

Culture and deception

While American military professionals have executed deception operations well in the past, as evidenced by several of the more famous ones above, it still is not natural to the American military. Deception planning is not ingrained in American military planning as it is in

⁶⁵ Joint Chiefs of Staff, *Military Deception*, Joint Publication 3-13.4 (Washington, DC: Joint Chiefs of Staff, February 14, 2017) I-12.

⁶⁶ *Ibid.*

other militaries. The authors of this paper tried to determine why this is the case and looked through the lens of a country's strategic culture to develop a theory.

The strategic culture of a nation impacts the culture of its military, and how a nation uses its military from the strategic down to the tactical level. Colin Gray and David Jones, two respected strategic culture theorists, argue each country has a unique strategic culture that is a result of a combination of “macro-environmental variables such as deeply rooted historical experience, political culture, and geography.”⁶⁷ David Jones goes further and breaks down the three inputs of strategic culture into “a macro-environmental level consisting of geography, ethnocultural characteristics, and history; a societal level consisting of social, economic, and political structures of society; and a micro level consisting of military institutions and characteristics of civil-military relations.”⁶⁸ Gray and Jones used their analysis to note the differences in U.S. and Soviet strategic culture and how the differences impacted their nuclear strategy during the Cold War. Gray argued that U.S. morality prevented the Americans from effectively creating a nuclear war strategy because the U.S. could never accept the human cost of a nuclear war. Jones argues “Soviet strategic culture placed a premium on offensive grand strategies.”⁶⁹ The impact of strategic culture is also seen in a country's ability to conduct deception operations.

American strategic culture rubs with deception—specifically, American's desire to use overwhelming force to destroy an adversary. American geography set the foundation for a free market economy to flourish, and this allowed the U.S. government to create a military that has the worlds most advanced weaponry. Russell Weighley describes well in his book *The American*

⁶⁷ Alastair Johnson, "Thinking about Strategic Culture," *International Security* 19(4) Spring 1995, 6.

⁶⁸ *Ibid.*, p. 7.

⁶⁹ *Ibid.*

Way of War: The History of United States Military and Policy how America has adopted a military strategy that focuses solely on a “crushing” military victory either through attrition or annihilation.⁷⁰ The Vietnam War is a good example of when American technology advantages blinded the military from using deception. In the Vietnam War, American military planners had an organizational bias against deception; “because the Viet Cong ‘used deception to such good effect’ it was considered by some in the Pentagon to be ‘an enemy tactic...un-American.’”⁷¹ Instead of incorporating deception operations, American military planners “emphasized the Army’s strong suits in firepower and strategic mobility” and developed a strategy of attrition.⁷² While the American military has executed successful deception throughout history, it must guard against realigning on overwhelming fire superiority to win its battles. Americans can execute deception well; however, they need to ensure it remains a continued part of military planning.

Conclusion

This short survey has highlighted historical cases of the effects and opportunities gained through the employment of MILDEC. In each case, regardless of the deception technique applied, the MILDEC employed provided the tactical commander with a relative advantage they exploited to achieve a decisive victory. MILDEC has been a component of warfare throughout history as evident in the above historical examples and will increase in necessity as the development of advanced weapon technologies allow commanders to target and destroy large areas of the battlefield. Incorporating MILDEC into military operations will be necessary to protect the force, and will enable more effective targeting of an adversary's force. Armies need to continue to invest and develop physical, technical, and administrative means to facilitate

⁷⁰ Russell Weigley, *The American Way of War: The History of the United States Military and Policy* (Indiana: Indiana University Press, 1991).

⁷¹ Paul B. Janeczko, *Double Cross* (Virginia: Candlewick Press, 2017), 193.

⁷² Andrew Krepinevich, *The Army and Vietnam* (Maryland: The John Hopkins University Press, 1986), 164.

MILDEC, and commanders need to incorporate MILDEC into training scenarios to better educate their force on how to plan and execute MILDEC effectively. The next two chapters will focus on providing doctrine, organization, training, material, leadership and education, personnel and facilities (DOTMLPF) recommendations to execute MILDEC better.

Chapter 2: Identify shortfalls in the current environment. Describe the problem.

If deception is essential, why is there a renewed need to highlight its importance? Some individuals might agree with its importance and assume that it is being trained effectively to prepare the U.S. Army for potential conflict. Those individuals who believe that it is being trained effectively would be wrong. The recent seventeen years of conflict in Afghanistan and Iraq has presented the U.S. Army with a dilemma. In those countries, U.S. forces have largely faced an inferior enemy, incapable of completely denying the freedom of maneuver, let alone utilizing the fusion and integration of various forms of signals and human intelligence to target forces on a large enough scale to inflict politically unacceptable levels of casualties. As a result, the U.S. forces training for and preparing to deploy have not needed to focus their efforts on fighting a near-peer enemy.⁷³ Even as those conflicts shrink in forces assigned and there is a pivot to the Korean Peninsula and Europe with an added emphasis from the leadership to be prepared to fight a near-peer, the training and education centers have failed to or are incapable of making the transition required for such training.

In October of 1981, the first battalions of U.S. Army forces conducted a rotation at the newly designed National Training Center (NTC). NTC was an incredible advancement in the training development where forces could conduct battalion-level live fire exercises and fight

⁷³ Kris Osborn, "Army shifts training to heavy mech war after more than a decade of counterinsurgency warfare," *Warrior Maven*, last modified March 2, 2017, <https://www.themaven.net/warriormaven/land/army-shifts-training-to-heavy-mech-war-zw54MGCgP0WYSv4F7dqJ-g>

each other in force-on-force engagements utilizing laser-based simulation to provide realism.⁷⁴ The vision was a maneuver space large enough for two battalions to conduct joint exercises with limited involvement from a brigade headquarters.⁷⁵ The root of the concept that drove the creation of NTC is the same concept that now renders NTC an inadequate training facility to achieve the desired end state. With the creation of the M1A1 Abrams main battle tank and other ground and aerial platforms that increased the tempo, lethality, and size of the battle area, existing training areas at bases that had once been used to train entire divisions could no longer support the training of even battalions.⁷⁶ Another driving factor in the development of NTC was the concept of "suppress-to-move, move-to-concentrate" model of tank centric warfare developed by William Depuy as a result of his analysis of the Arab-Israel War.⁷⁷ Thus the need to create an area of land where the U.S. Army could conduct realistic training of its increasingly capable battalions, augmented with close air support, electronic warfare, supporting artillery, and live fire drove the creation of the NTC. Also contributing to the creation of the NTC was the need for an objective means of evaluating the training and readiness of units, which led to the utilization of what are now called Observer/Coach - Trainers (OC/Ts).⁷⁸

Fast forward more than forty years, and the tempo, lethality, and size of the battle area for a battalion has increased even greater. Table 1 illustrates a comparison of the equipment present in an Armored Brigade at the time NTC was developed with the equipment currently present in an Armored Brigade Combat Team. The proliferation of unmanned vehicles (both aerial and

⁷⁴ Anne Chapman. "The origins and development of the National Training Center." Office of the Command Historian, Center for Military History: Washington DC. p. 1 https://history.army.mil/html/books/069/69-3/CMH_Pub_69-3.pdf

⁷⁵ *Ibid.*, p. 81.

⁷⁶ *Ibid.*, p. 6.

⁷⁷ Benjamin Jensen, "Forging the Sword: Doctrinal Change in the U.S. Army," (California: Stanford University Press, 2016), p. 42.

⁷⁸ *Ibid.*, p.5-6.

non-aerial), increases in signals collection technology as well as other advances combined with reorganizations of Army Battalions has led to the outgrowing of NTC.

Table 1:

A Comparison: Army Organizational Equipment					
Armored Battalion (x2), FY1981 TOE			Armored BCT, Present (1-1CAV)		
System/Platform	Number of Systems/Platform	Weapons Range	System/Platform	Number of Systems/Platform	Weapons Range
M60A1 Tank	108	2,000m	M1A2 SEP Main Battle Tank	87	4,900m
ITV Anti Tank	6	TOW 3,750m	M2A3 Bradley Fighting Vehicle	82	25mm 1,600m-3,000m, TOW 3,750m
M3 CFV	12	25mm 1,600m-3,000m, TOW 3,750m	M109A6 Paladin (Mobile Artillery)	18	24km (unassisted) 30km RAP
			Shadow (TUAS UAV)	4	100 kilometers, Line of Sight
			Raven (Small UAS)	15	10 kilometers, Line of Sight

Source: Data compiled from FMS Web MTOE Document Numbers 07315KFC17, 17315KFC41, 06385KFC54, and 07315KFC11; Headquarters, United States Army, *Cavalry Troop Army Training Publication 3-20.97*, (Washington DC: United States Army, September 2016), p. B-14; United States Army Armor School, *Armor Reference Data* in three Volumes, Volume I, The Army Division, TOE 17-35H (as changed), (Kentucky: United States Army Armor School, 1981), p. 265

Continuing to jam highly capable forces augmented with increasingly capable systems into the maneuver area that is too small for them stifles their creativity and ultimately their ingenuity. It also decreases their ability to deceive the opposing forces (OPFOR). At the NTC there are only so many ways to approach the enemy forces; limited by terrain that is either impassable or outside of the training area boundaries, commanders are limited to just two or three options. Likewise, OPFOR only has to think about one or two options: knowing the U.S. forces cannot leave the training boundaries. His chances of falling for an enemy deception are slim to none. As a result, the demand for cognitive energy applied by U.S. Army commanders to deceive the OPFOR is often applied elsewhere such as developing branches or sequels.

So, if deception is often ignored at the U.S. Army's largest training area, where is it a focal point? In the current curriculum for officers in the Operations Division, it is completely omitted until Intermediate Level Education (ILE). Even at ILE, the extent of which training and

education focused on military deception is the instructors or facilitators saying, "do some deception." The argument can be made that this is appropriate because as a company or troop commander one is executing the Battalion commander's vision and therefore not planning company level TAC-D. Though this is correct, the response given when a reporter asked then Major General James Mattis, during Operation Iraqi Freedom, how he arrived at a decision so quickly and Mattis responded that he hadn't, that he had spent the last thirty years making the decision suggests that perhaps the academic study of deception earlier in one's career is important.⁷⁹ The response from Mattis alludes to the concept of the 300-year-old mind whereby individuals learn through the experiences of others and can reflect on them. If ILE is the time deception instruction begins, roughly after 10.5 years of an officer's career, are officers not shortchanged the ability to reflect on and apply this knowledge going forward? And even at ILE at 10.5 years of primarily tactical experience with potentially some operational exposure, officers are exposed to, at least at the Marine Corps Command and Staff College, a total of three contact hours on military deception, included as a subset under the curriculum of information operations.

There is some positive effort with regards to deception, and that is the Army's updated FM 3-0 *Operations* published in October of 2017. The updated manual focuses on how Corps headquarters can utilize MILDEC in the Corps' deep area but to do so must incorporate assets and capabilities that reside outside of the Corps' control.⁸⁰ Planning for and employing assets and capabilities that are not inherent within an organization requires training and repetition to accomplish, but how often can an Army Corps practice this against an opposing force? FM 3-0 *Operations* also emphasizes that unique to the local commander's requirements, TAC-D is not

⁷⁹ James Mattis, "Ethical Challenges in Contemporary Conflict: The Afghanistan and Iraq Cases," (speech, Annapolis, MD, February 23, 2006), United States Naval Academy, https://www.usna.edu/Ethics/_files/documents/MattisPg1-28_Final.pdf, p. 27.

⁸⁰ Army FM 3-0 *Operations*. October 2017, p. 1-34.

necessarily nested with the greater MILDEC operations and therefore all TAC-D requires approval two echelons above the requesting commander.⁸¹ The updated manual goes on to highlight the difficulties that Brigade Combat Teams have in employing TAC-D but that if successfully employed, they may create very short periods of relative advantage over an enemy that can be exploited.⁸² All of this difficulty associated with TAC-D translates to training requirements that are currently incapable of being fulfilled at the NTC. The inherent difficulty illustrated by the doctrine writers and the very limited, short opportunities of advantage against an adversary that TAC-D presents are exactly the reason that commanders must be equipped and well-rehearsed at executing it.

One possible solution could be a revival of something similar to the General Headquarters (GHQ) Maneuvers, more commonly referred to as the Louisiana Maneuvers held in the summer and fall of 1941 where entire Field Armies were pitted against each other in simulated warfare across the southern portion of the United States.⁸³ The GHQ maneuvers enabled the Army to test innovations such as the Triangle Division, the Armor Division, and the Cavalry Division while experimenting with various enablers such as Anti-Tank attachments, in an unscripted, force-on-force exercise.⁸⁴ The U.S. Army spent many months planning for the execution of these maneuvers to ensure their realism. They negotiated and leased land usage with owners across North Carolina, South Carolina, Georgia, and Louisiana to prevent being restricted by "No-Trespassing" signs and provide appropriately sized maneuver spaces.⁸⁵ Funding for the exercise came to a total of \$28 million.⁸⁶ Similar maneuvers of Corps versus

⁸¹ *Ibid.*, p. 2-38.

⁸² *Ibid.*, pp. 2-38 - 2-39.

⁸³ Christopher Gabel. "The U.S. Army GHQ Maneuvers of 1941." Center for Military History: Washington DC., p. 5.

⁸⁴ *Ibid.*, pp. 22-33.

⁸⁵ *Ibid.*, p. 50.

⁸⁶ *Ibid.*

Corps could be conducted today in the Montana - Dakotas region of the United States or in the Arizona, New Mexico, Texas, California regions.

Opponents to conducting such large-scale exercises would almost certainly cite the cost associated with it and the difficulty of civil-military coordination amongst a myriad of other reasons not to do it. While these may be obstacles to conducting such exercises, they provide excellent real-life training for staffs to conduct civil-military coordination and are likely less costly than similar exercises conducted across Europe. The training benefit for staff and maneuver units would be unmatched by any other experience, and the size of maneuver area could provide a real opportunity for commanders to take the risk, develop their creativity, and be adaptive. Unconstrained by the confines and boundaries of the NTC, commanders could practice the skill of deceiving their opponents and learn what works, and what may not work. They may also develop insights into detecting when they are the subjects of OPFOR TAC-D operations.

Another option to expand the limited training environment at the National Training Center is to finally utilize the construct of live, virtual, and constructive training environment. Announced by the Army in 2012, the concept of live, virtual, and constructive training utilizes technology, particularly communications infrastructure, to link a unit training under "live" conditions in the field, with a unit executing "virtual" training in simulators such as the close combat tactical trainer, and a "constructive" environment where users input information but don't replicate the actual tactics.⁸⁷ This allows both the friendly and enemy headquarters to receive visual displays of all units, live, virtual, and constructive, vastly broadening the limits that the traditional NTC boundaries impose. If resourced and applied at NTC, commanders could remove the limitations imposed by the boundaries by executing operations outside of them in virtual and

⁸⁷ U.S. Army, "Army Live, Virtual, Constructive Integrating Architecture," last modified May 27, 2015, https://www.army.mil/standto/archive_2015-05-27.

constructive environments. Thus, commander's ingenuity and attempt to deceive the enemy would be tested in addition to subordinate unit's ability to fight successful engagements. To the higher headquarters and the enemy, a well-constructed live, virtual, constructive environment would appear seamless, and from an outside standing in the tactical operations center, it would not be apparent that it was anything other than a live training event.

Whether the Army chooses to return to something similar to the GHQ exercises, expand and utilize the promise of live, virtual, and constructive training environments, or it chooses to do neither it must address the lack of equipment sets available to commanders to employ deception. On December 13, 2017, the United States Marine Corps demonstrated the ability to remotely operate a UH-1 "Huey" by a Marine with no prior training or experience utilizing a handheld device. The Marine Corps has decided to invest in this technology and can now remotely operate any helicopter in their fleet if they choose to do so, giving them the advantage to operate in contested environments without increasing the cost of pilots and crews.⁸⁸ At this point in the technological revolution, there is no reason a similar capability cannot be applied to ground vehicles. Equipping a commander with the capability to outfit any amount of his ground vehicles with the capability to be remotely operated gives him an infinitely greater amount of options to employ his forces, deceive the enemy, and fight from a position of advantage. This also allows the commander to increase the utilization of dismount forces in one area without sacrificing combat power in another area to do so. Additional technological solutions that would enable commanders to increase their ability to deceive the enemy for relatively little to no cost would be the ability to alter the transponder frequencies on the Brigade Combat Team's Shadow

⁸⁸ Office of Naval Research, "Special Delivery: New Autonomous Flight Technology Means Rapid Resupply for Marines," last modified December 13, 2017, <https://www.onr.navy.mil/en/Media-Center/Press-Releases/2017/2017-AACUS>

TUAV. Altering the transponder frequency of the Shadow TUAV to replicate some other vehicle may completely fool enemy radar or Identify Friend or Foe (IFF) systems. If it doesn't fool the radar and IFF, it at least appears out of place, causing the adversary to utilize additional time to confirm what it is that they have identified, giving the U.S. forces a cognitive advantage and precious time advantage over the enemy's decision cycle. If the Shadow TUAV is armed like the Marine Corps is experimenting with than this little amount of time could prove decisive in eliminating a high pay off target from the battlefield.

Chapter 3: Applying Lessons Learned from Command and Staff College Fight Club

Command and Staff College's Fight Club examines current, and future capability sets of the Marine Corps and applies them to complex problems using the rapid planning decision process. Once the plan is created a computer-generated wargame or a table-top wargame is conducted. Throughout the computer-generated and table-top map level wargames, the authors of this paper along with their Fight Club teammates experimented with current, and future capability sets to develop and test deception ideas, and throughout Fight Club various insights have been developed that impact the planning and utilization of deception. The most important insights that were informed by history and research for this paper that came to fruition during Fight Club were the following:

1. Deception is hard, and if you do not know how the enemy decision maker receives information, thinks, and makes decisions deception operations will not work. If you can not put yourself in your enemy's shoes, find someone who can.

2. Understand the enemy's thresholds and operate below them, nested with the overall plan.

3. Attack the enemy's pre-conceived notions, reinforcing his visualization of the battle through as many conduits as possible - deception is NOT a single event.

4. The goal should be forcing the enemy to expose his order of battle or high pay off targets so that U.S. forces gain a temporary positional advantage where they can act to create favorable conditions for the larger operation.

5. Don't over-rely on deception.

6. Deception ethics. When is it right to sacrifice forces for deception.

7. The real challenge becomes how to utilize feints, displays, demonstration without sacrificing actual capability (i.e., barges, floating containers, etc.).

We will now discuss each of these insights in more detail.

First, for deception to be successful, the operation must be artfully planned to fool an enemy commander. To do this the deception planners must know how the enemy commander receives their information, how he/she thinks, and the type of decisions he/she are likely to make given the information. This requires a lot of knowledge on the enemy commander. Deception operations during the Fight Club wargames were arguably easier because American military officers were battling each other. American military officers have similar training and experiences, which allowed deception planners good predictive ability into to how their opponent commanders in the wargame might think and react to certain information. However, in warfare deception, planners rarely have this luxury. The take away is the importance to have within the deception planning team an expert on the adversary. A person that can provide in-depth analysis across the political, military, economic, social, infrastructure, and information variables. These additional lenses will allow the deception planners to present information that is credible and focused correctly to achieve the desired actions by the adversary commander.

The second principle is the in-depth understanding of an enemy's threshold and the necessity to operate beneath them while nesting within the operational plan. As evidenced earlier, research has pointed out that the first principle of deception, focus, oriented on fooling the enemy decision maker. This entails a high degree of information preparation of the operating environment and an understanding of likely enemy decisions, specifically their employment of critical weapon systems such as chemical or nuclear weapons. For example, if a large-scale demonstration or display, oriented on fooling an enemy commander as to the location of a joint forcible entry operation or penetration was so successful that it also triggered the decision to employ a nuclear warhead than the mission would result in a tactical success yet an operational failure. This leads to the second critical insight developed through wargaming, the utilization of many conduits.

The third principle of deception is credibility, and one way to bolster the perceived credibility of information is to attack pre-conceived notions through as many conduits as possible. Instead of utilizing large demonstrations or displays that overtly threaten the decision maker and lead him or her to employing a critical weapon system or unit in detriment to the operational plan, the utilization of a series of interrelated displays, demonstrations, raids, and feints should be used. Additionally, when possible, this should be accomplished utilizing low cost, robotic replicas or remotely controlled pieces of equipment. This allows the friendly forces to flood the enemy's decision cycle with credible information while preserving combat power and options for the friendly commander.

There is a fine balance in employing deception as discussed without triggering the employment of strategic weapons or reserves and forcing the enemy to expose high pay-off targets for precision attacks. In the Russia example previously illustrated, it is likely that

intelligence and operations staff would consider Russian MLRS as a high pay-off target due to its range and destructive capability. Likewise, the Russians would seek to conceal their MLRS and utilize it discriminatorily. The focus of deception operations should be oriented on forcing the enemy decision maker to expose these critical weapons or reserves so that they may be eliminated by precision fires. MLRS, for example, employs radar and needs to be unmasked to fire. Once it fires, telemetry can pinpoint its location. Thus, deception can orient towards forcing the enemy to activate his emitters that could be picked up by signals detection or forcing him to fire against a perceived threat (ideally unmanned), so that telemetry could produce a location targeted by a unit already on stand-by. Timing and synchronization is everything in deception operations such as these as opportunities are fleeting.

The fifth lesson learned from during the wargaming exercises is to not over rely on deception operations. As discussed in the above paragraph it provides a commander a tactical advantage if he/she can remove enemy high-value targets from the battlefield. Ideally, a commander has studied the enemy and developed engagement criteria he/she thinks they enemy has that will cause them to use their high-value targets. When planning an amphibious invasion on the western coast of North Korea our team planned a large deception operation, a feint with manned and unmanned teaming, to cause the North Koreans to use their artillery assets to engage our feint force, and in turn we would be able to target the North Korean artillery effectively and remove them from the battlefield increasing our chances of an effective attack. We relied heavily on the deception operation to be successful, but we were wrong; it did not have the desired effect and as such significantly altered our course of action which put our forces at a tactical disadvantage. Deception operations are great when they work, but as noted above it is hard to

predict actions of an adversary. Plan and execute deception operations, but have a branch plan that is well known and researched.

The sixth lesson gleaned from the Flight Club wargames isn't really a lesson, but a question. What are deception ethics, and is it morally right to commit troops for a deception operation? As technology has improved, it is harder to fool an enemy using fake displays. In today's operations environment to conduct feints, displays, and demonstrations actual troops will be necessary to make a credible threat to an adversary, and this will put troops at significant risk of being targeted. Using consequentialism ethical theory, it is ethically sound to commit forces to deception operations if by doing so fewer soldiers will die during the operation. Ultimately, troops have been committed to shaping operations, which deception operations are, throughout warfare history to create conditions that enable the decisive force to win. Like any decision a military commander makes they must weigh the risk versus the reward. If the likelihood of a deception operation success is high and the risk to force is low it makes sense to commit forces; however, if the chance of the deception working is low and the risk to force is high, it may be better for the commander to seek other courses of action.

This transitions into the final lesson learned that has been persistent throughout. When possible, utilize decoys, or replicas to reduce the risk to forces yet still cause the desired effect on the enemy decision maker. Some technological suggestions have been made throughout the paper such as the use of transponder codes to fool identify friend or foe systems or the use election emitters to replicate the signature of our critical systems for enemy targeting. More creativity and ingenuity should be practiced by commanders to develop low-cost alternatives such as decoy barges or containers that could serve dual purposes of triggering sonar/radar signatures and later be employed to detonate mines during an amphibious assault. It is logical

that as three-dimensional printing capabilities continue to proliferate the force that if encouraged to do so, commanders could exercise their ingenuity and creativity to print a never-ending assortment of objects or decoys for employment. Commanders do not have to wait on future technology though, as the planned employment of fires such as smoke in areas during wargames was often as effective. The employment of smoke in U.S. doctrine typically assists in masking maneuver or operations such as breach. Thus, if observed by enemy forces, it confirms his indicators of impending contact in that specific area, often diverting additional units or sensors to assist with identifying the contact. None of this occurs though unless education and training focus highlights the need to practice deception.

Chapter 4: The conclusion and recommended fields of future study

The use of military deception has persisted throughout the history of warfare. As modern adversaries close the weapons technology gap and operate utilizing tactics of unmanned surveillance systems linked to mass artillery or missile strikes, the necessity to utilize military deception as a form of protection for U.S. forces is an overlooked necessity. American strategic culture at times has blinded commanders from effectively incorporating deception into operations, and this is still evident in the current wars in Iraq and Afghanistan. While there have been operations during these two wars that have incorporated effective deception, it is rare. Americans persist in relying on overwhelming fire to defeat its non-peer threat. As America re-focuses, its efforts to fight China, Russia, and North Korea, threats that have near-peer capabilities, America will have to rely on more than just their firepower. Deception is practiced at every level of Russian military planning, and Americans need to look throughout all warfare through a deception lens. It is going to be critical to know if an adversary is trying to deceive and

if a deception lens does not exist within a headquarters the American military does not stand a chance. However, there is hope. Americans throughout history have executed deception well.

Deception is a skill that if leaders are not trained, equipped, and practiced at employing they will fail to utilize. Rear Admiral Grace Hopper is often credited with saying that "the most dangerous phrase in the language is, 'We've always done it this way.'" As a profession, the military must re-examine if the National Training Center that was created more than forty years ago still meets or exceeds all of the needs of the modern force or if there are other ways that the Army can provide world-class training to its units. In addition to the training space, units and commanders must be appropriately equipped with the technology such as autonomous or remotely operated vehicles and allowed to experiment with their employment to deceive a real enemy played by another unit to hone their ingenuity and skills of judgment and decision making while managing risk to their force.

Recommended Future Areas of Study

A recommended area of future research is the development of systems that assist commanders in planning deception operations and help them identify when they are being deceived in combat. It has been demonstrated that deception is focused on individual decision makers and their preconceived notions. So how can the combination of artificial intelligence and big data analysis enable better conduit analysis and enable better deception planning and how can they enable commanders in real time to determine if they are the targets of enemy deception.

Another area of recommended study is to research what characteristics make a good deception planner. The Army currently is currently undertaking studies at to determine if certain mental attributes make an officer a better staff officer or a better commander. Deception planning takes more effective critical thinking skills; there is an art to envisioning deception and

certain skills may better enable a person to be a deception planner. An example of a culture that breeds good deception planners are the British. It is often noted how the British people conceal their true feeling though wit and irony. They are open on the surface but as Geoffrey Household, a British novelist, notes about his own countrymen they are “unconsciously secretive about anything which is of real importance to them.”⁸⁹ This culture has made deception an important part of British military planning and has created some of the greatest deception minds in history. For example, Brigadier Dudley Clark, who Thaddaeus Holt in his book *The Deceivers* describes Dudley Clark as the father of modern deception, is the British officer that created the long-term bogus order of strategic battle deception that was used throughout World War II that proved decisive in helping the allies win the war.⁹⁰ Future research should study men like Dudley Clark and determine if there are specific characteristic or experience that enable effective deception planning.

The last recommended area of future study is the utilization of alternative compensatory control measures (ACCM) for deception operations. ACCMs are currently used to safeguard classified information and operations, specifically deception operations in Iraq and Afghanistan when normal control measures are not sufficient. Secrecy is inherently vital in deception planning due to the risk of the deception plan being leaked or otherwise comprised. Still, there should be a further analysis of the required approval authorities to plan and execute military deception operations as well as who and when individuals are read on to ongoing deception operations. If held too close, there is an equal prevalent risk that a units actions compromise the

⁸⁹ Nicholas Rankin, *A Genius For Deception How Cunning Helped the British Win Two World Wars* (London: Oxford University Press, 2008), xi.

⁹⁰ Thaddaeus Holt, *The Deceivers* (New York: A Lisa Drew Book/Scribner, 2004), 32.

deception plan, requiring a fine balance of when and who is informed to protect the details of the plan.

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