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**Operational Vision – An Essential Trait For
Army Operational Commanders**

**A Monograph
by
Major William W. Hamilton
Armor**

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ABSTRACT

OPERATIONAL VISION - AN ESSENTIAL TRAIT FOR ARMY OPERATIONAL COMMANDERS

by Major William W. Hamilton, USA, 49 pages.

This monograph analyzes the significance of the concept of operational vision. It uses classical theory and modern concepts to define the characteristics of operational vision and then expresses the significance of this concept in terms of the operational design.

The monograph defines operational vision as the quality of an operational commander that gives him the ability to transform a superior commander's intent into a carefully defined objective and develop a rational plan accordingly. It then describes four characteristics that make up operational vision. These characteristics are: broad outlook, inner perspective, historical perspective, and determination.

The monograph discusses the theoretical roots of operational vision and the theory behind the characteristics of operational vision. The historical analysis uses Ulysses S. Grant's 1864-65 Campaign and William Slim's 1944 Burma Campaign to verify the four characteristics of operational vision. This analysis concludes by determining that operational vision is a concept that allows the operational commander to effectively and correctly answer the three questions of the operational design.

The monograph concludes that operational vision is a valid concept. Its roots lie in classical military theory. The four characteristics are valid as the key components of operational vision. Thus the U. S. Army should develop these characteristics in its operational commanders. The Army should embrace the concept of operational vision and develop it in its operational commanders. Operational vision will have a key role in future operational art in that it will allow a commander to more effectively (1) develop an end state, (2) develop and sequence a campaign, (3) resource a campaign, and (4) execute a campaign.

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Operational Vision

INTRODUCTION

The Army's keystone war fighting manual is FM 100-5, Operations. FM 100-5 describes how the Army fights campaigns, major operations, battles and engagements. These operations are organized into three levels of war: the strategic, the operational and the tactical level.

Many of the failures of the Vietnam War were attributed to a failure of strategic and theater leaders to link actions among the levels of war. Specifically, our military and political leaders failed to link tactical actions to the achievement of strategic goals. This failure brought a resurgence of the study of the operational level of war in the 1980s. The operational level of war is the level that lies between the strategic and tactical levels of war.

Within the operational level of war, commanders practice operational art. Operational art is "the employment of military forces to attain strategic goals in a theater of war or theater of operations through the design, organization, and conduct of campaigns and major operations." ¹

The operational commander conducts campaigns and major operations. He is responsible for achieving strategic goals via these campaigns and operations. The

operational commander exercises a type of leadership that is different from the tactical commander. He uses the principles of senior level leadership. He exercises "operational leadership."

Operational leadership is different from tactical leadership. This is because war at the operational level is different from war at the tactical level. Operational warfighting involves large scale operations conducted simultaneously and sequentially over large areas. It requires large amounts of resources supplied over great distances. Operational warfighting presents unique challenges to a commander's leadership. Therefore, the role of operational leadership to the operational art is to provide the mental, physical, and moral leadership to conduct successful campaigns and major operations. A key part of operational leadership is for the operational commander to exercise a quality called "operational vision."

Operational vision is the trait that allows an operational commander to see the desired operational end in the form of a military condition and then synthesize a plan that gets to that end. Mr. James Schneider, an instructor and military theorist at The School of Advanced Military Studies, called the practice of operational vision one of the characteristics of modern operational art. He states

that ". . . successful commanders will demonstrate 'operational vision'." Operational vision is defined as: "The ability to transform a superior commander's intent into a carefully defined objective and develop a rational plan accordingly." ²

The significance of operational vision is that it assists a commander in defining what a successful end state looks like. It also helps the commander develop and execute a campaign. Therefore, operational vision is critical in transforming strategic and often politically oriented goals into military ends.

The establishment of military ends is critical to commanders at all levels, from the theater Commander-in-Chief (CINC) to the infantry platoon leader. This understanding of what success should look like provides structure for the campaign. It provides a basis for the sequencing of the campaign and the logic for resourcing. More importantly, it provides commanders at all levels with the intent of the next higher commander. Therefore, it gives each one in turn the freedom of action to act within that intent and allows him to execute the campaign plan within the CINC's vision.

General John Foss, Training and Doctrine Command (TRADOC) Commander speaks of this vision in the form of commander's intent. The commander's intent provides

freedom of action and responsibility to execute plans to subordinate commanders at all levels.³

Current U.S. Army leadership doctrine does not specifically address operational vision. It does address vision for senior leaders. FM 22-103, Leadership and Command at Senior Levels, describes vision as a senior leader's inner light. It is the source and focus for action. ⁴ However, this definition does not encompass the specific capacity to see an end and structure an operational campaign to achieve this end. It does not specifically address the vision a commander fighting at the operational level must have. Therefore, this explanation of vision may not be completely adequate for describing the characteristics that current and future operational commanders must have.

Operational vision's contribution to the future of operational art will be to enable the operational commander to develop a clear military aim from complex political goals. In the future, one can expect the aims to become more abstract and hard to define. This will be so because the strategic political goals will become increasingly more complex. The operational commander also will have to execute politically sensitive military operations with more constrained resources. This will force him to develop more effective

operations and campaigns. These will have to be carefully sequenced and resourced. Operational vision thus will become an essential characteristic for senior commanders.

The role of operational vision and its practice by Army Senior Leaders will continue to grow in importance. Therefore its significance as a characteristic of current and future operational commanders deserves a closer look. To provide insights into the nature of operational vision, I will answer the question: What role does the commander's operational vision play in the operational design process? My criteria for analyzing the theoretical concepts of operational vision via the historical cases are the elements of operational vision. These elements are the operational commander's ability to:

- a. Transform a superior commander's intent into a military objective.
- b. Develop, sequence, and resource a plan.
- c. Employ operational reserves successfully.

The commander who has operational vision should demonstrate these elements. Therefore, I will use them to examine Lieutenant General Ulysses S. Grant's and Field Marshall Viscount William Slim's operational vision in two campaigns. I will see if each man was able to do the things specified in the criteria

successfully. By showing the characteristics each man displayed as he exercised the elements of operational vision, I will be able to validate the characteristics of operational vision. This validation will show us what characteristics we should develop in our operational commanders in order for them to have operational vision.

My paper will first cover the theory behind the concept of operational vision starting with the psychological roots of creative activity. Additionally, I will discuss the theoretical background of each of the characteristics of operational vision.

My historical analysis will then analyze Grant's and Slim's operational vision relative to my criteria. This should provide a better understanding of what are the characteristics of operational vision.

The next part of my paper will discuss these characteristics in terms of their relation to the three questions a commander must answer in the operational design. Part IV of my paper will draw conclusions as to the validity of the concept of operational vision, and the role operational vision plays in the operational design. Finally I will give some insights into the importance of operational vision and provide a few recommendations as to what operational vision should mean to the operational commander and how we should

train operational commanders.

THEORY

The key elements of operational vision are the ability to analyze strategic guidance, form an idea of an operational end state and develop ways to attain the operational end state. The critical characteristics a commander must have to exercise the elements of operational vision successfully are broad outlook, inner perspective, historical perspective, and determination. We will first examine the theoretical background behind operational vision in general and then look at the theory behind each characteristic.

The idea of an operational commander having a special characteristic is not new but it has been called various things over the years. The entire concept is a mix of ideas starting with the basic theory of creative thought.

The roots of operational vision lie in the concept of bisociative thinking. Arthur Koestler expressed this concept in the book The Act of Creation. In it he describes the process of creating thoughts and concepts from seemingly dissimilar planes of reference. This process includes "the various routines of associative thinking from the creative leap which connects previously unconnected frames of reference and makes

one experience reality on several different planes." ⁵

The exercise of a skill such as operational vision is always under the dual control of a fixed code of rules (which may be innate or acquired by learning), and a flexible strategy, guided by environmental pointers- "lie of the land." ⁶ These rules or codes seem to parallel a commander's knowledge of doctrine or a knowledge of history. They provide familiar patterns.

Koestler believed historical reference played a big part in creative thinking. When life presents us with a problem it will be attacked in accordance with the code of rules that enable us to deal with similar problems in the past. " ... A changing, variable environment will tend to create flexible behavior - patterns with a high degree of adaptability to circumstances." ⁷

Some military theorists believe the creation of new ideas comes from a mixture of original thought with existing concepts. Koestler's concepts follow this line of thinking but emphasizes that creation does not create something out of nothing: it uncovers, selects, reshuffles, combines, and synthesizes already existing facts, ideas, faculties, skills. Even when the situation is ripe for a given type of discovery it still needs the intuitive power of an exceptional mind, and sometimes a favorable chance event, to bring it

from potential into actual existence. *

The core of Koestler's argument involves the synthesis of new concepts from the input of two seemingly unrelated areas. The process of creating original concepts from these areas involves using two frames of reference to link them together. One frame of reference is a structured thought process composed of certain doctrinal precepts or rules. The other is a flexible, adaptable frame of reference that allows one to respond in new ways to new areas of thought. When the two come together you have the creation of original concepts and actions. The degree of revolution in the idea varies. Some creations are merely a rearrangement of existing components while a few are truly revolutionary.

Operational vision is all about taking strategic guidance and objectives and transforming them into an operational end state or objective. These end states set the military conditions for achieving the strategic objectives.

The strategic guidance and operational end state represent the two unrelated planes of reference discussed earlier. One is politically oriented while the other is militarily oriented. The new concept formed by input from these planes of references is the campaign plan. The campaign plan describes how the

operational commander will use military forces to achieve strategic goals.

The ability to synthesize operational aims from strategic goals, develop a plan and execute a plan requires more than just the creative skills embodied in Koestler's ideas. Other characteristics are necessary. The operational commander must have a broad outlook, inner perspective, historical perspective, and determination to develop and execute a campaign successfully once he has developed goals. The theoretical basis for these characteristics are the concepts of genius, coup d'oeil, and intellectual development. These concepts were developed during the Napoleonic period of classical strategy.

Classical strategy started when countries began to field mass armies with modern weapons. This was during the time of Napoleonic warfare. Carl Von Clausewitz was the most significant military thinker of that time.

Broad outlook is founded in Clausewitz's idea of genius. Genius refers to "a highly developed mental aptitude for a particular occupation." ⁹ However, Clausewitz did not mean genius to be simply a good knowledge of the technical aspects of soldiering. The idea of genius involves having general intellectual development, courage and a powerful intellect that enables a commander to assess the uncertainty of a

situation and see through that uncertainty.

Clausewitz was not alone in speaking of genius in a commander. Antoine Jomini also spoke of genius but in his estimation, unlike Clausewitz, it was not a personal characteristic. He believed genius was demonstrated by properly applying theory.¹⁰ Jomini, characteristically, focuses less on the human factors of leadership and more on the correct application of principle. His idea of genius still has some merit, however. The operational commander must correctly employ doctrinal principles to sense all the possible ways to achieve an operational end. Koestler's concept of using a code of rules entails using a set of theory or principles based on past experience. This is similar to Jomini's ideas of properly applying existing doctrinal principles.

Inner perspective entails the ability to see through the "fog of war" and is related to Clausewitz's theory of coup d'oeil. Coup d'oeil is the sense that allows a commander to see the true nature of the situation despite its ambiguity.¹¹ It also allows him to follow that truth and make a decision. This concept is related to the operational commander's ability to see the true nature of the military aims he has to achieve. A realization of the aims enables him to develop his campaign plan. In concert with achieving

these aims, coup d'oeil empowers him to make timely decisions based on his perceptions.

Inherent in making timely decisions is the resolve or determination, which is our next characteristic.

Clausewitz says a commander must have the courage to follow the faint light that leads to truth.¹² This courage is the foundation of determination. It takes determination to see through all the false information, uncertainty and fog. This determination enables the commander to take certain actions despite all the indicators that tell him to make different decisions. A commander need not be brilliant but he must have a strong mind.¹³

Inherent in the development of a strong mind is the study of history. Our final characteristic, historical perspective, is grounded in Clausewitz's idea that great commanders have a high degree of general intellectual development. Grant had just such development. Grant's mind was stocked with an analytic knowledge of past campaigns. This historical knowledge allowed him to see into the mentality of his opponent.¹⁴ Thus this characteristic is critical to anticipate and adjust a campaigns execution.

In summary, operational vision and all of the characteristics of operational vision have good theoretical foundations. The term operational vision

may be a recent innovation but its features date back to classical military theory. Both classical and modern theory indicates that an operational commander must have a way to look at and structure a campaign. The genesis of an operational plan must start with the creative ideas of the commander. He must then have the vision to resource and carry out his campaign.

Thus, the basic elements of operational vision are a broad outlook about the theater of war and the nature of the operation, a historical perspective grounded in a good knowledge of military history, an inner perspective that can show him the true nature of his campaign, and the determination to carry out a campaign. These characteristics enable an operational commander to devise original concepts of operations. An operational commander's broad outlook gives him the creativity and flexibility to establish an end state and devise ways of achieving it. His historical perspective allows him to recognize familiar patterns while designing and executing a campaign. The operational commander's inner perspective is related to his analytical ability, which enables him to determine the interrelationship of each operation. From this he can sequence and resource the operations. Finally determination enables him to carry out the plan. Let us now look at the historical practice of operational

vision.

HISTORICAL ANALYSIS

My historical cases key on the leaders of two of military history's most successful campaigns. Lieutenant General Ulysses S. Grant's 1861-65 Civil War campaign is considered the first campaign to display the characteristics of modern operational art. Viscount William Slim's 1942-45 Burma campaign is also an excellent example of how the leadership of one man can turn what was an embarrassing failure into a brilliant success.

I will describe each campaign then look at the strategic guidance each man received. Following a brief look at the execution of each campaign, I will apply my criteria and examine the characteristics each man used to formulate and attain their military ends. An analysis in light of my criteria will highlight the personal characteristics of both men. By following this procedure I should be able to discern the most important characteristics Grant and Slim used in the exercise of their operational vision. This will confirm that the four key characteristics of operational vision are: broad outlook, inner perspective, historical perspective, and determination.

The American Civil War marked a turning point in modern warfare. For the first time, armies could no longer fight one decisive battle and end a conflict. Armies expanded and began to operate over vast distances. One could no longer defeat the bulk of an army at one point at one time. Consequently, it became necessary to fight at several widely dispersed places at the same time.

The characteristics of this campaign distinguish it as the start of operational art. The essence of which is the development, sequencing, integration and support of campaigns and major operations, separated in time and space but synchronized to have one strategic effect.

A failure early in the war to synchronize the actions of the Union forces had produced only limited strategic success. By late 1863, Grant had defeated General John C. Pemberton and captured Vicksburg. General George Meade had defeated General Robert E. Lee at Gettysburg but had failed to destroy his army. However, all of these successes could not deliver the Union ultimate victory in 1863.

By early 1864, the nation had become weary of almost three years of war. The Union and Confederate armies were stalemated in the east. Lee's forces had moved into Virginia and maneuvered to protect Richmond.

Further west, Grant had moved into Tennessee and was now posturing his armies to strike toward Atlanta. However, no end to the fighting was in sight.

President Abraham Lincoln was facing a presidential election in the midst of this seemingly endless series of attrition battles. In March 1864, President Lincoln sought a leader who could energize his forces and quickly bring the war to a successful conclusion. Lincoln chose the man who had engineered the federal victories in the west - U. S. Grant.¹⁵

Lincoln summoned Grant to Washington and promoted him to Lieutenant General. Immediately after his promotion, Grant assumed command of all the United States Armies. Grant had realized for a long time that the Union needed a new strategy. Hence, Grant quickly set about organizing his forces and putting the finishing touches on a strategic plan he had been working on for some time.¹⁶

Looking back on Lincoln's strategic guidance, we can see that his intent was to end the war and restore the Union. However, Lincoln had specified only one objective point - Lee's Army.¹⁷ Lincoln also had several political goals, such as protecting pro-union loyalists in East Tennessee and the Mid-West. Grant's plan had to encompass all of the political aims while focusing on the defeat of the Confederacy's military

potential.

The plans of 1863-64 not only dealt with Lee's Army but also sought to synchronize the destruction of his army with the destruction of the South's war making capability. The Army of Northern Virginia was the most successful Confederate Army. It also posed the greatest threat to Washington and thus to public opinion in the populous northeast. It seems that for the men in Washington, beating the Confederacy was simply a matter of beating Lee.

However, this guidance alone was not adequate because it focused only on the defeat of Lee's Army and preserving a Union presence in East Tennessee not, the simultaneous defeat of the confederacy. To Grant, the Union armies looked "like a balky team, no two ever pulling together, enabling the enemy to use to great advantage his interior lines" ¹⁸

Grant realized this lack of synchronization and set about to correct it. In April 1864, Grant finalized his strategy. It was a reflection of guidance from Lincoln and Halleck but the heart of the plan was Grant's. ¹⁹ Grant's plan was to conduct multiple, simultaneous advances against the armies and resources of the Confederacy. The plan focused on the destruction of Lee's Army of Northern Virginia and Major General Joseph Johnston's Army of Tennessee. He wanted to

destroy the military power of the confederacy by first destroying its armed forces then by destroying the south's ability to wage war. Grant's plan was:

First to use the greatest number of troops practicable against the armed force of the enemy. Second, to hammer continuously against the armed force of the enemy and his resources until by mere attrition, if in no other way there should be nothing left to him. ²⁰

Grant proposed to fix and destroy Lee's Army with Major General George G. Meade's Army of the Potomac in Virginia. Simultaneously, the forces of Major General William T. Sherman's Military Division of the Mississippi would destroy Johnston's Army, take Atlanta, then march into Georgia (the interior of the Confederacy) and destroy as many resources as possible. Grant believed that by fixing Lee's army, the Confederates would not be able to reinforce from the east the army facing Sherman.

In a major operation in the west, Major General Nathaniel P. Banks would move from New Orleans against Mobile, then strike northeast through Alabama into Georgia to cooperate with Sherman in a pincers movement. ²¹ In similar major operations, in other areas, Major General Benjamin F. Butler would move in concert with Meade up the James River towards Richmond. This would help isolate Lee's Army. Major General Franz

Sigel would move up the Shenandoah Valley to keep the reinforcements and resources of the valley from Lee. Grant would stay in the east, collocated with Meade's Army.

Grant's operational reserve was the IX Corps under Major General Ambrose Burnside. Grant placed this corps under his own control and positioned them at Annapolis, Maryland. ²² This arrangement prevented Burnside from being under the command of any of his old subordinates. It also gave Grant the ability to protect Washington, and influence the major area of operations in northern Virginia.

While Meade was slugging it out in Virginia, Sigel, Butler, Banks and Sherman fought in their areas of operations. Sigel's, Butler's and Bank's campaigns failed, but the campaigns of Meade and Sherman throughout 1864 and into 1865 destroyed the Confederacy's last remaining armies.

Grant used his reserve almost immediately in the Battle of the Wilderness (5-7 May 1864). IX Corps joined the battle just south of Wilderness Tavern, Virginia on 6 May. Its employment increased the number of federal forces engaged, but because of a lack of maneuver space was not decisive.

As the Virginia Campaign wore on, Meade bled the Army of Northern Virginia white before laying siege to

Petersburg in June 1864. He broke the siege in March 1865 then captured Richmond, pursued Lee and forced him to surrender on 9 April 1865.

Sherman took Atlanta in September 1864 then marched to Savannah. He then turned north and into the Carolinas and captured Charleston before defeating the remnants of Johnston's scraped together army near Raleigh, North Carolina on 26 April 1865. Now that we have discussed Grant's Campaign, we must analyze it for the characteristics of operational vision using our criteria.

As you recall, our first criteria is: transforming a superior commander's intent into a military objective. Examining Grant's campaign in relation to this criteria, we see that Grant was able to take Lincoln's and Halleck's guidance and develop it into a complete plan with clear military objectives. From this we can conclude that the first characteristic of vision Grant possessed was a broad outlook. J.F.C. Fuller believed that Grant's outlook was broad and all embracing. He saw the war as whole and not merely as a battle of attrition in Virginia against Lee. ²³ Fuller believed that Grant's broad outlook gave him the ability to:

. . . see the true nature of the great conflict . . . (this enabled him to) . . . take in at a glance the whole field of the war, to form a correct opinion of every suggested and

possible strategic campaign, their logical order and sequence, their relative value and the interdependence of the one upon another; and finally . . . to see that the end had come²⁴

Grant manifested this characteristic as early as January 1864. That month he outlined to Halleck a tentative plan to beat the Confederacy by striking into Mississippi, Alabama and Georgia. He assessed that in these three states lay the potential economic and manpower sources for the Confederacy. While Halleck focused on Virginia and Lee, Grant took the broader view that these three states could produce the manpower, weapons, and food the confederacy needed to carry on the war.²⁵

This broad outlook showed Grant that to beat the Confederacy he needed more than one major operation against Lee in Virginia. This outlook caused him to develop one campaign with five, simultaneous major operations against the forces and resources of the south.

By applying our second criteria: develop, sequence, and resource a plan, we can see that Grant realized the interrelated nature of the simultaneous major operations in this campaign. Grant's realization of the interdependence of his operations show that he had an inner perspective of the nature of his plans. Grant's realization of the importance of the

interdependence of the operations in this campaign further shows in the orders issued to Meade, Butler, Sigel, Sherman and Banks. He uses words such as "So far as practicable all the Armies are to move together and toward one common center." ²⁶

The second criteria also reveals that in developing plans for his 1864-65 campaign, Grant's operational vision also consisted of a historical perspective. Unlike other Civil War generals, Grant used this perspective not so much to develop his plans but to verify and adjust them. Fuller believed that Grant's historical perspective allowed him to foresee branches to his campaign plan. Grant's planning of branches started with an understanding of his enemy. He then used historical perspective to foresee possible enemy counteractions. Fuller cites the Wilderness portion of Grants 1864-65 Campaign as an example of his historical perspective. Grant, before he moved into the Wilderness, foresaw a possible move south of the James River and also the siege of Richmond. ²⁷

The second criteria finally reveals that the major characteristic of Grant's operational vision was his determination - his force of will. This will enabled Grant to continue to resource and execute his campaign despite the resulting losses in Virginia and the resulting criticism. Often a chosen course of action

will produce uncertain and disquieting results. In these situations the commander's determination, springing from his vision of the aims, must guide him. The making of decisions in these cases will reflect the will of the commander.²⁸ Even though Grant had five major operations spread out over the entire southeast United States his force of will allowed him to stay focused on the destruction of the South's forces and war making resources.

Grant demonstrated force of will several times during this campaign. A good example is during the Virginia Campaign in the Spring of 1864. Grant suffered heavy losses in the Wilderness, at Spottsylvania, on the North Anna and at Cold Harbor. His popularity fell as the casualties became a political liability to Lincoln. Yet, Grant was determined to continue the fight. "Having once in a matter that required irreversible decision he never reversed, nor even misgave, but was steadily loyal to himself and his plans."²⁹

Applying our final criteria: employ operational reserves successfully, we find that one cannot evaluate Grant's use of his operational reserves. The insinuation is that the commander with the better operational vision will sense when and where to deploy the reserve to be decisive and successful. Grant had

the greater numbers of forces. He was not too concerned with retaining a large reserve and employing them decisively. This is why he immediately drew upon the IX Corps to increase his forces at The Wilderness in May 1864. He was not constrained by resources, therefore he did not have to exercise a keen vision by holding out his operational reserve for the decisive time and place.

In summary, Grant's 1864-1865 campaign marked a turning point in modern warfare. The campaign was different in how it was developed and fought. It took a commander with operational vision to devise and fight a campaign such as this, which did not even resemble wars of ten years before its date.³⁰ Grant's operational vision was characterized by a broad outlook, a historical perspective, an inner perspective of the campaign and a strong force of will.

Although the 1864-65 Civil War Campaign marked a turning point in modern warfare, it cannot stand alone as an example of operational art. The seventy-four years between the end of the Civil War and the start of the Second World War witnessed a world war, several European wars and the rise of mechanization.

Armies expanded, forces became mechanized, more mobile, and air power became a prominent feature of the modern battle field. Armies fought across entire

continents and in vast oceans. Finally, the resources needed to sustain a modern, mechanized, 20th Century army are vastly different than in the Civil War. Thus, I have chosen to analyze the one commander who really seemed to epitomize the modern operational commander, Sir William Slim.

Slim's odyssey began with the Japanese entrance into World War II. The Japanese attacked Pearl Harbor on 7 December 1941. This was the first strike in a series of offensives planned across the Pacific Basin. The first stage of the Japanese plan was the taking of the Southern Resources Area. ³¹ The Japanese main thrust into this area included a branch into Burma and the Dutch East Indies.

The drive into Burma would not only secure the resources of this area it also would isolate China. The border passes of northwest Burma and eastern India were the gateways to the Brahmaputra Valley. This valley was a line of communication and supply from Ledo, India to Kunming, China. The river, a railway and the "Hump" airlift route to China all culminated in Ledo - on the India-China border. The Ledo Road also ran from Ledo to Bhamo, Burma. There it joined with the Burma Road and ran to Kunming, China. Therefore, the complete loss of Burma in June 1942 dealt the allies a serious blow.

On 19 March 1942 Field Marshal Viscount Slim was chosen to command the newly formed I Burma Corps. General Harold Alexander, Burma Army Commander, issued a directive to destroy the Japanese in Burma just shortly after taking command of the Burma Army. Slim had little reaction time and no preparation time prior to his first campaign. Subsequently, this attempt to recapture Northern Burma failed. By June 1942, the Japanese had beaten Slim's Corps back across the Chindwin River. Slim withdrew to India and prepared for his next campaign.

Slim became commander of the 14th Army in August 1943. As an operational commander, Slim conducted three major campaigns. His greatest successes as the 14th Army Commander came during the Kohima/Imphal Campaign and the push across the Irawaddy River. This campaign represents a turning point for the control of Burma and seems to illuminate Slim's operational vision best.

In January 1944 General Sir George Giffard, the 11th Army Group Commander, gave Slim his strategic guidance. All of the guidance was terrain oriented. Giffard's guidance was to:

Capture with the least delay the mouth of the Naf river, Maungdaw and Buthidaung and, thereafter, exploit vigorously southward; to clear the Chin hills area as far east as the foothills overlooking the Kabaw valley and to dominate this area to contain the Japanese in the Kabaw valley. Finally, to employ Wingate's special force in conjunction with

Stilwell. ³²

Slim took this guidance and correctly assessed that he had to first destroy as much of the Japanese 15th Army that he could in order to advance back into Central Burma.

In March 1944 Slim was preparing to take the initiative. To do this he had to destroy Japanese thrusts across the Chindwin and Manipur Rivers. On the west side of these river valleys were the towns of Kohima and Imphal. These two towns were the pivots of maneuver for forces trying to advance out of the Chindwin Valley and into the Brahmaputra Valley into India.

Slim correctly assessed that he had to transform the terrain objectives Giffard gave him into objectives that oriented on the enemy force. His plan was thus to destroy the Japanese forces by concentrating superior forces against a portion of the Japanese Army on the plain at Imphal. Slim would allow the Japanese to concentrate near the plain then counterattack them. He would then continue the attack against the Japanese lines of communications to turn them out of position and drive the Japanese back across central Burma. Slim's plan had four phases: (1) concentration, (2) attrition, (3) counteroffensive, (4) and pursuit.³³

Slim's operational reserve was a combination of

divisions and brigades from the IV Corps. IV Corps would fight the decisive battle on the Imphal Plain. Slim formed a reserve from the 17th Division, the Indian Parachute Brigade, and the 254 Indian Tank Brigade. His plan was to use the reserve to destroy the Japanese once they were committed against his positions on the Imphal Plain.³⁴

The plan worked as expected. Slim rapidly moved forces into his theater of operations. He engaged the Japanese in an attrition battle at Kohima while maneuvering forces to Imphal. Slim eventually concentrated 100,000 men at Imphal. There he destroyed much of the Japanese 15th Army. The remnants of the Army started to pull back over the Chindwin. Slim initiated a pursuit and shifted the main effort from 14th British Corps to IV British Corps. Slim's 14th Army advanced to Mandalay and Meiktila eventually taking Rangoon and ending the war in southern Burma in May 1945.

Here we will apply our first criteria: transform a superior commander's intent into a military objective. We see that Slim was able to develop clear military objectives from weak strategic guidance.

Getting clear strategic guidance had been a problem since Slim's first defeat in 1942. Slim confessed that one of the reasons for this earlier loss

to the Japanese and the problems in planning for this campaign was the strategic guidance for his theater. He states:

Of these causes, one affected all our efforts and contributed much to turning our defeat into disaster - the failure, after the fall of Rangoon, to give the forces in the field a clear strategic object for the campaign. As a result, our plans had to be based on a rather nebulous, short term idea of holding ground. Burma was not the first, nor was it the last, campaign that had been launched on no clear realization of its political or military objects. ³³

This problem carried over into 1944. Giffard gave only terrain oriented objectives. Slim had to transform them. In doing so Slim's operational vision was characterized by a broad outlook. Slim demonstrated his broad outlook by seeing beyond the narrow bounds of terrain. In the Kohima/Imphal campaign, Slim realized that his forces were weaker than the enemy, and that he would have to wear the Japanese forces down before he could advance. To destroy the Japanese forces during this campaign, Slim made the Japanese come to the Imphal Plain where he could concentrate two corps and destroy them.

Like Grant, Slim's broad outlook empowered him to view the theater of operations as a whole. This enabled him to take in all possible alternatives. Slim recounts that he would study several alternative plans himself then discuss them with his staff and immediate

commanders. At these discussions he would outline three or four broad alternatives. ³⁶ In the Kohima/Imphal Campaign the alternatives were (1) to advance across the Chindwin River and attack the Japanese before they attacked him, (2) hold the Japanese 33d Division near Tiddim and fight on the Chindwin and (3) concentrate and fight on the Imphal Plain. Slim chose to fight on the Imphal Plain. ³⁷

Analyzing Slim's campaign in relation to our second criteria: develop, sequence, and resource a plan, we see that Slim had an inner perspective of his campaign. This perspective allowed him to sequence this campaign so that he used Imphal as a decisive point to destroy the Japanese first and then continue his attack across the Chindwin. To facilitate this sequencing, he also phased this campaign. Slim's inner perspective of the campaign is a clear example of Clausewitz's notion of coup d'oeil. His inner sight on how the campaign would unfold allowed him to successfully sequence the campaign and use decisive points.

This criteria further brings out Slim's determination and provides another example of inner perspective through Slim's ability to allocate resources to critical points despite competing demands on resources. In April 1944 Slim had two major battles in progress on the central front. IV Corps was holding

off fierce Japanese attacks at Imphal. The Japanese also were continuing to attack Kohima. Slim had to decide whether to allocate resources to the garrison at Kohima, or to IV Corps at Imphal. Since the main enemy force was at his chosen decisive point, Slim used his resources to build up XXXIII Corps so they could attack and destroy the main Japanese force at Imphal.

Slim's operational vision here provided him an inner perspective that enabled him to recognize the dependence on success at Imphal with the success of the initial part of his campaign plan. He had to destroy the main Japanese force there before he could advance and drive the remaining Japanese back and retake Northern Burma. His ability to assess the criticality of a situation and make a decision concerning staying with or modifying a plan sprang from a focused vision of what Slim wanted to accomplish and the determination to carry out his plan.

Slim's successful use of operational reserves meets our third criteria while further demonstrating his superior operational vision. In contrast to Grant's use of his reserve, Slim was short on forces. The reserve in the IV Corp's area near Imphal was critical to the success of Slim's entire plan. His employment of the 17th Division, reinforced with mobile counterattack forces proved to be critical in destroying the Japanese

at Imphal. He had to use them at the right time and place to be successful.

In summary, Slim met all three criteria as a commander exercising operational vision. Slim explicitly demonstrated three of the four characteristics of operational vision. Slim's broad outlook, inner perspective, and determination are apparent through the analysis of this campaign via my criteria. Slim's historical perspective was not apparent in the development and execution of this campaign. This is not to say that he did not have this characteristic, only that I was unable to evaluate this characteristic in this campaign. From all other perspectives we must say that Slim had and exercised operational vision.

Starting with our theory, we have defined four characteristics that enable an operational commander to develop and execute a successful campaign. These are: (1) a broad outlook of the entire campaign, (2) a historical perspective that helps in developing and executing a campaign, (3) an inner perspective of the campaign and (4) a strong determination or will.

By applying our criteria, which were the elements operational vision, we have identified four distinct characteristics. These are the key characteristics of the commander who exercises operational vision. In

other words, they enable the operational commander to formulate a vision of the operational end state. They further enable the commander to develop, sequence and execute the plan. They also suggest possibilities in the event the commander is forced to diverge from his original plan.

The characteristics of operational vision mesh well with the conceptual characteristics discussed in our theory. Broad outlook is related to Koestler's ideas of creativity. The outlook of an operational commander allows him to see patterns and synthesize concepts where none existed before. He must have a wide ranging outlook to see ways and means that he can use to achieve his aims.

Historical perspective is directly related to Koestler's theory that creativity can derive from the recognition of familiar patterns. Inner perspective is the manifestation of Clausewitz's concept of coup d'oeil or an inner light that guides a commander and allows him to see the true and full nature of an unfolding campaign. Finally, determination or will is a common concept for nearly every theory of vision. It is specifically addressed by Clausewitz as the courage that enables a commander to follow the light revealed by coup d'oeil. Given the theoretical background and historical evidence, one can say that operational

vision is a valid concept.

We must now link operational vision to the contemporary practice of operational art via the operational design. This will answer our research question.

OPERATIONAL VISION AND THE OPERATIONAL DESIGN

The operational design is a conceptual framework. It assists the operational commander in determining an operational end from strategic guidance. The operational design then helps him develop ways to achieve this end. It further assists him in balancing his means against his desired ends. The operational design requires the operational commander to answer three questions:

(1) What military condition must be produced in the theater of war or operations to achieve the strategic goal?

(2) What sequence of actions is most likely to produce that condition?

(3) How should the resources of the force be applied to accomplish that sequence of actions? ³⁹

Each question of the operational design requires a creative task (related to Koestler's ideas of creative activity). The operational design is a framework that helps the commander identify and accomplish the tasks that are critical to practice operational art

successfully. Operational vision encompasses the characteristics that an operational commander must have to answer each of the questions of the operational design correctly.

We have described a commander who has operational vision as having a broad outlook. This is to say, he must see the entire battlefield in terms of terrain, enemy, mission, time and space. This outlook allows him to visualize the operational ends he must achieve. This characteristic of operational vision thus enables the operational commander to answer the first question of the operational design.

His vision of the end enables him to have a wide view of various ways to achieve an end. This helps the commander develop branches and sequels. Commanders who possess a historic perspective can recognize familiar patterns in a campaign. Not only does this characteristic help the commander conceptualize the military end he must achieve, it also can help him sequence operations based on the anticipated course of the campaign and the predicted reaction of the enemy. It also can help him structure branches and sequels. Consequently, this characteristic of operational vision helps the commander answer the second question of the operational design. It enables him to develop and sequence a campaign.

The commander's inner perspective of the campaign helps him to anticipate and forecast a campaign's sequence. Once the campaign begins, it helps him adjust the sequencing and resourcing of a campaign based on his inner perspective of the interdependence of the success or failure of parts of the campaign. This characteristic of operational vision empowers the commander to answer the second and third question of the operational design.

Finally determination and will enables the commander to carry through on his decisions on the campaign's sequencing and resourcing. This characteristic allows him to keep the end state in focus, motivate his subordinates to achieve the end, and gain moral ascendancy through this strength of will over the enemy.

In summary, the operational commander's operational vision enables him to answer effectively the three questions of the operational design. It further helps him carry out his campaign in accordance with the design and to change the campaign as needed, in accordance with the design.

The characteristics embodied in operational vision are essential to the execution of the operational design. The operational commander must have a broad outlook, a historical perspective, an inner perspective

of the campaign and the determination and will to carry out a campaign. Without these characteristics, embodied in operational vision, a commander can neither see the operational end nor can he conceive of the ways to achieve that end. In short, he cannot use the design or execute campaign developed using the operational design.

CONCLUSION AND RECOMMENDATIONS

In our efforts to understand operational vision, this monograph has examined its theoretical roots and looked at its characteristics. We have analyzed two historical examples of the practice of operational vision and determined its key characteristic. Finally, my paper has linked operational vision and its characteristics to the operational design.

From my analysis one can conclude that operational vision is a valid concept. The theoretical characteristics of operational vision are scattered throughout many discussions of senior level and operational leadership. However, only the term "operational vision" embodies all the characteristics essential to the operational commander.

The operational commander who has these characteristics and who exercises operational vision can effectively use the operational design. This is

because operational vision is a trait that gives the commander the ability to answer the three questions of the design. These three questions equate to using an ends-ways-means framework to develop, sequence and provide resources for a campaign. Operational vision is the trait that lets a commander use this framework effectively.

The elements of operational vision have been around a long time. In 1952, Field Marshall Slim spoke to the Command and Staff College about "Higher Command in War." In this speech, he addressed several of the characteristics that make up operational vision. He spoke of will power (determination), and flexibility of mind (broad outlook). ³⁹ However, only recently has the term operational vision come into being encompassing many of the characteristics essential for operational commanders.

In practice and doctrine, most of the elements of operational vision are adequately addressed. Our doctrine realizes that senior level leadership applies to the operational level of war fighting. The doctrine recognizes that this level of leadership requires leaders who have "highly developed conceptual and integrative skills." These skills include the ability to synthesize, analyze, decide, create, forecast and intuit. ⁴⁰ It further requires commanders who have the

"indomitable will" to carry out his plan and impart that will to his subordinates as intent.

Given the acceptance of operational vision as a valid concept, I would recommend that the Army embrace operational vision as being different from the vision of a tactical leader. Operational vision is a characteristic that is essential for the operational commander to use the operational design properly. Operational vision starts with the commander's vision of what the operational aims or ends should be. From a clear view of the end state, comes the campaign to achieve that end state. The operational design is a planning tool. It assists the operational commander in conceiving, developing and resourcing a campaign.

I would further recommend that the Army adopt training techniques geared specifically toward developing the characteristics of operational vision in its operational commanders. Training should include exercises that enable senior commanders to develop and exercise their conceptual outlook. These exercises would require them to develop and justify specific operational objectives given abstract strategic guidance.

From these operational objectives the commander would have to visualize and justify the concept of a campaign. A follow on phase to this training would

include situational exercises that would present them with challenging operational situations such as a campaign that must be carried out with constrained resources. Another situation would be to develop a campaign that must achieve a specific military end with low casualties or within specific time, cultural or political constraints.

Historical perspective is a product of a strong background in military history. All senior military officers are expected to have a strong grounding in history, however operational commanders should focus on historical operational campaigns. LTC John Turlington of the Army War College several years ago recommended the "systematic study of military history" as a part of learning the operational art.

If we are to be able to develop leaders skilled in the operational art we must find a way to approximate, as closely as possible, the experience of combat. We can do this through the systematic study of military history. ⁴¹

Operational commanders should focus their study of history on such commanders as Slim and Grant. The U.S. Army Command and General Staff College's School of Advanced Military Studies (SAMS) specializes in the historical study of operational art. The officers attending this school have a historical perspective of the operational art.

The only characteristic of operational vision that cannot be taught is determination and will. These are things an operational commander should have by that point in their career. Operational commanders must cultivate the skills and knowledge that give them confidence. The confidence that their thoughts and actions are correct will give operational commanders the determination to carry out their ideas.

The Army should strive to seek out and train commanders who have a broad outlook on war fighting. The Army must nurture the historical perspective of its future operational commanders. The Army must choose operational commanders who have demonstrated an inner vision of operational art and the determination and will to carry out difficult campaigns.

The implication for the practice of operational art is that the concept of operational vision should be formalized into current concepts of operational war fighting. Operational vision has its roots in the leadership vision of junior leaders but it must, over time, develop into a broader vision. The operational commander deals in the world of often abstract strategic guidance.

In the future, a changing political climate and strategic environment will dictate that the operational commander be particularly skilled in developing

operational aims from strategic guidance. This necessitates a focus on the characteristics embodied by operational vision.

ENDNOTES

1. U.S. Army, Field Manual 100-5, Operations, (May, 1986), p. 10.
2. James J. Schneider, "Theoretical Implications of Operational Art," Military Review, (September, 1990), p. 25.
3. John Foss, "Command," Military Review, 5 (May 1990), p. 4.
4. U.S. Army, Field Manual 22-103, Leadership and Command at Senior Levels, (June, 1987), p. 8.
5. Arthur Koestler, The Act of Creation (London: Hutchinson & Co., 1964), p. 10.
6. Ibid., p. 38.
7. Ibid., p. 118.
8. Ibid., p. 120.
9. Carl Von Clausewitz, On War (Princeton: Princeton University Press, 1976), p. 100.
10. Antoine H. Jomini, "The Art of War," Roots of Strategy Book 2 (Harrisburg: Stackpole Books, 1987), p. 437.
11. Clausewitz, On War, p. 103.
12. Ibid., p. 102.

13. Ibid., p. 103.

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John Keegan, The Mask of Command, (New York: Penguin Books, 1987), p. 213.

15. Thomas E. Griess, ed., The West Point Military History Series: American Civil War (Wayne: Avery Publishing Group, 1987), p. 191.

16. Ulysses S. Grant, ed. John Y. Simon, The Papers of Ulysses S. Grant, Volume 10: January 1-May 1864 (Carbondale: Southern Illinois University Press, 1982), p. xiii.

17. Herman Hattaway and Archer Jones, How the North Won, (Urbana: 1983), p. 525.

18. Ulysses S. Grant, Personal Memoirs of U.S. Grant, (2 Vols.; New York: Charles L. Webster, 1885), II, p. 555.

19. Ibid., p. 196.

20. Ulysses S. Grant, The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies (Washington, D.C.: Government Printing Office, 1894), pp. 11.

21. James M. McPherson, Ordeal By Fire - Volume II: The Civil War (New York: Alfred A. Knopf, 1982), p. 412.

22. Griess, American Civil War, p. 195.

23. Fuller, Grant and Lee, p. 244.

24. J.F.C. Fuller, Grant and Lee - A Study in Personality and Generalship, (Bloomington: Indiana University Press, 1982), p. 245.

25. A.L. Conger, The Rise of U.S. Grant, (New York: 1931), p. 310-315.
26. Grant, The Papers of Ulysses S. Grant, p. 273.
27. Fuller, Grant and Lee, p. 247.
28. Lothar Rendulic, "The Command Decision," Course 1-Foundations of Military Theory, Readings, (Fort Leavenworth: 1990), p. 19.
29. A. Badeau, Military History of Ulysses S. Grant, (), vol 1, p. 222.
30. Fuller, Grant and Lee, p. 249.
31. James L. Stokesbury, A Short History of World War II (New York: William Morrow & Co., 1980), p. 200.
32. Geoffrey Evans, Slim as Military Commander, (London: B.T. Batsford LTD, 1969), p. 119.
33. William J. Slim, Defeat into Victory, (London: PAPERMAC, 1956), p. 296.
34. Ibid. p. 294.
35. Ibid., pg. 535-537.
36. Ibid. p. 209.
37. Ibid., p. 290.
38. FM 100-5, Operations, p.10.
39. William Slim, "Higher Command in War.", Military Review, (May 1990), pg. 11-15.

40. Ibid, p. 52.

41. John E. Turlington, "Learning the Operational Art",
U.S. Army War College - Individual Essay, (April,
1986), p. 13.

BIBLIOGRAPHY

BOOKS

- Badeau, A. Military History of Ulysses S. Grant, (), 19 .
- Clausewitz, Carl Von. On War. Princeton: Princeton University Press, 1976.
- Conger, A.L. The Rise of U.S. Grant. New York: The Century Company, 1931.
- Evans, Geoffrey. Slim as Military Commander. London: B.T. Batsford LTD, 1969.
- Fuller, J.F.C. Grant and Lee: A Study in Personality and Generalship. Bloomington: Indiana University Press, 1957.
- Fuller, J.F.C. Generalship - Its Diseases and Their Cure. Harrisburg: Military Service Publishing Company, 1936.
- Grant, Ulysses S. ed by John Y. Simon. The Papers of Ulysses S. Grant. Carbondale: Southern Illinois University Press, 1982.
- Griess, Thomas E., editor. The American Civil War. Wayne: Avery Publishing Group, 1987.
- Hattaway, Herman and Archer Jones. How the North Won: A Military History of the Civil War. Urbana: University of Illinois Press, 1983.
- Hunt, James G. and John D. Blair. ed. Leadership on the Future Battlefield. Washington, D.C.: Pergamon-Brassey's International Defense Publishers, 1985.
- Jomini, Antoine H. Art of War: Roots of Strategy, Book 2. Harrisburg: Stackpole Books, 1987.
- Koestler, Arthur. The Act of Creation. London: Hutchinson and Company, 1964.
- Keegan, John. The Mask of Command. New York: Penguin Books, 1987.
- McPherson, James M. Ordeal by Fire - Volume II: The Civil War. New York: Alfred A. Knopf, 1982.

Slim, William J. Defeat into Victory. London: PAPERMAC, 1956.

Stokesbury, James L. A Short History of World War II. New York: William Morrow and Company, Inc., 1980.

Sun Tzu, Samuel B. Griffith, trans. The Art of War. Oxford: Oxford University Press, 1963.

Todd, Helen. A Man Named Grant. Boston: Houghton Mifflin Co., 1940.

Young, Peter and Richard Natkiel, editor. Atlas of the Second World War. New York: Berkley Windover Books, 1973.

PERIODICALS

Banisch, Werner W. "Leadership at the Operational Level." Army, (August 1987), 50-60.

Collins, J. Lawton. "Leadership at Higher Echelons." Military Review, (May 1990), 33-45.

Foss, John W. "Command." Military Review, (May 1990), 2-8.

Gerner, Mark H. "Leadership at the Operational Level." Military Review, (June 1987), 26-35.

Ridgeway, Matthew B. "Troop Leadership at the Operational Level." Military Review, (April 1990), 57-68.

Schneider, James J. "The Loose Marble - and the Origins of Operational Art." Parameters, (March 1989), 85-99.

Schneider, James J. "Theoretical Implications of Operational Art." Military Review, (September 1990), 17-27.

Slim, William. "Higher Command in War." Military Review, (May 1990), 10-21.

MONOGRAPHS

Gardner, Gregory. "Generalship in War the Principles of Operational Command." AMSP Monograph, (May 1987), 1-41.

McNeil, Timothy C. "Grant's 1864 Campaign in Virginia." MMAS Thesis, (May 1988), 1-140.

Riley, Don T. "The Evolution of Operational Art - The Reconquest of Burma, 1943-1945." AMSP Monograph, (May 1987), 1-36.

LEADERSHIP STUDIES

Turlington, John E. "Learning the Operational Art," Individual Essay - USAWC Military Studies Program Paper, Carlisle Barracks: USAWC, 1986.

U.S. Army Command and General Staff College. Dwight D. Eisenhower: The Professional Soldier and the Study of History, Fort Leavenworth: USACGSC, 1990.

DOCUMENTS

CGSC Student Text 22-3, Senior-Level Leadership: Selected Readings. Fort Leavenworth: USACGSC, 1988.

Field Manual 100-5, Operations. Washington, D.C. HQ Department of the Army, 1986.

Field Manual 22-100, Military Leadership. Washington, D.C. HQ Department of the Army, 1983.

Field Manual 22-103, Leadership and Command at Senior Levels. Washington, D.C. HQ Department of the Army, 1987.

Rendulic, Lothar, "The Command Decision." Course 1: Foundations of Military Theory-Readings. Fort Leavenworth: SAMS, 1990.