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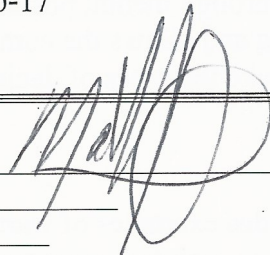
MASTER OF MILITARY STUDIES

Operational Sense: The 'Coup D'oeil' Subordinates Require of Their Senior Leaders

SUBMITTED IN PARTIAL FULFILLMENT
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MASTER OF MILITARY STUDIES

Major George J. Flynn III

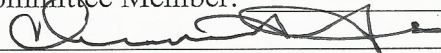
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Executive Summary

Title: Operational Sense: The ‘Coup D’oeil’ Subordinates Require of Their Senior Leaders

Author: Major George J. Flynn III, United States Marine Corps

Thesis: To be successful in the execution of operational level decision-making, leaders must mentally position themselves to gain the cognitive decision space required to achieve *operational sense*, a coup d’oeil that is gained through respect of the cognitive domain, an understanding of operational purpose, and the discipline to allow those at the tactical level to set conditions to achieve that purpose.

Discussion: Though Marine Corps Doctrine links coup d’oeil, to tactical sense, Carl von Clausewitz defined coup d’oeil, more broadly as the “quick recognition of a truth.”ⁱ Recognizing truth through study and reflection is applicable to both the battle and the encompassing operational campaign. A commander executing at the operational level must be able to see the true decisive effect required from tactical action(s) in order to meet the desired strategic objective. Operationally, this decisive effect is the tipping point that commences momentum in the direction of achieving the strategic objective. This requires the commander to know how to position oneself not just in a physical sense but also in terms of where he or she is allowing his or her respective decision-making plane to exist in order to offset the negative effects of cognitive bias. As war is a contest against a free-thinking enemy attempting to make decisions with the same cognitive constraints, positioning oneself properly to have the cognitive decision space to gain perspective in order to discover the truth is important in achieving the strategic end state. Possessing operational sense requires a commander who is able to position oneself mentally to minimize cognitive bias, understand the role of momentum in the building of tactical action, and attack the enemy’s decision making process. To effectively link tactical actions to strategic objectives requires an operational sense, gained through mental positioning, that respects the effects of the cognitive domain on decision making and allows the commander the ability to know when to transcend the levels of war in order to make the types of decisions that create situations that achieve operational momentum.

Conclusion: History provides examples of warring commanders with very different warfighting mindsets, where the ability to maintain operational sense affected the outcome of a particular campaign. To be effective in the future, today’s leaders must ensure that they develop an operational sense that reflects an understanding of operational purpose, the discipline to allow those at the tactical level to set conditions to achieve that purpose, and respect for the effects of the cognitive domain.

ⁱ Carl von Clausewitz, *On War*, ed. Michael Howard and Peter Paret, trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1984), 102. Clausewitz stated that “the concept merely refers to the quick recognition of a truth that the mind would ordinarily miss or would perceive only after long study and reflection.”

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Preface

As military professionals study to understand such concepts as the nature of war and the operational art, they must not lose sight of the right kind of leadership that is required to allow for the innovative exploitation of opportunities in the execution of operations. All military leaders are products of their initial leadership opportunities and tactical experiences and these high-fidelity moments stay with them throughout the progression of their careers. With this progression in mind, born from tactical experience, it is natural that every commander aspires to be the type of leader who others would call on in times of trouble to appear on their flank to save the day. As leaders progress in rank and responsibility, they must remember that the “flank” they need to appear upon for their subordinates is not found as much on the battlefield as it is in the mind, where a leader prepares for the future decisions and guidance required for the situation that is unforeseen. A mark of evolution in a commander is not his or her ability to know the future, but rather it is the will to attempt to shape it. Failure to do so is not micro management; it is improper management and a misuse of the energy and brainpower of the commander whose tactical focus at the expense of operational thought betrays the trust of his subordinates.

This graduate-level process of military study has been a struggle of thought, and I have been guided and encouraged along this path by the mentorship of Dr. Matthew Flynn who first suggested to me that I needed to invest the time in understanding the cognitive domain. Throughout many War Studies, Ethics, and Leadership seminars, whenever cognitive effects entered the discussion, Dr. Flynn took the time to ensure that I took note of the cognitive effect and this mentorship allowed me to further develop my thoughts on this issue. Additionally, I would like to thank Lieutenant Colonel Micheal Russ for his willingness to provide his military perspective and editing prowess. His enthusiasm for instruction is hard to match and sets an

example for the level of instruction that exists at Command and Staff College. Lastly, this work could not have been completed without the love and strong support from my wife Nicole, the one who sets the example in terms of strength and leadership for our family.

Introduction

In his book, *Team of Teams: New Rules of Engagement for a Complex World*, retired US Army General Stanly McChrystal outlined lessons on leadership he learned while serving as the Joint Special Operations Joint Task Force commander in Iraq in 2008. McChrystal highlights a question he would often ask to those soldiers under his charge: “If I told you that you weren’t going home until we win – what would you do differently?”¹ Put another way, General McChrystal could very well have asked: what defines victory and how does one make use of tactical-level actions to build the momentum needed to achieve victory? The stated questions highlight the operational struggle that McChrystal dealt with and is akin to the struggle many senior leaders grapple with today, especially when placed in positions of command where effective operational-level decision-making is critical to mission success. To be successful in the execution of operational level decision-making, leaders must mentally position themselves to gain the cognitive decision space required to achieve *operational sense*, a coup d’oeil that is gained through respect of the cognitive domain, an understanding of operational purpose, and the discipline to allow those at the tactical level to set conditions to achieve that purpose. If achieved, a commander possessing operational sense will have a combative and cognitive edge over the enemy that will build operational momentum towards achievement of the strategic objective.

Though Marine Corps Doctrine links coup d’oeil to *tactical sense*, Carl von Clausewitz defined the term more broadly, stating that coup d’oeil “merely refers to the quick recognition of a truth that the mind would ordinarily miss or would perceive only after long study and reflection.”² In recognizing the truth through study and reflection, a commander executing at the operational level is able to see the essential decisive effect required from the tactical action(s)

that must be accomplished to meet the strategic objective. Operationally, this decisive effect is the tipping point that commences a momentum shift in the direction of achieving the strategic objective. Properly achieving this recognition requires the time to think and contemplate as Clausewitz described. This requires the commander to know how to position oneself physically and also cognitively in terms of where he or she is positioned in the decision-making plane to offset the negative effects of cognitive bias. Positioning oneself properly to have the cognitive decision space to gain perspective and discover the truth is important, as war is a contest against a free-thinking enemy attempting to make decisions in the same cognitive domain. Therefore, possessing operational sense requires a commander who understands the role of momentum in the building of tactical action, who is able to position himself or herself mentally to minimize cognitive bias and create situations that adversely affect the enemy's decision making process. Effectively linking tactical actions to strategic objectives requires an operational sense, gained through mental positioning, that respects the effects of the cognitive domain on decision making and allows the commander the ability to know when to transcend the levels of war in order to make the types of decisions that create situations that achieve operational momentum.

Operational sense can be difficult to achieve and maintain. As General McChrystal worked to better define his role as commander of the Joint Task Force, he provided a clear statement regarding the nature of his leadership problem in that particular time and place:

At exactly the time when I had the capability to make more decisions, my intuition told me I had to make fewer.... If I could make a decision, shouldn't I? Wasn't that my job? It could look and feel like I was shirking my responsibilities, a damning indictment for any leader.³

McChrystal's introspective statement exposed a bias for action that appeared to be in conflict with the intuition to adjust his perspective and approach to decision making. The bias for action presented a necessary sense of urgency required by the leadership development, military culture,

and education of which General McChrystal was a product. This bias is indicative of the magnitude of cognitive influence that is placed on heuristics in decision-making processes.

Marine Corps doctrine, education, and culture promote a bias for action. Specifically, *Marine Corps Doctrinal Publication (MCDP) 1-3 Tactics* states, “a good tactician has a constant sense of urgency. We feel guilty if we are idle. We never waste time, and we are never content with the pace at which events are happening.”⁴ The challenge for General McChrystal and other senior leaders appears to reflect a lack of acknowledgment that their decision-making is no longer based on being a good tactician. Senior leaders must acknowledge that, in operational-level decision-making, possession of an operational sense requires the cognitive decision space needed to see beyond reactive, tactical-level actions. Moreover, operational sense mitigates the effect of cognitive bias and allows the leader to make reflective decisions that incorporate tactical results to achieve momentum at the operational level of war.

Research Acknowledgment

Research conducted on cognitive psychology and decision-making, Civil War history, and U.S. Marine Corps Doctrine supported the evolution of this thesis. The writings of prominent cognitive psychologists, like Daniel Kahneman and Amos Tversky, were useful in outlining the cognitive domain in decision-making. Their research provided a focus point for insight into the effects of biases on decision-making heuristics and how bias often causes human beings to make irrational decisions in the absence of time for reflection prior to decision. The analysis surrounding this thesis required this focus on the causes for irrational decision making first and foremost and this helped navigate the vast array of research regarding the cognitive domain.

Second, Colonel John Boyd's *Patterns of Conflict* presentation also gave perspective on how a decision-making process, so valued by the Marine Corps, is affected by the cognitive domain when decisions are reactive in nature. In a taped presentation of his *Patterns of Conflict*, Boyd comments on the bias of "mirror imaging," which he believed affected senior leaders in the execution of their decision making in the Vietnam War.⁵ Boyd espoused the relevance of understanding such bias as he perceived that the inability of senior leaders to properly plan and make use of tactical actions to spur and achieve operational momentum led the loss of the war.

Third, the study of Civil War history, specifically the historical documents found in *The War of the Rebellion: The Official Records of the Union and Confederate Armies*, provided primary-source insight into the day-to-day decision-making and respective mindsets of commanders in the Overland Campaign during the spring of 1864. *Grant's Memoirs* provided further insight into General Ulysses S. Grant's demeanor during the Overland Campaign, an operation that achieved significant momentum in bringing about an end to the Civil War in the east. Major General J. F. C. Fuller's book *Grant and Lee* and James J. Schneider's theoretical paper "Vulcan's Anvil: The American Civil War and the Foundations of Operational Art" provided additional comparisons of the generals as they made decisions in the fog of war. Both writer's respective defense of Grant's operational leadership and vision reinforce the question regarding the type of mindset and positioning required of a leader to be effective at manipulating tactical effects for operational gain. This combination of both primary and secondary sources helped provide a strong foundation for this analysis.

Lastly, Marine Corps Doctrine, specifically *MCDP 1 Warfighting*, *MCDP 1-2 Campaigning*, *MCDP 1-3 Tactics*, and *MCDP 6 Command and Control* provided perspective and reinforce that Marine Corps doctrine does provide decision-making guidance. However,

work still needs to be done to refine Marine Corps doctrine and especially its culture to shape commanders' abilities to be more disciplined in decision making and develop the operational sense that provides a cognitive advantage. This next step is the ultimate contribution of this Master of Military Studies thesis, a point of departure to consider how best to introduce operational sense gained through the achievement of cognitive decision space into Marine Corps thinking and philosophy.

Marine Corps Doctrine and the Need for "Operational Sense"

In 1986, Marine Corps doctrine underwent a significant evolution resulting in the publishing of *Fleet Marine Force Manual (FMFM) 1 Warfighting*. Since that time, and through the evolution into the Marine Corps Doctrinal Publication (MCDP) naming convention, the Corps' doctrine has served as a Marine's philosophy on how to think to achieve decisive effects. The publications provide perspective on tactics, campaigning, strategy, logistics, and command and control. In each publication, Marines are consistently reminded of the need to be comfortable with uncertainty and develop the skills necessary to properly plan, communicate, and trust subordinate leaders in the execution of mission-type orders. Unique to one publication, however, is the clear description of an intangible aspect of leadership that applies to those Marines operating in the tactical level of war that need emphasis on the cognitive aspect of leadership in the face of the enemy.

MCDP 1-3 Tactics defines coup d'oeil as "tactical sense," the ability for leaders to "have an intuitive understanding of the situation, know what needs to be done, and know what can be done."⁶ At the tactical level, the intuitive understanding of the situation is completely dependent on the leader's decision-making heuristics and the associated cognitive biases that affect those heuristics. In this manner, there exists a fine line defined by heuristic accuracy that separates

tactical sense from complete incompetence. However, as commanders become more senior and take on added responsibilities, the effect of cognitive bias is magnified, as multiple simultaneous actions are executed, supervised and assessed. The intuitive understanding then required at the senior-leader level must transform to something that is beyond the tactical level and incorporate “big picture” linking of strategy to conditions created by tactical action. Defining and teaching leaders to know when and how to use their operational sense can result in thinkers who recognize the overarching effect(s) of tactical action required to gain operational momentum. For any instruction or change in approach to be successful, discipline of the mind is key.

Operational sense thus requires an understanding of the effects of cognitive bias, a broader view of the problem, and the discipline to remain above the fray of tactical-level thought and action. Greater understanding and respect for the cognitive domain can also facilitate operational-level decision making that drives an opponent to a confined set of options advantageous for the friendly commander for exploitation. Discipline requires patience, trust, and the ability to think through situations to successfully mitigate the negative effects and reinforce the positive aspects of cognition. If achieved, operational sense affords leaders the ability to not only see the problem from differing perspectives, but also to understand the purpose of their orders better and stay true to that purpose in the conduct of war. Intuitive understanding at the operational level is an understanding of the future situation required to achieve momentum and an appreciation of the negative effects of the biases existing in the cognitive domain that must be mitigated. Therefore, the intuitive understanding required of an operational-level decision maker does not regard the situation as it is, but rather an understanding of what the situation will be - an end state that is defined in terms of a desired situation that the enemy did not foresee or could not control.

The Operating Environment - Cognitive Domain

The cognitive domain, where all decision making takes place, is the mental terrain where judgment, experience, and intuition reside and where biases abound and affect and possibly distract an individual from understanding both the true nature of a problem and the type of decision that needs to be undertaken. Cognition is how humans receive and interpret information, assess, make decisions, and learn. The cognitive domain is the environment in which such decision-making processes reside. Cognition, defined as “the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses,” is the enabler of inputs that allows the decision-making process to run.⁷ The heuristics and biases present in the cognitive domain are useful in allowing for fast decision and action cycles and are harmful when those biases distract the individual’s achievement of true appreciation for the situation upon which the decision rests. A commander who understands the cognitive domain and can maneuver in that space will potentially be able to truly link strategy and purpose to objectives and tactical actions systematically, the essence of “operational art.”

Theory, Philosophy and Doctrine

Philosophers, psychologists, warfighters, and economists alike have studied the cognitive domain’s influence on how people think, decide, and act. Study variations range from understanding the human condition to improving understanding of the ebb and flow of the economic marketplace to seeking tools to better understand an adversary. This research and study has produced many models that attempt to define how a human being comes to a decision. For example, Benjamin Bloom’s 1956 Taxonomy explained subsets of the cognitive domain of as knowledge, comprehension, application, analysis, synthesis and evaluation.⁸ In 2003, Dave Snowden created the Cynefin Framework to illustrate decision making through the effects of five

categories: simple, complicated, complex, chaotic, and disorder.⁹ Then in 2011, Daniel Kahneman defined decision making as a process of thinking in two different systems: system 1 being reactionary and system 2 allowing for more time to process and analyze before making a decision. In these and other studies, a common theme exists: there are decisions of a reactionary nature and decisions of a contemplative or reflective nature, and the process chosen is determined either by the situation or by the individual decision maker.

In a military construct, the levels of war may define the situation facing any commander. Marine Corps doctrine outlines and defines clearly the levels of war with the intention of ensuring that all Marines understand the importance of their effect on decisions and associated actions. *MCDP 1 Warfighting* states, “tactics focuses on the application of combat power to defeat an enemy force in combat at a particular time and place.”¹⁰ The tactical level is the level of war in which action and subsequent reaction must reside as tactics is focused on the use of techniques and associated procedures at a particular time and place. However, actions at the tactical level can affect the operational and strategic levels of war in the sense that any and all actions are tactical, and as such, are the tools that create conditions that affect operational momentum with regards to the greater strategy.

Nominally, each positive tactical effect could result in gained operational momentum as the commander moves closer to achieving operational objectives for strategic goals. Therefore, the operational level becomes the medium for decision making and connects the results of tactical actions to strategy. Marine Corps doctrine states “actions at this level [operational level] imply a broader dimension of time and space than actions at the tactical level.”¹¹ If decision making at the tactical level is in support of action/reaction, then decision making at the operational level should be of a different process and perspective that accounts for and

advantages a broader dimension of time and space. Understanding this dynamic is the responsibility of the operational-level commander.

John Boyd

John Boyd codified many of these decision-making concepts into his Observe-Orient-Decide-Act (OODA) system, a part of his noteworthy “Patterns of Conflict” research and presentation. Using Boyd’s OODA system as a model for discussion, the observation aspect begins with a given situation and consists of the knowledge received tied to that situation. Factors such as upbringing, culture, and memories affect how this knowledge is then perceived and processed as part of one’s orientation. The effects on both the incoming information and the way in which it is perceived and processed are cognitive biases that affect decision making.

The tactical level most often presents an if/then attack/counter-attack construct for the warfighter. Here the effects of cognitive bias are magnified significantly and the tactical-level decision maker is susceptible to being unable to mitigate the effects of cognitive bias during the observe and orient phases. This highlights the importance for commanders to know how and when to transcend the levels of war, to position oneself in thought at the level that best facilitates success in linking objectives to actions. The discipline to maintain a mind for time and space in decision making affords commanders the space to reflect and to conduct the long study required to mitigate the effect of cognitive bias and recognize the situation as it will be. The result is greater clarity in the purpose and end state that ultimately provides guidance regarding the vector of effect required to support objectives and strategic ends.

Carl Von Clausewitz

While Marine Corps doctrine links coup d’oeil to tactical sense, Carl von Clausewitz defined coup d’oeil as “merely [referring] to the quick recognition of a truth that the mind would

ordinarily miss or would perceive only after long study and reflection.”¹² In recognizing the truth through study and reflection, a commander executing at the operational level should be able to see the true decisive effects required for meeting the strategic and operational objectives. The ability to properly recognize the situation, as it will be, requires the time to think and contemplate as Clausewitz described. As stated before, this also requires the commander to know how to position him or herself not just literally, but figuratively with respect to an appropriate decision-making plane, positioning oneself properly to gain and sustain the right perspective and discover truth. Truly possessing operational sense requires a commander who positions him or herself mentally to minimize cognitive bias and gain momentum by attacking the enemy decision-making process.

Operational art requires an operational sense that respects the effects of the cognitive domain on decision making and allows the commander the ability to think across the levels of war and make the types of decisions that render the adversary incapable of effective decision-making at the operational level. In essence, the enemy’s operational center of gravity is its decision-making process and the complimentary critical vulnerability is the bias found in the cognitive domain: one that draws it into a reactive mode of decision-making. For a commander to not understand this reality, the consequences are the related to the concern surrounding the “strategic corporal.”¹³

The Strategic Corporal and the Rise of the Tactical General

During his time as Commandant of the Marine Corps, General Charles Krulak emphasized the importance of understanding the “strategic corporal” to ensure that all Marines respected the powerful role that junior Marines’ tactical actions had in creating nearly instantaneous strategic success or failure.¹⁴ Over time, the term has taken on a negative

connotation in that the strategic corporal has come to define a Marine whose misstep subsequently negatively affects the greater strategy. If there exists such an entity as the “strategic corporal” whose improper actions at the tactical level can adversely affect the higher levels of war, then is there also an operational entity whose unfocused thought and undisciplined decision-making adversely affects the greater strategic effort?

In an op-ed for the Brookings Institute, political scientist and scholar Peter Singer defined what could be the inverse of the strategic corporal, the “tactical general.” In discussing the strategic corporal, Singer highlights how increased technological capabilities outfitted to the armed forces led to

an opposite phenomenon – a dirty little secret that the people in the service are somewhat afraid to talk about for risk of their own careers. I [Singer] call it the rise of the tactical generals. Our technologies are making it easy, perhaps too easy, for leaders at the highest level of command not only to peer into, but even to take control of, the lowest-level operations.¹⁵

So why does General McChrystal’s concern regarding what he needs to be as a leader mirror the dangers of becoming a tactical general? The reason is that today’s technological gains amplify the biases that exist in the cognitive domain and distract senior leaders from engaging in the reflective decision making required for their command positions.

As actions at the tactical level are most often of a nature of action, reaction, and subsequent reaction between belligerents, the decision situation itself changes relatively slowly in comparison to the rapid execution of the decision process on both sides. With each side acting in a “system 1” fashion, decisions are rapidly made as one side makes a move that is then followed by the counter-action from the other side.¹⁶ Essentially, the situation at the tactical level is often the output of the last action taken by the respective belligerent while the operational situation remains relatively unchanged.

However, when decision-making is looked at from an operational perspective, the situation appears to move faster as the respective belligerent's decision-making becomes more reflective. There exist greater opportunities to "skip a turn" and study tactical-level actions and their associated effects to understand how the situation is evolving before the adversary's decision-making process has completed. In this manner, perhaps the center of gravity at the operational level changes - viewed less in terms of the physical and more in terms of the abstract mental picture of the moment. Therefore, understanding cognitive bias as the critical vulnerability of the enemy allows the true center of gravity for any adversary to become their decision-making process. Instilling or maintaining biases in the mind of the adversary is critical as the enemy's biases begin to negatively affect decision-making, negatively impact the decision cycle, and force reactivity as the enemy loses sight of the true situation. Momentum is thus gained when the operational-level decision maker has maneuvered his own thought process to a plane higher than his adversary, creating a cognitive situation where the enemy is fixated on a dilemma (tactical situation) and is no longer able to comprehend what is relevant (operational).ⁱⁱ

Case Study - The Overland Campaign: May 4 – June 24, 1864

The effects of cognitive bias on decision-making were prevalent in the Overland Campaign of 1864 during the lead-up to the nine-month siege of the Battle of Petersburg that effectively ended the American Civil War. The Overland Campaign provides both positive and negative examples of a commander's ability or inability to deal with the effects of cognitive bias

ⁱⁱ Jacob Kipp, "Two Views of Warsaw: The Russian Civil War and Soviet Operational Art, 1920-1932" in *The Operational Art: Developments in the Theories of War*, ed. B.J.C. McKercher and Michael A. Hennessy (Westport, CT: Praeger Publishers, 1996), 62. For additional perspective on the requirements of the operational decision maker, the evolution of Russian operational doctrine, led by military theorists such as Alexander Svechin, found that the challenges created by modern warfare were masses of information and the need for commanders to have an operational focus.

on decision making and inevitably, operational momentum. The case study highlights the role of decision makers (operational-level leadership), tactical-level executors, and the respective situation that is defined in terms of moment in time and the respective viewpoint of the decision maker based on their cognitive decision space.

The Overland Campaign in 1864 provides insight into the role of cognitive bias and its effects on the conduct of war through the leadership of Generals Ulysses S. Grant and Robert E. Lee. Throughout the execution of the campaign, both senior leaders faced moments where they became fixated and enslaved to biases which further drew them into a reactive decision-making process. As one commander failed to account for the effects of such biases and remained primarily in a reactive, system 1 mindset, the other was, more often than not, able to better mentally position himself throughout the campaign to command in such a way that cognitive biases were mitigated. This mitigation allowed the commander to gain operational sense and make appropriate level decisions that led to success throughout the majority of the campaign. Though General Lee maintained the irrelevant tactical initiative throughout the campaign, General Grant managed to maintain the relevant operational initiative despite moments where cognitive bias adversely affected his decision-making process. The result was the deciding blow that defeated the Confederacy.

The Overland Campaign was a collection of engagements that commenced west of Fredericksburg, Virginia, first with the Battle of the Wilderness and continued southeast towards the James River and concluded with the Battle of Cold Harbor. This campaign set conditions for the commencement of the Richmond-Petersburg Campaign and the end of the Civil War. The war's closure achieved the US strategic objective of maintaining the Union and denying the Confederate States' secession. The Overland Campaign often draws interest because many view

the conflict as Grant versus Lee - a reluctant Grant taking on the greatest military mind of the time, General Lee. Confederate General Jubal Early and historian Douglas Southall Freeman conclude that while Lee outmaneuvered Grant time and again, Grant chose attrition to whittle away the Confederate forces until the Army of Northern Virginia's will was broken. These historians claim that Grant won, but with no sophistication of thought as materiel advantages overwhelmed the South, not necessarily defining a military defeat on the battlefield.¹⁷

When viewed through the lens of operational art and the assessment of the cognitive decision space required to think, decide, and act, this case study demonstrates that Grant was able to defeat Lee because, more often than not, Grant chose to properly position his mind to think and make operationally relevant decisions. This positioning manipulated and eventually overwhelmed the decision cycle of General Lee, whose own cognitive biases held him into thinking and acting purely at the tactical level. With an understanding of the strategic objectives for both the United States and the Confederacy, this case study also analyzes the challenges both sides faced and how command and control, positioning, and level of appropriate or inappropriate decision making affected the outcome of the campaign.

The assumption going forward is that at the time perhaps cognitive bias affected the mind of one if not both of these leaders during the course of the fight. While cognitive bias affected the mind of both generals, Grant was able to get free of this myopia more often than Lee. The author acknowledges there are many examples throughout the campaign where Grant demonstrated the leadership challenge of maintaining operational sense. With this understanding, the Overland Campaign case study will detail the evolution of the campaign that led to the Battle of Cold Harbor, a period where Grant's loss and eventual recapture of

operational sense explains the campaign's outcome at least as much, if not more, than a mere focus on attrition as a cause for victory.

The tactical executors, those individuals whose decisions and actions provided inputs to the decision-making process of the decision makers, were numerous. For the Confederacy, the decision agents that were a key to Lee's decision-making process were General James Longstreet, commander of the I Corps; Lt. Gen. Richard S. Ewell, commander of the II Corps; Lt. General A. P. Hill, commander of the III Corps; and General G. T. Beauregard, commander of the Department of North Carolina and Southern Virginia, stationed in southeast Virginia. For the Union, the tactical executors that were key to Grant's decision-making process were Major General George Meade, commander of the Army of the Potomac; Major General William Tecumseh Sherman, commander of the Army of Tennessee; Major General Franz Sigel, and later Major General David Hunter, commanders of the Department of West Virginia; and Major General Benjamin Butler, commander of the Army of the James.

When comparing the Union and Confederate organizational constructs, key differences exist in the positioning and role of the tactical executors for each side. As the campaign commenced, the entirety of Lee's tactical executors were co-located with Lee in Virginia, whereas Grant's tactical executors were spread throughout the south and southwestern United States. As a decision maker, Lee took part in the direct tasking of these tactical executors as they engaged in combat with General Meade's forces, with the exception being General P.G.T. Beauregard's forces in southeast Virginia, detached to ensure that General Butler's Army of the James did not attack Richmond from the southeast. Though not directly in charge of Beauregard from a decision-making standpoint, Beauregard's positioning and battlefield actions served as inputs to Lee's decision-making process.

Lee's span of command and control of Confederate forces in 1864 was far less reaching when compared to 1862 when Lee left his position as senior military advisor to Confederate President Jefferson Davis to assume command of the armies of eastern Virginia and North Carolina.ⁱⁱⁱ In his book detailing Lee's commencement of the Northern Virginia Campaign in 1862, historian Joseph Harsh foreshadows Lee's loss of operational sense, stating that Lee, despite being given a greater span of control over the entire Confederate effort than had been afforded his predecessor, General Johnston, "soon became preoccupied with his new field command that he ceased to exert control over operations at a distance."¹⁸ By the commencement of the Overland Campaign in 1864, Lee's time spent in command of a field army had begun to undermine his ability to retain the operational sense that afforded him success two years prior. In the time between 15 April 1864 and the close of the Overland Campaign that July, the aggressive, risk-taking commander of the Army of Northern Virginia would lose his operational sense and become tactically focused to the detriment of the Confederacy.

In the months prior to the start of the campaign, several of Lee's dispatches detail that he possessed a mindset to "take the initiative before our enemies are prepared to open the campaign."¹⁹ This outlook persisted within weeks of the onset of the campaign. On 16 April 1864, in a dispatch to General Braxton Bragg, military advisor to Confederate President Davis, Lee provided his thoughts regarding a possible course of action that could have potentially regained the initiative for Lee and placed Grant into a reactive posture that was more susceptible to the negative effects of cognitive bias.

ⁱⁱⁱ Jefferson Davis to Robert E. Lee, 1 June 1862, Richmond, VA in *War of the Rebellion: Official Records of the Union and Confederate Armies*, Series I, vol. 11, 568. Unit naming organization and naming convention for the Army of Northern Virginia were in the midst of change in 1862. In the letter detailing Lee's assumption of command, Davis directed Lee to "assume command of the armies in Eastern Virginia and in North Carolina."

If I was able to move, with the aid of Longstreet and Pickett, the enemy might be driven from the Rappahannock and be obliged to look to the safety of his own [Union] capital instead of assault upon ours.²⁰

These communications demonstrate Lee's understanding of the operational implications facing the Army of Northern Virginia prior to the commencement of the Overland Campaign. Lee understood the importance of the James River to the Union as an avenue of approach and his thoughts on attacking to gain physical space to better defend Richmond mirror the offensive-defense mentality that was used in the campaigns in Northern Virginia and Maryland in 1862 to successfully defend Richmond by putting pressure on the Union. Lee's hesitation in 1864 to commence a similar operation centered largely on his belief that he did not possess the manpower and logistical resources necessary to take the initiative and attack.

Lee's perspective at the time regarding his force size is worth note and serves as an example of the slow degradation of his operational focus as his army would commence the Overland Campaign with force ratios that compared to previous engagements and campaigns up to that point of the war. The Army of Northern Virginia would commence the Overland Campaign with an approximate relative combat power ratio of 1.8:1, with approximately 64,000 Confederates facing approximately 118,000 Union soldiers.²¹ This ratio was slightly less favorable than what Lee had in manpower at Gettysburg, but was significantly more favorable than the relative combat power ratio the Confederacy faced at Chancellorsville (2.2:1) when Lee twice split his force of 60,300 against General Joe Hooker's Army of the Potomac that consisted of 133,868 men.²² Lee's refusal to act and instead remain on the defensive would result in a self-induced denial of tactical options that skewed Lee's operational sense and put his decision-making ability in a reactive system 1 process that was dictated by Grant's control of the operational situation.

On the Union side, Grant's choice to work through Meade and allow Meade to focus on the preponderance of tactical-level decision making allowed Grant the cognitive decision space to reflect in decision making, essentially protecting himself from cognitive bias. The product of Grant's use of cognitive decision space allowed him to maintain a clear site picture of the operational situation he desired, a situation that would take advantage of Lee's choice of withdrawal or attack. In a dispatch to his chief of staff Major General Halleck on April 29, 1864, Grant shared his operational vision.

General Butler will operate on the south side of James River, Richmond being his objective point. I [Grant] will move against Lee's army, attempting to turn him by one flank or the other. Should Lee fall back within his fortifications at Richmond, either before or after giving battle, I will form a junction with Butler, and the two forces will draw supplies from the James River. My own notions about our line of march are entirely made up, but as circumstances beyond my control may change them, I will only state that my effort will be to bring Butler's and Meade's forces together.²³

Grant's desired future situation was that of a joined Army of the Potomac and Army of the James threatening Richmond via the James River. Grant set the conditions to drive the tactically focused and cognitively blinkered Lee towards an operational situation that Grant desired, a situation that Grant eventually created by using Lee's own tactical victories against him.

One of the main critiques scholars and experts level against Grant throughout the conduct of the Overland Campaign was that his actions were purely focused on attrition.²⁴ A counter-argument that could be made to this assertion is that Lee's continued attacks on Union forces resulted in self-attrition.²⁵ To view this from the lens of operational sense, a review of the types of decision-making being conducted by the two leaders is required to contrast decision making styles and validate the necessity of operational sense.

In his book *Grant and Lee: A Study in Personality and Generalship*, noted historian and British Major General J.F.C. Fuller provides the following analysis of Grant that both questions his definition as a “butcher” and highlights Grant’s decision making:

Though Grant naturally hoped that he would be able to crush Lee north of Richmond, it must not be overlooked, as most historians have overlooked it, that this was not his central idea, which was to hold Lee, as it were in a vice, by constant attack, until Sherman could swing round from Chattanooga... [but that Grant] expects that he will have to establish himself on the James river.²⁶

Fuller goes on to explain that Grant first indicated a focus on owning the James River in a dispatch to Meade on 9 April, nearly a month before the campaign was to commence. In dispatches to each of his tactical executors, though the James River and its importance are mentioned, Grant does not anchor on its operational importance in an effort to keep his subordinates focused on their respective tactical objectives.^{iv} He maintained a broader view of the problem and used his subordinates to focus the tactical action on making “Lee’s army...[the] objective point.”²⁷ What is noteworthy throughout the campaign is that while tactical action occurred, Grant, not being directly involved in tactics, was able to provide continual, subtle direction to the Army of the Potomac that kept Union forces on the move in a southeast direction towards the James River. In this manner, Grant’s use of Meade’s forces allowed him to continue to reinforce Lee’s bias for action in such a way that it blinded Lee to the true purpose and intent of Grant’s objectives and movements.

From the onset, Lee was improperly positioned to make the types of decisions necessary for success at the operational level of war, as he was blinkered by many cognitive biases.

^{iv} Ulysses S. Grant to George G. Meade, April 9, 1864, Culpeper Court-House, VA, in *War of the Rebellion: Official Records of the Union and Confederate Armies*, Series I, vol. 33, 828. Grant alluded to Meade the greater operational purpose of the Army of the Potomac’s tactical action when he wrote “So far as practicable, all the armies are to move together and toward one common center.”

Throughout the campaign, Lee was consistently forced to make rapid, reactive decisions in response to the movement of Meade's forces south. In each case, the record suggests that though Lee was often successful in his efforts, he was a "tactical general" during the conduct of the Overland Campaign. Lee consistently struggled because his situation rapidly changed in complexity with each move and countermove. Conversely for Grant, the decision situation did not change during the campaign. When cognitive bias threatened, Grant was able to transcend the levels of war, discern impacts at numerous levels and properly guide the tactical executors in the right direction for the Army, seizing the James River.

Battles of the Wilderness and Spotsylvania Courthouse 5-21 May 1864

On the northwest side of Richmond, the Battle of the Wilderness commenced when Lee's forces attacked the Union Army crossing the Rapidan River. In his May 5th and 6th reports on the battle, Lee remarked: "By the blessing of God we maintained our position against every effort until night.... Every advance on his part, thanks to a merciful God, has been repulsed."²⁸ Lee, though successful, commenced a systematic and reactive decision-making effort focused on recent victories, slipping him into the realm of tactical decision-making. There is no greater example of Lee's lack of cognitive decision space and loss of operational sense than in Douglas Freeman's account of Lee's attempt to rally a number of Longstreet's Corps in a counterattack. According to Freeman's collected accounts from the battlefield on May 6, 1864, as Lee attempted to personally take lead of the charge himself, the soldiers realized what was happening and tried to stop him.

He [Lee] did not hear them. His face was aflame and his eyes were on the enemy in the front...Longstreet was at hand, Venable shouted into the General's ear; had he not better turn aside and give Longstreet his orders? For a moment there was a hard conflict between the impulse of the warrior and the commander's sense of responsibility. Then, like a man coming out of a trance, Lee slowly pulled back his

horse, his glare still to the front; he waved his hat to the onrushing Texans and went back to Longstreet – to be told bluntly that he should go farther behind the lines.²⁹

Freeman's account of Lee's actions on May 6th demonstrates Lee's completely inappropriate mental positioning and lack of cognitive decision space. In choosing to follow his bias for action and attempt to move to the front to rally the troops, Lee's reactive actions were an attempt to address a tactical problem. Lee should have maintained the cognitive decision space necessary to solve the operational problem that Grant's continued pressure and southeast movement presented. While still in the proximity of the Rappahannock, perhaps a bold movement of forces to the Shenandoah to threaten Washington while Lee operated from the defense could have put some pressure on Washington and thwarted Grant's operational momentum.

Some military professionals may disagree and justify Lee's actions as being in line with that philosophy that the duty of any leader is to move to the point of friction. While it is essential for leaders to move to the point of friction, leaders must have the ability to choose the correct friction point to address. The criticism of Lee in this instance is that he became a "tactical general" and ignored moving to the true point of friction for which his billet mandated he work to solve, thwarting Grant's operational momentum and regaining the initiative for the Army of Northern Virginia.

While Lee remained fixated on tactical action, Grant retained his operational sense. On May 7, 1864, Grant sent his chief of staff, Major General Halleck, the following: "I think the loss of the enemy must exceed ours, but this is only a guess based upon the fact that they attacked and were repulsed so often. I wish you would send me all the information you have from General Sherman, by Bull Run, and all the information from the James River expedition."³⁰ Grant clearly acknowledges the tactical loss and appears to agree with Lee that the Union has been repulsed.

However, what is also clear is that the tactical action is not Grant's focus, rather his focus remains on the complementary movements of forces like Sherman's disrupting the south and on Butler's movement towards the James River.

Grant resolved to continue his campaign and directed Meade to move the Army of the Potomac southeast. Lee followed and, after hard marching, beat Grant to the vital crossroads at Spotsylvania. As the Battle of Spotsylvania Courthouse commenced, Lee remained focused on the day-to-day interactions of his army with the Army of the Potomac. On May 8, 1864, Lee reported, "after the repulse of the enemy from Spotsylvania Court-House this morning, receiving re-enforcements, he [Grant] renewed the attack on our position, but was again handsomely driven back."³¹ Earlier on the same day, Grant had reported to Halleck the following:

It is not yet demonstrated what the enemy will do, but the best of feeling prevails in the army, and I feel at present no apprehension for the result. My efforts will be to form a junction with General Butler as early as possible, and be prepared to meet any enemy interposing.³²

Grant followed this report with one on May 9th that read, "If matters are still favorable with Butler send him all re-enforcements you can."³³ As Grant's constant pressure on Lee left open the possibility for a decisive Union victory, Grant's direction to the Army of the Potomac to continue to move southeast and his request for the Army of the James to be reinforced demonstrates the additional option he was pursuing to ensure Union operational momentum would lead to strategic victory.

While Lee remained focused on the irrelevant tactical level information he received, Grant not only refused to acknowledge any concern for the tactical actions to which he was co-located up to this point in the campaign, but instead continued to show his concern with the progress of Butler's army's movement along the James towards Richmond. This moment clearly showed that Grant possessed a true sense for what was required for victory while Lee seemingly

was unable to see the larger picture. Lee may have commenced one of history's greatest tactical efforts, but operationally, his biased decision-making resulted in him being outmaneuvered by Grant, making use of a reflective decision-making process that allowed for discernment of the whole.

As the campaign continued, Lee, biased to tactical action, continued to attack and defend in brilliant ways, yet the trend line of Union movement to the southeast continued. Essentially Grant was able to use tactical actions to either find or set the battlefield for the operational opening that he was looking for. Grant could be assured that a decisive point might exist at any point in the campaign where Lee's forces faced the prospect of being overrun. Absent that reality against Lee, Grant continued to move southeast towards the James River, keeping the Confederacy from threatening Washington while driving Grant's Army of the Potomac to originally stated linkup point with Butler which would give the Union the greater force size and avenue of approach desired to move on Richmond.

As the campaign progressed, emotions in the Army of the Potomac began to run high. General Sigel's loss at the Battle of New Market and General Butler's report to Grant that the Army of the James was stalled had an effect on Grant's ability to remain in the appropriate operational decision making plane. In reaction, Grant sent the following dispatch to Major Generals Halleck:

We have lost to this time 11 general officers, killed, wounded, and missing, and probably 20,000 men...I am now sending back to Belle Plain all my wagons for a fresh supply of provisions and ammunition, and propose to fight it out on this line if it takes all summer.³⁴

This dispatch can be interpreted to demonstrate Grant's positive attitude and resolve. Contrarily it demonstrates Grant's loss of disciplined thought and a misguided desire to continue to make

the biased irrational escalation or sunk-cost investment of manpower into the attack of the Confederate defenses at Spotsylvania.^v

Discipline of the mind is important for leaders trying to maintain their operational sense. History in this case has suggested that negative actions on the battlefield, emotions, and other human factors can create an environment where a commander's decision making becomes increasingly biased and devastating as reactionary decision making takes over. During the Battle of Spotsylvania Courthouse, General Grant, the example for operational leadership for most of this case study, began to make the wrong types of decisions that reflected a loss of cognitive decision space and submission to cognitive bias that culminated in nearly devastating results during the Battle of Cold Harbor. Here, Grant demonstrated an ineffective transcendence into the tactical level and its results were nearly catastrophic to the greater effort.

Battles of North Anna and Cold Harbor 23 May – 12 June 1864

The Battles of North Anna and Cold Harbor arose as Grant continued to move southeast in an attempt to turn Lee's flank while Lee continued to use interior lines and tactical defensive action to meet him as the Overland Campaign continued. In the Battle of North Anna, Lee's use of an "inverted V" defense centered at Ox Ford along the North Anna River nearly turned to disaster for the Army of the Potomac as the Union unwittingly split itself in the attack, providing Lee with greater tactical advantage. As for the Army of the James, in the days preceding the Battle of North Anna, Butler's forces became stalled on the Bermuda Hundred peninsula south of Richmond. As a result, the Army of the James was unable to achieve the desired tactical

^v Daniel Kahneman, *Thinking, Fast and Slow*. 1st ed. (New York: Farrar, Straus and Giroux, 2011), 345. "The decision to invest additional resources in a losing account, when better investments are available, is known as the *sunk-cost fallacy*, a costly mistake that is observed in decisions large and small."

effects necessary to achieve the operational momentum of which Grant sought, a depleted Army of Northern Virginia torn between protecting Richmond and its supply lines to the south east and avoiding a decisive Union victory at the hands of the Army of the Potomac.

In a letter to General Halleck, on 22 May 1864, Grant acknowledged that, “the force under Butler is not detaining 10,000 men in Richmond, and it is not even keeping the roads south of the city cut.”³⁵ As evidenced by this letter, Grant’s frustration had grown and his poor mental positioning and focus on the smaller tactical picture increased the effect of cognitive bias on his decision-making. Additionally, Grant received dispatches from Washington, that reflected both a lack understanding of Grant’s operational focus and renewed pressure on the General of the Union Army to attack and achieve the politically desired decisive victory over Lee.³⁶ Grant’s mounting frustration would lead to him to choose to press the frontal assault against Lee at the Battle of Cold Harbor.

This change in approach for Grant was at the expense of the operational gains made by the Army of the Potomac up to that point. Despite his earlier operational focus on the importance of the James River, on 25 May Grant ordered Halleck to “send Butler’s forces to join this army. The James river should be held to City Point, but leave nothing more than is absolutely necessary to hold it, acting purely on the defensive.”³⁷ Grant’s manipulated mindset was further demonstrated in the following statement to Halleck on 26 May,

Lee’s army is really whipped. The prisoners we now take show it, and the action of his army shows it unmistakably. A battle with them outside of entrenchments cannot be had. Our men feel that they have gained the morale over the enemy and attack with confidence. I may be mistaken, but I feel that our success over Lee’s army is already insured.³⁸

Unfortunately for Grant, Lee and his “whipped” army described the Union attacks in the Battle of North Anna as “feeble [attacks]...that were easily repulsed.”³⁹ Tactically, Lee retained the

advantage and Grant's loss of operational sense and transition to reactionary decision-making led to the commencement of three bloody assaults on entrenched Confederate positions during the Battle of Cold Harbor.

The Battle of Cold Harbor was a tremendous defensive victory for the Confederacy. Historian Ghordon Rhea estimated Union casualties on June 3rd alone were nearly 4-5 times that of the Confederacy.⁴⁰ Over a three-day period, Union forces attempted time and again to root out Lee's forces from their entrenched defensive positions. Leading up to this battle, in subsequent letters to Halleck, Grant appears to have increasingly focused on Lee, a demonstration of divulgence into tactical thinking. Grant's renewed focus on Lee's actions caused Grant to consider the situation moment to moment, instead of contemplating if his army was still maneuvering to create the situation that Grant desired – control of the James River and an avenue of approach to seize Richmond. The final assault on 3 June resulted in an estimated 4,000 Union casualties. Grant's reaction and poor leadership in this moment at Cold Harbor demonstrates a bias tied to irrational escalation where Grant's tactical focus led him to disregard reality and make the same decision to attack despite the previous results. The saving grace for Grant in this instance was the critical decision to engage with his subordinates post the completion and utter failure of the third attempt of 3 June.

In this visit with his subordinates, Grant was able to regain his operational sense. Grant's personal memoirs describe the linkup with his junior leadership and the following feedback received:

Hancock gave the opinion that in his front the enemy was too strong to make any further assault promise success. Wright thought he could gain the lines of the enemy, but it would require the co-operation of Hancock's and Smith's corps. Smith thought a lodgment possible, but was not sanguine: Burnside thought something could be done in his front, but Warren differed.⁴¹

As a result of this meeting and the feedback received, Grant pulled himself out of the tactical-level decision making process and re-established himself as an operational thinker. In his memoirs, Grant provided further reflection on his decision making saying, “I have always regretted that the last assault at Cold Harbor was ever made. At Cold Harbor, no advantage whatever was gained to compensate for the heavy loss we sustained. Indeed, the advantages other than those of relative losses were on the Confederate side.”⁴² Grant acknowledge in his memoirs how he lost his way and in so doing accidentally reinvigorated the morale of the Confederacy while nearly destroying the morale of the Union Army as the June 3rd charge “seemed to revive their [Army of Northern Virginia] hopes temporarily.”⁴³ Fortunately for Grant, having Meade properly positioned allowed him to have discussions with his commanders necessary for regaining perspective and making the decisions for his Army to move towards crossing the James, hereby regaining the operational initiative and placing Lee in the exact position Grant had wanted all along, facing a Union force concentrated on the James, threatening Richmond, leaving Lee torn between defending Richmond or defending the Confederate supply lines at Petersburg.

This period of the campaign provides a clearly defined difference in the commander’s need for the cognitive decision space to command and control as compared to the physical space and task organization needed to effectively lead forces in the conduct of an operational plan. In the days preceding the Battle of Cold Harbor, Grant adjusted the task organization of the Union Army by placing Major General Ambrose Burnside’s IX Corps under the tactical control of General Meade.⁴⁴ In terms of physical positioning, this change in task organization should have provided Grant the ability to focus on other aspects of the campaign, specifically, the struggles incurred by General Butler. In Marine Doctrinal terms, Grant’s change in task organization

could be seen as an attempt to allow him to move to the point of friction, which was the struggle facing the Army of the James as it dealt with General Beauregard's defenses. As history suggests, though Grant may have sought physical space to command and control the entirety of the campaign, cognitively, Grant's decision making and focus remained on the tactical actions that occurred at Cold Harbor. Grant's challenge with maintaining the cognitive decision space necessary to reflect and maintain operational momentum while mitigating the cognitive biases that come with consistent access to tactical level information mirrors the predicament that senior commanders, like General McChrystal, face today.

Reflection and Implications

In the closing actions of the Overland Campaign, Grant's reversion to making decisions based on what he could influence regardless of enemy action opposed reentry to tactical level decision-making. Grant's regaining of operational sense allowed him to retake the initiative and commence operations to take Petersburg, launching a new campaign that placed additional pressure on Lee's forces as Sherman conducted his Savannah Campaign and destroyed Confederate infrastructure and morale as he marched his Army to the Atlantic Ocean. With Grant firmly entrenched in operational level thought and Lee's remaining fixation on the tactical, conditions were in place that ultimately led to the surrender of Lee's Army at Appomattox and the end of the Civil War.

The relevance of the lessons observed from the Overland Campaign senior leadership complements the essence of General McChrystal's primary concerns. What is required for today's leaders to ensure that they develop an operational sense when commanding and acting as primary staff officers is an understanding of operational purpose, the discipline to allow those at

the tactical level to set conditions to achieve that purpose, and respect for the effects of the cognitive domain.

An understanding of operational purpose can be gained through the commander's ability to find similarities that exist in the outcomes of various tactical actions and choosing such actions that, regardless of outcome, still garner an effect that builds momentum. Just as Grant was able to do from the outset of the Overland Campaign by directing tactical actions whose effects were sufficient as long as they generally continued the movement of the Union to southeastern Virginia and towards the James River, perhaps commanders should focus less on providing guidance regarding the types of courses of action they would like to see (tactical) and focus more on describing to subordinates the need to build courses of action that are distinguishable across all warfighting functions yet similar in their operational end states and ability to manipulate cognitive bias to affect the enemy's decision-making process.

The need for discipline to allow those at the tactical level to achieve the effects that build operational momentum is defined in Marine Corps doctrine. *MCDP 6 Command and Control* states that "historically, there have been two basic responses to the fundamental problem of uncertainty: to pursue certainty as the basis for effective command and control or to accept uncertainty as a fact and to learn to function in spite of it."⁴⁵ Most leaders would like to believe that they are able to accept uncertainty as a fact and can function in spite of it. One look at a command-and-control center that exists at the highest levels of command today would counter this argument. The technological capabilities that have greatly increased the situational awareness in conduct of war should be the tools of the tactical level operators. The tactical level can then use the technology afforded to take the tactical action that, when identified properly by one with operational sense, results in an operational victory that achieves the desired strategic

outcome. Reflective decision making based on an understanding of the effects of cognitive bias and a focus on gaining operational momentum are the tools of the operational level that allow commanders to truly be able to accept uncertainty and function despite the effects apparent in the cognitive domain.

The means to achieve the respect of the cognitive domain is essentially done through reflective study in combination with the preparation for and actual conduct of leading in war. The biases tending to affect decision making and the conditions in which it occurs needs to be instilled early in the careers of leaders and be sustained as a recurring theme, a reflective and consistent review founded in education and tested in application. By this, leaders may even define and understand their own biases, shaped by their backgrounds and experiences, that need to be acknowledged as dangers in decision making. Not doing so may result in an inability to break out of certain situations unless one receives outside assistance, similar to what Grant experienced at the close of the Battle of Cold Harbor.

Throughout the entirety of the military command structure, and regardless of the size of the unit, there will exist situations where leaders will be required to think operationally. To gain and retain operational sense, commanders placed in situations requiring an operational focus must ask themselves: Am I an active participant in the planning process, while maintaining the discipline of mind to reflect on operational issues while my staff develops tactical action? Have I truly established a command climate where subordinate commanders and staffs are trusted to know how to properly challenge the commander's decision making? If the answer to these questions are in doubt, commanders, through their own operational training and development, must identify to their trusted subordinates the conditions, perhaps even emotional states, where they determine themselves to be the most vulnerable to cognitive bias. A commander

possessing an understanding of their cognitive weaknesses and the humility to ask subordinates if they (the commander) have the right situational perspective will be followed to the ends. Paired with a subordinate staff mature enough to know and respect the magnitude of such a question builds and sustains a command and staff team that is prepared to counter cognitive bias and who will move forward in battle with *operational sense*.

End Notes

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²⁹ Douglas S. Freeman, *Robert E. Lee: A Biography*, vol. 3 (New York: Charles Scribner's Sons, 1935), 287-288.

³⁰ Ulysses S. Grant to Henry W. Halleck, 7 May 1864, Wilderness, VA, in *War of the Rebellion: Official Records of the Union and Confederate Armies*, Series I, vol. 36, part I, 2.

³¹ Robert E. Lee to James Seddon, 8 May, 1864 in *War of the Rebellion: Official Records of the Union and Confederate Armies*, Series I, vol. 36, part I, 1029.

³² Ulysses S. Grant to Henry W. Halleck, 8 May 1864, Piney Branch Church, VA, in *War of the Rebellion: Official Records of the Union and Confederate Armies*, Series I, vol. 36, part I, 2-3.

³³ Ulysses S. Grant to Henry W. Halleck, 9 May 1864, Spotsylvania Court=House, VA, in *War of the Rebellion: Official Records of the Union and Confederate Armies*, Series I, vol. 36, part I, 3.

³⁴ Ulysses S. Grant to Henry W. Halleck, 11 May 1864, Spotsylvania Courthouse, VA in *War of the Rebellion: Official Records of the Union and Confederate Armies*, Series I, vol. 36, part II, 627.

³⁵ Ulysses S. Grant to Henry W. Halleck, 22 May 1864, Bethel Church, VA, in *War of the Rebellion: Official Records of the Union and Confederate Armies*, Series I, vol. 36, part I, 7.

³⁶ Ethan S. Rafuse, "Wherever Lee Goes..." in *Grant's Lieutenants: From Chattanooga to Appomattox*, ed. Steven W. Woodworth, 47-84. (Lawrence, KS: University Press of Kansas, 2008), 65-66.

³⁷ Ulysses S. Grant to Henry W. Halleck, 25 May 1864, Jericho Ford, VA, in *War of the Rebellion: Official Records of the Union and Confederate Armies*, Series I, vol. 36, part I, 8.

³⁸ Ulysses S. Grant to Henry W. Halleck, 26 May 1864, Quarles' Mill, VA, in *War of the Rebellion: Official Records of the Union and Confederate Armies*, Series I, vol. 36, part I, 8- 9.

³⁹ Robert. E. Lee to James Seddon, 8 May, 1864, Taylorsville, VA, in *War of the Rebellion: Official Records of the Union and Confederate Armies*, Series I, vol. 36, part I, 1030-1031.

⁴⁰ Gordon C. Rhea, *Cold Harbor: Grant and Lee, May 26-June 3, 1864* (Baton Rouge: Louisiana State University Press, 2002), 386.

⁴¹ Ulysses S. Grant, *Personal Memoirs of Ulysses S. Grant* (New York: Cosimo Classics, 2006), 342.

⁴² *Ibid*, 344.

⁴³ *Ibid*.

⁴⁴ Ulysses S. Grant to Ambrose Burnside, 24 May 1864, Jericho Ford, VA, in *War of the Rebellion: Official Records of the Union and Confederate Armies*, Series I, vol. 36, part III, 169.

⁴⁵ Headquarters US Marine Corps, *Command and Control*, MCPD 6 (Washington, DC: Headquarters US Marine Corps, October 4, 1996), 77.

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