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MAJOR STEPHEN M. SITTNICK, USA

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Do the Operational Operating Systems(OOS) Offer an Adequate Framework for the Synchronization of Combat Power at the Operational Level?

A Monograph

by

Major Stephen M. Sittnick

Infantry

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School of Advanced Military Studies
United States Army Command and General Staff College
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Major Stephen M. Sittnick

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Approved By :

_____ Monograph Director
LTC (P) Edward E. Thurman, M.S.,

_____ Director, School of Advanced Military Studies
COL James R. McDonough, M.S.

_____ Director, Graduate Degree Program
Philip J. Brookes, Ph. D.

Accepted this _14th_ day of _May_ 19___

ABSTRACT

DO THE OPERATIONAL OPERATING SYSTEMS (OOS) OFFER AN ADEQUATE
FRAMEWORK FOR THE SYNCHRONIZATION OF COMBAT POWER AT THE
OPERATIONAL LEVEL? by MAJ. Stephen M. Sittnick, USA, 42 pages.

This monograph examines the adequacy of the OOS as a framework for
operational synchronization. In light of current downsizing, the U.S.
military is going to have to discover ways to do more with less. The answer
will not be found solely in technological innovations. We must become
masters at concentrating combat power at the decisive time and place.

Synchronization is described in this monograph as the intellectual
process that accomplishes the concentration of the elements of combat
power. It is a process applicable to the operational as well as the tactical
levels of war. The operational commander relies on synchronization to help
him set the proper conditions for the battles his subordinate tactical
commanders will fight. The current doctrinal framework for operational
synchronization is the OOS.

The adequacy of the OOS is analyzed against the synchronization
processes used by past successful operational commanders. General
Nathanael Greene and Field Marshal Slim are the historical subjects used in
the analysis. This monograph demonstrates that the thought processes of
these past commanders fall into the purview of the OOS. Based upon this
analysis the OOS are found to be doctrinally sufficient. Emphasis, however,
must be added to the commander's intent, operational objective and center
of gravity to ensure their adequacy as a framework for operational
synchronization.

Chapter 1: INTRODUCTION

The future of the U.S. military will be one of smaller force structures. The United States military is undergoing a significant decrease in personnel strength and budget as well as a consolidation of roles and missions. These dramatic changes are going to have a major impact on the warfighting practices of the armed forces. They will have to perform their tasks with far less resources, yet the American public will expect their military to maintain the same readiness and capability that won its reputation as the most capable military force in the world.

American political leaders assume that a smaller military can exploit technology to maintain peak readiness. The Chief of Staff of the U.S. Army wrote in a recent article that Americans characteristically seek technological answers to complex problems.[1] Americans have become accustomed to their high technology forces achieving quick decisive victories with few casualties. They expect their forces to fight smarter -- not harder. They assume that smart minds and smart weapons will obviate the need for an attritional slug fest.

It is very possible that a future and leaner U.S. military may face an enemy that can field a robust and capable force. This potential foe may prove to be the most uncooperative of enemies and not succumb to an American force relying solely on technology to provide a significant relative advantage. Technological systems may not be sufficient to produce the necessary advantage that renders victory. If a conflict is initiated by the insertion of a small contingency force, this force may find itself overwhelmed by a larger, less technologically sophisticated foe. Simply delivering high-tech systems to a battlefield may not be sufficient to

defeat the sheer brute force of a larger enemy force. The key to success is to focus on synchronizing the effects of those systems.

Synchronization of the effects of lethal and non-lethal systems is a well established practice of tactical U.S. Army forces. It becomes increasingly more urgent that U.S. operational warfighting reflect the same proficiency for synchronization. The reality of future warfare is that American forces may face a distinct numerical disadvantage on the battlefield. This possibility requires that all means available to the operational level commander be used effectively and efficiently.

Operational combat power must be concentrated at the decisive place and time. This requires precise synchronization of the elements of combat power. Synchronization is the intellectual process that accomplishes this. FM 100-5, Operations, describes synchronization as the arrangement of battlefield activities and resources in time, space and purpose to produce maximum relative combat power at the decisive point.[2] The battlefield activities are described in terms of operating systems. They serve as the doctrinal framework for the synchronization process.

At the operational level of war the six operating systems are operational movement and maneuver, operational fires operational intelligence, operational command and control, operational protection and operational support. The primary research question of this monograph is: Do these operational operating systems (OOS) offer an adequate framework for synchronizing combat power at the operational level? Other secondary research questions that will assist in determining the answer to the previous question are:

* Why synchronize combat power at the operational level?

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* What can history show us about how past operational level commanders successfully synchronized combat power?

* How do the OOS compare to the synchronization processes used by past operational commanders?

Assumptions

The following assumptions are key to completing the research of this monograph.

1) The OOS are the basis for a framework for operational synchronization.

2) Future U.S. forces may find themselves fighting against a proficient enemy that outnumbers them.

Monograph Methodology

Structure of the Monograph

The introduction of this monograph describes the problem, research questions, and monograph methodology. Chapter two examines the current doctrinal framework for synchronization. The third chapter analyzes the campaigns of General Nathanael Greene and Field Marshal William Slim to determine how they successfully synchronized combat power. Chapter four examines these campaigns to determine the adequacy of the OOS as a framework for operational synchronization. The final chapter offers conclusions on the adequacy of the operational operating systems.

Chapter 2: Current Doctrinal Framework

Synchronization is the arrangement of military action in time, space and purpose to produce maximum relative combat power at the decisive place and time.[3]

Synchronization Defined

There is more to effective warfighting than mustering combat forces and weapon systems. These physical means represent only capability, not action. Brigadier General Huba Wass de Czege, former Director of the School of Advanced Military Studies, wrote that a military leader must properly combine and apply his means (combat potential) to achieve actual combat power.[4] This combat power has meaning only when compared to the enemy at a specific time and place on the battlefield. The key is to determine ways to maximize friendly combat power and minimize enemy combat power in order to achieve a relative friendly advantage.

One method is to merely increase the amount of friendly forces and weapons systems and decrease the enemy's systems until an absolute numerical advantage is achieved. An equation to express this method is:

$$\text{Friendly Combat Power} - \text{Enemy Combat Power} = \text{Absolute Combat Power Advantage}.$$

An example would be increasing the amount of friendly attack helicopters in an engagement so more enemy tanks could be destroyed. One problem with this supplementary method is that it does not adequately address the ability of the enemy's air defense systems to attack additional friendly attack helicopters. Enemy ADA systems might destroy enough friendly attack helicopters to minimize any benefit. The supplementary method also does not consider the effect that can be gained from combining

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the unique capabilities of complementary friendly systems. Essentially the supplementary method applies 'more of the same' in an effort to increase friendly combat power.

A more effective method is the complementary application of combat power. This method starts by calculating overall friendly combat power. The theoretical basis for this calculation is the combat power model:

$$C(\text{Combat Power}) = [M \ (\text{maneuver}) + F \ (\text{firepower}) + P \ (\text{protection})] \times L \ (\text{leadership}).$$

The friendly planner determines the strengths and vulnerabilities of enemy systems, then determines the best combination of friendly systems which avoids enemy strengths while attacking enemy vulnerabilities. The complementary method also considers ways to increase the survivability of the friendly force, improve the placement of the friendly force on the battlefield and enhance the inherent fighting potential of the members of the force.

After calculating overall friendly combat power it must be properly applied against the enemy force. A framework used to ensure that combat power has been effectively synchronized at the operational level consists of the operational operating systems. They serve to channel friendly combat power against the enemy force. To gain maximum advantage, the proper time and place to apply friendly combat power against the enemy force is determined. The friendly force achieves an advantage relative to the enemy force at that particular time and place. This process is synchronization – the instrument of the complementary application of combat power.

Considering the previous example, a greater relative combat power would be achieved if a friendly SEAD program were delivered to prevent enemy ADA systems from engaging friendly attack helicopters. The end result would be greater than merely adding more attack helicopters. The

friendly force is increasing its combat power by adding more attack systems, improving the survivability of those systems, and decreasing the protection of the enemy force. The ultimate goal of synchronization, the concentration of complementary combat power at the decisive place and time, is thus achieved.

To achieve a complementary effect, a commander must be knowledgeable of all the capabilities and limitations of his and the enemy's entire force. As Baron Jomini wrote,"this skill allows the commander to understand what is possible."[5] Until the commander is confident that he knows both his force and the enemy's, he will be unable to recognize or create an opportunity to effectively synchronize his combat power.

It is important to remember that the goal of combat operations is to synchronize the effects of combat systems, not just the systems themselves. It is not enough to assign a group of systems to a unit in an effort to bulk it up. Planning must be completed to insure that the unit will be located at the proper place and time to utilize combat systems at their optimum ranges, in favorable terrain conditions, and against an appropriate enemy force. Maximum effect is achieved when friendly strength is delivered against enemy weakness.

Synchronization is the alternative to relying on intuition or piling-on forces. Future warfare will be conducted in more complex environments than the past. The tempo of combat will increase and require quicker decision-making, greater forethought and faster execution. The range and lethality of weapon systems will be greater. The depth and breadth of the battlefield will increase in the dimensions of air, land, sea and space. Synchronization must be used to achieve the greatest complementary effect of available combat power. The U.S. military cannot afford to rely on

supplementary approaches to generating combat power or attritional warfare. As the U.S. military grows smaller the need to plan and fight smarter increases.

Synchronization at the Operational Level

Current doctrine establishes the BOS as the basis for the tactical synchronization framework. It might seem logical, therefore, that the OOS would be a suitable framework for operational synchronization. This deduction however, must undergo analysis. Prior to testing the adequacy of the OOS as a framework for synchronizing operational combat power, two questions must be answered. First, what is the difference between tactical and operational combat power? Second, is it necessary for an operational planner to concern himself with the synchronization of combat power?

The tactical and operational levels of war are distinguished by scope and dimension.[6] The tactical commander is concerned with ending a battle victorious and with sufficient combat power for the next battle. His limited scope allows him to focus on the conduct of one battle at a time. All his combat power is oriented against enemy forces in contact or those that can be brought into a particular battle or engagement. Impact on future combat is determined by the amount of friendly combat power that remains at the end of battle.

The operational level commander, on the other hand, focuses on establishing favorable conditions for future battles. He is concerned about the proper sequencing of battles. This sequencing and the battles themselves make up a campaign. The campaign is a fabric of preparation, battles, pauses, and resolution. In the context of operational art, a battle becomes a part not a whole. The operational artist ensures that subordinate

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tactical commanders begin each battle under the proper conditions and end by establishing the conditions for the next battle. If the battle itself does not render the proper conditions, then another battle must be conducted or the operational commander must apply some form of operational level action, such as fires, movement and maneuver, or protection. His goal is to accomplish the purpose of a campaign: create the military conditions necessary to achieve the strategic objectives.

Operational Warfare is Joint Warfare

Tactical engagements are hardly ever fought in just one dimension, or only by one service. An Army tactical commander often may have to rely on the close air support from Air Force aircraft. So too a Navy F-14 squadron commander might be dependent on ground special operations forces for terminal guidance for his air interdiction mission.

The theater of an operational commander includes every dimension: land, sea, air, and space. This multidimensional nature of operational warfare necessitates the jointness of the operational force. The operational commander is responsible for the actions of all the services under him. He must not only be aware of the actions of the various Army divisions, Air Force squadrons, and Navy task forces under him; he must blend them them in proper proportion and timing. At times attacking an enemy with a flight of F-16s might create more effect than the attack of many infantry battalions. Likewise the ground assault of a Marine battalion landing team on an enemy surface-to-surface missile site might be the only thing that will allow the safe passage of a carrier task force through a strategic strait. The operational level commander is concerned with more than just aggregate friendly troop strength. He must insure that the proper

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type of force is applied at the proper time and place. He must be proficient at synchronizing combat power.

Armed Forces Staff College publication #2 defines operational synchronization as "the arrangement of joint military actions in a given time and theater of war or operations with a given strategic purpose to produce maximum relative military power at the decisive place and time. Military activities at the operational level are inherently joint and frequently combined."[7] If the operational commander wishes to synchronize his combat power he must understand the strength and weakness of each member of his joint team.

As with the BOS of the tactical level, the OOS are the activities which express the amount of combat power a force has. Each member of a joint operational force has its own level of potential combat power. This combat power will be applied in battle in the context of the OOS. At the operational level, synchronization arranges the operational operating systems in the theater so that combat power can be concentrated at the proper time and place.

Chapter 3: HISTORICAL ANALYSIS

The National Training Center serves as an effective medium to validate the tactical synchronization model. Operational level warfare has no similar training medium. History therefore provides important insights for operational synchronization. The ability of past operational commanders to rapidly and effectively synchronize their combat power determined their success or failure. Therefore, it is useful for contemporary operational artists and planners to study the thought processes past operational

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commanders used to synchronize their combat power. Contrasting these processes with today's OOS serves as an effective test for the adequacy of the OOS as a doctrinal baseline for a framework for operational synchronization.

General Nathanael Greene and Field Marshal Slim are two appropriate historical commanders to serve as subjects for this study. An assumption of this monograph is that a future U.S. force might find itself outnumbered by a capable enemy. Greene and Slim were both outnumbered by proven veteran enemy forces. The Carolina Campaign of Nathanael Greene and the Burma Campaign of Field Marshal Slim offer insight into the challenge each faced and the unique methods of operational synchronization they utilized to overcome these challenges.

General Nathanael Greene

> One wise head is worth a great many hands
>   Euripedes

Nathanael Greene is cited by many historians as one of General Washington's ablest lieutenants. This is great compliment to Greene's personal character when one considers that he did not attend formal military education nor have any active military service prior to the outbreak of the American Revolution. Greene's Quaker background forged a self-reliant and resourceful character. His avid reading of the classics, from Locke to de Saxe, developed a powerful intellect.[8] Greene's successful experience as a partner in the family business honed his managerial skills, established important personal contacts, and whet his ambition for solving administrative problems.[9]

With relations worsening between England and the American colonies, Nathanael Greene joined a volunteer militia company in 1774. He switched his personal reading focus from social philosophy to military theory. "He absorbed the fundamentals of command-- discipline, training, foresight, preparation-- from reading Caesar, de Saxe, and Frederick."[10] He was interested most in the writings of Rollin, a French historian, who wrote of small ancient Greek armies triumphing over larger foes. Greene learned to appreciate the value of quality over quantity of troops. The application of this knowledge helped earn him an appointment as Brigadier General in the newly formed Continental Army.

As a Major General he fought alongside General Washington in the Campaigns of 1775-77. In 1778, Washington asked his trusted deputy to assume the duties as Quartermaster General at a time when the supply status of the Continental Army was desperate. General Greene accepted the position reluctantly but created an effective infrastructure and procured the means that helped preserve the Continental Army. At the same time the successful British invasion in the southern colonies was causing great concern to the leaders of the American Revolution. General Washington sent Greene to the south as the new commander of the southern theater knowing that he lacked sufficient troops or material to conduct significant operations. However, Washington knew that Greene was the one person who had the ability to create an army as well as lead one.

The British intent in the southern colonies was to create a counterrevolution among the many southern loyalists. British leaders felt that southern plantation owners would welcome the chance to reopen a healthy trading relationship with Britain. The British Army of the South was to clear the south of all rebels and turn over control of the territory to

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a loyalist government. General Clinton, the British commander, received the surrender of over five thousand colonial soldiers from the rebel commander, General Lincoln, in May 1780. He left a contingent of eight thousand British troops under Lord Cornwallis to establish the final conditions of victory. Cornwallis chose to establish a series of coastal bases of operations at locations such as Charleston, SC.; Wilmington, NC.; and Savannah, GA. He also built interior outposts along the Savannah River. He left the control of the population up to the loyalist troops.

The Continental Congress sent General Horatio Gates, the hero of Saratoga, to expel the British troops and quell the counterrevolution. Instead, General Gates' Southern Army was destroyed at Camden S.C. on 15 August 1780. The partisan forces under Generals Sumter and Pickens were routed and dispersed and their commanders placed under house arrest. A campaign of terror was waged by the British and loyalist troops. The southern colonists were given no opportunity for neutrality. They either took up the loyalist cause or suffered the consequences of being labeled a rebel. Cornwallis' zealous cavalry commander, Colonel Tarleton, set about burning the plantations of the citizens which the British leaders wished to win over. Cornwallis was dealt a serious blow, however, when a loyalist force under the command of British Major Ferguson was destroyed at King's Mountain by partisan forces. An insurgency spread which forced Cornwallis to consolidate his soldiers in South Carolina.

In the midst of this desperate situation, General Greene assumed command of the Southern theater. As he reviewed his forces in December 1780, he noted that" the appearance of the troops was wretched beyond description, and their distress and account of provisions was little less

than their sufferings for want of clothing and other necessities. In his near naked and starving army he found a core of sublime bravery similar to Rollin's writings of the ancient Greeks.

A litany of problems faced General Greene in all areas -- political, economic and military. These included the following:

*Shortage of manufactured goods in the south

*Lack of improved overland transportation networks

*Population centers widely separated by vast wasteland

*Colonial troops hindered by Tory communities

*Many talented colonial officers killed or captured

*Lack of organized cohesive state and local governments

*U.S. Congress unable and unwilling to supply further arms, supplies or troops to the southern colonies

*Partisan bands- few, dispersed and unorganized

In Greene's own words," my task was to raise and provide for an army in a dispirited and devastated country, creating resources where they do not exist , to operate with an incompetent force on an extended and broken line of frontier; to hold in check in many points, and avoid coming into contact with an enemy superior in numbers and discipline."[11]

General Greene considered the strategic aims of the Southern campaign to be the same as the overall aims of the revolution:

1. Preserve the force rather than aggressively seek battle

2. Protract the war and wear the British down

3. Establish (support) a strong central government

4. Establish a standing army

5. Sustain the support of the people

Greene knew he had to destroy the perception of British conquest in the South.[12] Though some of his peers relied on future French involvement, Greene felt the colonies had to supply their own means for victory. As in the northern colonies, a competent regular force was necessary for successful operations. This army not only had to fight, but also win the trust and support of the colonists. A mutual dependency had to be forged between the army and the people.[13] If the people saw that the army could fight and survive, then they could be motivated to regain control of their government.

General Greene identified the enemy strategic center of gravity as the cooperation between the British Army and the Loyalist force.[14] The British Army focused on protecting loyal communities from rebel attacks while the loyalist militiamen controlled the local population. This mutual relationship allowed the British to maintain control in the south. It was these British troops in the south that Greene saw as the operational center of gravity. Wherever their presence was, the colonists were denied the ability to regain control of the land and population. Therefore, Greene's operational objective was clear to him – destroy the British Army in the South.[15]

His tasks for achieving this objective were to generate combat power (an army and resources) and use it against the British forces. He was to accomplish both these tasks in a land foreign to his own New England homeland. In many ways he and his British counterpart shared an alien identity to the southern colonists. Greene was determined to shed this alien status by raising the troops, supplies, and spirit of his Army directly from the southern colonists. He believed this would prove more effective than

supplanting some outside military force as was being done by his adversary, Lord Cornwallis.

To raise the resources of war, Greene repeated the technique of his commander, General Washington. Greene appointed a distinguished regular officer, William R. Davis, to serve as his Quartermaster General. To acquire supplies for the new Colonial Southern Army, Colonel Davis traveled to state legislatures, private plantations, and to interior southern communities. These resources were transported to magazines deep in the interior where support for the rebel cause was high. Positioned along waterways, the magazines would be accessible to colonial forces, but away from the heavier-ladened and road-bound British forces. A network of outposts, trails and waterways were maintained for the rebel forces' use.

General Greene himself concentrated on recruiting to fill the ranks of his Army. He knew that only the presence of a capable regular Colonial Army force would draw the British forces out of their coastal bases. Although such a force constituted the nucleus of his Army, he still had to rely on militia and partisan forces. These forces were given the mission of roving the theater striking weak British and Loyalist formations at diverse locations and unpredictable times.[16] Reinforcements for the militia and partisans came from the countryside. Residents would "go to arms" only when needed, then melt back into the civilian landscape.

General Greene wanted his army to have great tactical and operational mobility. The native waterways and trails of the southern interior were the key to his operational mobility. A healthy mixture of horsemen in the army ranks would supply the tactical and operational mobility. Greene would not repeat the mistake of his predecessor General Gates who sent an army of footmen against an enemy force that contained a strong contingent of

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cavalry.[17] He realized his army would have to be a combined force that could execute its mission in a decentralized manner. General Greene recruited dedicated and capable subordinate leaders who were able to exploit the use of indigenous manpower and resources. He gave his lieutenants loose reins to perform their tasks after ensuring they thoroughly understood his intent and the operational objective- focus action against the British forces and refuse decisive battle in order to preserve friendly combat power, while weakening that of the enemy.

Greene, the Yankee general, created the means of war from the land and people of the enemy-occupied southern colonies. The genesis of his resourcefulness was his own cunning. While other generals were sent to fight with the means provided by their governments, General Greene had to furnish his own. He also had to commence his operations immediately upon arrival in theater or face destruction before his campaign started. These operations had to keep the British forces at bay and support Greene's operational goals; while he built his army, and acquired his supplies.

A viable intelligence network was essential to keep track of the activities of the British forces. The acquisition of Lighthorse Lee's dragoons assisted the intelligence effort with their raids deep in the British rear. The bulk of the information was coming from the partisan forces. Notable among them were the forces of Francis Marion, the Swamp Fox. The partisans were also able to serve as a courier system for the delivery of updated friendly information and command directives.

Greene recognized the value in keeping his forces dispersed in order to preserve friendly combat power and force the enemy to divide his forces to pursue the rebels. Greene also guarded the intent of his operations by refusing to concentrate friendly forces. Thus, he was able to threaten the

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British in many places simultaneously. As Greene demonstrated to the front of the British main column, his deputy, General Morgan, attacked the British rear with another colonial force. Partisan forces attacked the British supply trains and loyalist outposts. They also harassed the flanks of the main British force.

General Greene convinced his subordinates that retreat or delay were acceptable methods of fighting for colonial forces. It was better to accept less than total tactical victory than give the British the decisive battle they yearned for. Greene taught his forces to look beyond the immediate engagement to see the greater cumulative affect on the British. The British had to repeatedly tend to casualties, extend their supply lines and watch their loyalist support dwindle away. The British forces were tethered to their coastal bases and communicated along a road network constantly interdicted by guerrilla forces. While General Greene was able to maintain his own freedom of maneuver, his adversary lost it as he chased a fleeting dispersed colonial force. The victory aspired by the colonial forces was the final defeat and expulsion of the British forces from the south. In this operational context, it was wise for American troops to retreat prior to becoming decisively engaged at the tactical level. Colonial forces achieved a greater operational effect on the British force with multiple yet brief engagements.

When Greene did offer battle such as at the Guilford Court House against Cornwallis and at Holbrick's Hill against Lord Rawdon, he did so knowing that win or lose the colonial force would be able to field a force two days following battle, while the British would have to return to their bases. In both battles the British achieved narrow victories. The morale of the British troops and the will of their commanders decreased with each

successive engagement. The spirit of the colonial forces increased after each battle knowing they were retreating today so they could fight another day. The tactical objective was to punish that day's particular British formation, but the operational objective was to destroy the entire British Army of the South. In the final battle, Eutaw Springs, both the British and American forces suffered forty percent casualties. The Americans were able to replace these forces within days. The British force, under Colonel Stewart, had to return to Charleston, S.C. where it stayed until the evacuation of all British troops from the southern theater.

In a period of ten months General Greene was able to win his campaign. He initially infiltrated into theater to find little available combat power to wage a war. Against tremendous odds he set his sights on an ambitious operational objective--the destruction of the British forces in theater. He appreciated the physical and human/psychological dimensions of war. General Greene did not lament over his lack of resources or inability of his own forces to fight the type war of the British foe. He combined the available native manpower, material, and character to force the British to fight a style of warfare conducive to the colonial forces. While his regular and militia forces demonstrated to the front of British formations, his partisan forces attacked the enemy's flanks and rear. He blended the unique abilities and fighting techniques of each of his type forces. General Greene always remembered that the key was to defeat the British, not fight a grand decisive battle. He merely had to preserve his own combat power while his soldiers dwindled away the combat power of the British Army in the south. General Greene illustrated an operational dimension to combat power which dictated the way he distributed, concentrated and fought his forces.

FIELD MARSHAL WILLIAM SLIM

Sir William Slim is revered by many for his impressive character and intellect. Slim, coming from modest roots, endured personal financial burden to continue his commissioned service following World War I. His passion for soldiering and love of soldiers was forged on the WWI battlefields and maintained throughout years of service with British frontier (Indian/ Ghurka) soldiers. His association with these hearty and frugal soldiers helped Slim develop a high degree of physical and moral courage and a penchant for innovative resourcing. His intellect was a by-product of years of voracious reading and prolific writing. Slim's prior successful experience as a newspaper and novel writer gave him the ability to absorb large amounts of information, make quick assessments on the credibility of the information, make his own decisions, and express his thoughts effectively and concisely. Slim's thought process was as simple as his written and verbal directives– compare counsel to your own assessment, determine your main objective, subordinate all else and stick to your main objective. He chose not to waste time regretting past mistakes, but to learn from them vowing not to repeat them, then focus on thinking ahead of his enemy.

Slim attributed much of his leadership skill to his time as a platoon leader in WWI. Here he learned the importance of making a realistic appraisal of the soldiers' state of training and abilities. He realized that merely making soldiers work and fight harder did not always work. Rather, he learned the value of seeking ways to conserve and increase the combat power of his troops by cunning as well as brawn. Slim appreciated the strengths of his Asian troops better than most of his countrymen. While

others saw them as prone to confusion and unsophisticated, Slim viewed these soldiers as conditioned to take chances, used to fighting in desperate situations and adept at improvisation. Slim learned to exploit the intellectual and physical means within his own unit before pleading to higher for assistance. Serving in units which possessed meager resources but assigned formidable tasks, Slim became innovative at developing a relative combat power advantage when and where it was needed.

General Alexander, Commander of the Burmese Army, selected Slim to take charge of the 17th Indian and 1st Burma Divisions' defense of Burma in 1942. In a country new to him and with a skeleton staff, General Slim assumed command of the Burma Corps. He knew his soldiers were exhausted and without hope of reinforcement. His corps was to deny the Japanese the two major routes up the peninsula. This resulted in an eighty mile gap in the center of the corps' inner flank. The mechanized/ motorized Burma Corps was bound to the roads. The Japanese, on the other hand had light forces which could encircle and block the delaying Burma Corps with relative ease. Allied hopes changed from offensive action, to retention of Burmese territory and finally to the evacuation of allied troops across the Indian border. In India, the defeated Burma Corps recuperated from the toll extracted by the jungle terrain, disease, and the Japanese forces.

The intent of the Japanese in Burma was to cut the allied land line to preclude communication between India and China (the Burma Road). This action would greatly assist operations against Chiang Kai-Sheck's Army. The Japanese knew the allies would fight to reopen or build a new road to China. The Japanese assumed the British would pressure the other allies to conduct a future counteroffensive in order to regain the lost portion of their empire. In an effort to prevent this offensive, the Japanese wanted to

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attack across the border to seize the allied base of Imphal and then the huge supply base at Diampur. The method they wanted to use was a repeat of their earlier deep infiltration attacks which isolated allied forces in Burma. It worked to force the allies to retreat into India. They saw no reason why it would not work to prevent the reopening of the China land line.

The initial allied intent was to defeat the Japanese offensive in Burma. This changed to a delaying action to retain as much of Burma as possible and keep the Burma road open to China. The allies eventually focused on the evacuation of their forces and the build-up of combat power for a future counteroffensive. The force charged with conducting the counteroffensive was the new 14th Army and its commander was General Slim. Slim's superior was the 11th Army Group commander, General Sir George Gifford, who was also the land component commander to the Supreme Commander South East Asia Allied Command (SEAC), Admiral Lord Mountbatten. Slim designed the campaign plan, organized his theater, and executed the campaign to reconquer Burma.

Slim learned many lessons as the defeated commander of the Burma Corps. He was all too familiar with the poor state of training and low morale of the troops in his command. No army in Burma would be successful if it were bound to the roads. The vicious jungle and mountainous terrain had to be conquered. Additionally, the allies could never gain the initiative without an effective intelligence structure. All the members of the force, including rear area and headquarters personnel, had to be able to protect themselves. The reality of fighting the Japanese in the jungle meant that a friendly force was always threatened with encirclement. Slim knew he had to inculcate boldness back into the allied soldiers if their was to be any

hope of victory. Aggressive patrolling, austere provisions and isolation would have to be the norm for operations in Burma.

As the 14th Army commander Slim faced the challenge of an operational commander charged with the mission of attacking and defeating the same enemy that evicted him from Burma. The vast frontage of Slim's theater contained three separate areas of operation. Gaps exceeding two hundred miles separated the Northern, Central and Southern fronts and lateral communication was only possible by air. Perhaps the paramount challenge was the reality that Burma was a secondary theater of war. The European theater received priority in World War II. And in the Pacific theater, Burma was at the bottom of the pecking order. Allied troops felt so isolated in the Burma theater that they referred to themselves as the Lost Army. Other challenges were:

*Constrained land routes necessitated a direct approach toward the enemy force

*Troops suffered from dysentery, malaria, skin diseases and typhus

*Aerial transport priority in SEAC assigned to China, not Burma

*Severe shortages in ammunition, rations and weapons

*Superman image of the Japanese

*Upcoming monsoons increased the challenges of terrain

The stated strategic aim for the Burma campaign was to secure, maintain and expand an air and land route to China. General Gifford's guidance to Slim was to seize operational bases in the Southern front, seize the foothills along the Chindwin River in the Central front, and utilize Colonel Wingate's long range special forces in the Northern front. After the initial terrain objectives were achieved Slim was to exploit any opportunity to continue the attack. Slim took these terrain oriented objectives and

translated them into force oriented objectives. Slim felt it necessary to
focus operations against the destruction of the Japanese forces in theater.
They were the operational center of gravity. If he could destroy them, the
strategic and operational aims would be achieved. This was a bold objective
considering the overall advantage of strength, numbers and position that the
Japanese held. Slim had to devise methods to obtain a relative combat
power advantage over his foe. Before he could concentrate combat power, he
had to first raise it out of a defeated Army in a secondary theater -- a
formidable task.

Slim was confident that he would build sufficient combat power and
use it to destroy the enemy. Fundamental to this was a firm belief in his
own abilities, subordinate leaders and his soldiers. His first task was to
raise the morale of the troops to the level Slim knew was necessary. He
first concentrated on building secure and comfortable training bases for his
soldiers and he created a robust health care infrastructure that focused on a
preventive medical program. He convinced his boss to create two training
divisions in order to transform his soldiers into capable and aggressive
jungle fighters. He set up the conditions for minor tactical victories along
the fronts and promulgated their achievement throughout the command to
raise confidence and pride. He chose subordinate leaders who could continue
to raise the morale and confidence of their soldiers.

Slim adopted the operational methods which Lord Mountbatten saw as
critical to success in Burma. The allied soldiers had to fight in the jungles
where the Japanese would suffer greatest due to their poor medical care.
They had to fight when surrounded and rely on aerial resupply. In order to
maintain pressure on the enemy and seize the initiative, the Japanese had to
be attacked even during the monsoon season. The Allies could not allow the

Japanese reinforcements to flow unhindered. Slim also reorganized his force so it could be quickly moved by air in theater. Finally, in spite of the terrain in theater, Slim saw the need to concentrate his tanks in some favorable terrain in order to gain the appropriate combat power advantage over the enemy.

The first operation of Slim's campaign focused on drawing the Japanese into favorable terrain, of Slim's choosing, to destroy their 15th Army. This action was the key to any successful counteroffensive in Burma. The enemy had to be significantly weakened before the allies crossed into Burma. An initial tactical defense was chosen for the Imphal-Kohima operation in order to force the Japanese to occupy a large area, stretch their lines of communications and thus set up the counteroffensive. The advantage of the defense was that it would drain the combat power of the Japanese attackers while preserving friendly combat power. The main effort of the defense was in the central front, while forces in the Southern front conducted a supporting attack. In the northern front Wingate's forces infiltrated deep to interdict Japanese lines of communications. Tactical and operational reserves were able to reposititation by air, rail and land in sufficient time to defeat the Japanese Army. By exercising economy of force in the northern and southern fronts, Slim was able to concentrate sufficient combat power for the counterattack, which destroyed the Japanese 15th Army. After suffering fifty percent (53,000) casualties, the Japanese were forced to escape across the Chindwin River. Of the 16,000 allied casualties, many were returned due to superior health care. The success of the initial operation was followed up by the Irrawaddy operation and the defeat and surrender of the Japanese Army in Burma. Throughout the

campaign Slim, as operational commander, insured that the proper concentration of combat power was at the decisive time and place.

Slim believed that his subordinate leaders and troops conducted the events which caused the success. He merely focused on insuring the proper timing of these events. He saw his task as setting the conditions for tactical success while his corps commanders would execute the battles. Then he linked one successful battle to another until the campaign plan was fulfilled. He also felt solid intelligence on the enemy was necessary for achieving success in a campaign. Slim counted on the Japanese adhering to their trend of over-boldness and stubborn adherence to the original plan to contribute to the draining of enemy combat power.

Slim followed his principle of determining the main object, insuring everyone understands it, and then stick to it. He always saw the ultimate intention as offensive. He relied on every one of his soldiers, whether in a tactical defense or in pursuit. His every action focused on the destruction of the Japanese Army. He pushed his soldiers to maintain the initiative even into the start of the monsoon season. Slim's soldiers advanced hungry and exhausted, but eager to gain the destruction of the very force which had caused them to retreat earlier. Slim was successful because, as stated in the U.S. Army's keystone operations manual, he pressed operations to the very limit of combat power-- but not one step further.

Chapter 4 : ANALYSIS

General Nathanael Greene and Field-Marshal Slim are two past operational commanders that successfully synchronized operational combat power. Historical record reveals the result of Greene and Slim's

synchronization, but analysis is required to reveal the thought processes that produced that synchronization. The result of this analysis is a distilled operational synchronization framework that could be used as a standard to test the adequacy of current operational synchronization framework.

Operational Command and Control

Operational command and control is the exercise of authority and direction by a properly designated commander over assigned forces in the accomplishment of the mission. It involves the arrangement of command and control personnel, equipment, communication and facilities. The operational commander uses this system to establish procedures to direct, control and coordinate forces, and plan and conduct campaigns. The most important tasks operational command and control accomplishes are the articulation of the commander's intent, operational objectives, and limitations of force.

Greene

General Greene's command and control framework relied on the selection of trusted subordinate leaders who could carried out their missions under the guidelines of a clear commander's intent. His intent transmitted a vision which enabled subordinate commanders to determine what they had to accomplish to help achieve the operational objective. Greene was proficient at assigning the right task to the right force at the proper time and place. Greene's campaign plan properly sequenced battles to ensure that each tactical commander entered battle under the right conditions. Loose reins given to his subordinate commanders imbued Greene's force with a flexible command and control structure that allowed

them to maintain fluid movements necessary to defeat the numerically superior British. His partisan courier network gave General Greene's forces a communication system superior to the British.

Slim

Slim was adept at selecting capable subordinate commanders and staff officers and training them. Slim's days as a journalist helped him prepare clear, concise, and simple objectives and intent statements. He was equally adept at articulating the conditions required for the commencement of each phase of the campaign. Slim's frequent visits to the front line and forward command posts helped keep his forces focused on obtaining the conditions necessary for the following operation despite desperate tactical situations. A clear illustration of this is how Slim held off the counterattack on the Imphal Plain until sufficient friendly armor had been massed and enemy forces attrited.

Summary

Both Greene and Slim maintained an operational vision which transcended the local tactical action of the campaign. They communicated their vision by a clear commander's intent and operational objective. These two components were essential to their operational synchronization efforts. They were the intellectual foundation of Greene and Slim's campaign plans that allowed battles and engagements to be properly sequenced. Subordinate tactical commanders understood what they had to accomplish to set the conditions for operational success.

Operational Intelligence

Planning and conducting campaigns and major operations within a theater requires reliable intelligence. The key actions of operational

intelligence is the collection, identification, location and analysis of strategic and operational centers of gravity.

Greene

Greene identified the British center of gravity as the army itself. His primary operational intelligence task was then to track the main columns of Lord Cornwallis or Lord Rawdon. Partisan forces were essential for this task. They were the primary collectors and conveyors of information on the location of the enemy main force. Sympathetic members of the civilian population assisted in tracking the movements of various enemy elements and actions at the enemy coastal operations bases. Cavalry raids deep into enemy rear areas also gathered precious information on enemy intentions.

Slim

Slim felt it was the personal responsibility of the commander to make the final read on what the enemy's true intentions were. To do this required an understanding of the enemy's doctrine, information on their latest movements and knowledge of their commanders. Slim accurately predicted that the enemy would continued its trend of over-boldness and strict adherence to the original plan. Slim used aerial reconnaissance to monitor the movement of major Japanese forces. He also fostered aggressive patrolling to maintain contact with the close-in enemy. The key to the right read on the enemy came from Slim's personal dedication to exhaustive study of his foe. He was determined that no one in his command, not even his intelligence officer, knew the Japanese as well as he did. After all the study and analysis, Slim knew it was imperative that the main enemy force, or center of gravity, be properly identified. Slim's identification of the fifteenth Japanese Army as the force to destroy in the Imphal operation

was an example of making the right decision concerning where to attack the enemy.

Summary

The identification of the operational center of gravity was essential to the success of both Greene and Slim's campaigns. This task became a personal responsibility for both commanders. They both felt that their proper understanding of the enemy center of gravity was necessary if their operational visions were to have any credibility. Once the enemy center of gravity was determined they set up the infrastructure and allocated forces to continually track its location. Friendly forces conducted their movements and operations in a manner that lured the enemy into terrain favorable for its defeat.

Operational Support

Operational support covers all theater activities required to support forces engaged in the campaign and major operations. This operating system deals with the design, development, acquisition, storage, distribution, movement, maintenance, evacuation and disposition of all material in theater. It includes the movement, evacuation and hospitalization of personnel; and the acquisition, construction, maintenance, operation and disposition of theater facilities. Finally, operational support includes the acquisition or furnishing of all services.

Greene

Greene's solution of a regular officer to serve as his Quartermaster General illustrated the importance he placed on operational support. He knew that if it were to survive, his army had to have an effective support plan and infrastructure. From a myriad of sources General Greene was able to acquire and distribute sufficient resources for his

colonial army. Typically, Greene himself engaged in exhaustive staff calculations to insure proper sustainment for the many contingencies he developed. His systems of depots along the interior waterways supported his mobile columns. Greene was not beyond including the capture of enemy weapons and supplies as a element of logistics planning.

Slim

Slim had an appreciation for the importance of thorough administrative and logistical planning. The creation of initial operations/training/support bases was vital to setting the conditions for turning a defeated Army into a confident Army on the attack. Slim not only focused on the build-up of bulk supplies prior to his counteroffensive, he dedicated the appropriate attention and material to increasing the condition of the individual soldier. Innovation was the norm in the Burma theater. Huge boats were made from native Burmese teak trees and cargo parachutes fashioned from remnant canvas. Aerial supply was absolutely essential to allow the allied forces to continue the fight despite being encircled by the Japanese. The example was set at the highest levels- soldiers of the Burma theater had to excel in self-sufficiency and austere conditions.

Summary

The importance of operational support to the synchronization effort is evident from the amount of personal attention Greene and Slim paid to their logistics plans and infrastructure. They both were constrained by a lack of resources at the start of their campaigns. They both determined that establishing a viable support structure and building-up supplies were mandatory preconditions for the start of their campaigns.

Operational Fires

This operating system concerns the application of lethal and nonlethal firepower to achieve a decisive impact on the conduct of the campaign or major operation. Operational fires facilitate the maneuver of forces, isolates the battlefield, or destroys critical enemy functions and facilities.

Greene

Greene directed his partisan forces and cavalry units to strike the British forces in harassing attacks. Guerilla activity was encouraged along the British lines of communication. Militia forces were utilized to strike the flanks of the British columns and canalize them into terrain favorable to the colonists. Partisan attacks on Loyalist units bled the British of available manpower and popular support. Though in contemporary terms these actions suggest maneuver, the effects of the fires of Greene's militia and irregular forces accomplished the tasks of operational fires.

Slim

Air power applied the decisive firepower on enemy forces and their lines of communication (LOCs). Infiltration of COL Wingate's long range special forces units interdicted the enemy's LOCs as well. Slim insisted that the Japanese Army had to be significantly weakened prior the Fourteenth Army's offensive into Burma. The proper conditions had to be set if the attack was to succeed. Slim set the objective of destroying the 15th Japanese Army on the Imphal plain prior to the advance down the peninsula. Operational fires were critical to accomplishing this. Fires in the form of air power were used to isolate the battlefield and the enemy force. Slim was determined, after letting the 15th Army in the Imphal pocket, that no

additional reinforcements or resupply would be allowed the enemy. Slim correctly predicted that the enemy would become so absorbed in the close tactical fight that they would neglect their rear and LOCs.

Summary

Greene and Slim devoted assets to performing the three tasks of operational fires- facilitate maneuver, isolate the battlefield and destroy critical enemy functions/facilities. Significant friendly firepower was devoted to the interdiction of enemy lines of communication in Greene's and Slim's campaigns. Greene's partisan and militia raids and Slim's attack aircraft rendered enemy resupply activities ineffective. Attacks on enemy flanks helped canalize the enemy main element into the decisive point on the ground. Application of operational fires on key enemy formations isolated the battlefield and allowed friendly units to maneuver to the decisive point at the decisive time.

Operational Movement and Maneuver

Movement and maneuver changes the disposition of forces in theater to create a decisive impact on the conduct of a campaign by securing operational advantage of position prior to the start of battle or exploiting tactical success to achieve operational or strategic results. This operating system guides the timely deployment, regrouping, relocation or reinforcement of major formations of friendly troops. It also includes the delay, canalization and halting of enemy formations. Deception operations are included in this operating system. Their purpose is to ensure that friendly forces control land, sea and airspace in order to maintain positional advantage over the enemy.

Greene

The dispersion of his forces into multiple columns was the key to Greene's operational maneuver. Superior positional advantage was maintained by the colonial forces' effective movement throughout the difficult terrain of the interior of the Carolinas. A network of backwoods trails and rivers enabled the Americans to reposition quickly to concentrate forces and elude capture or decisive engagement. The increase in the number of horsemen, which Greene initiated, allowed quick regrouping of his forces for future tactical engagements and hasty reinforcement from inhabitants of the southern countryside.

Slim

Slim redesigned all his forces so they could quickly be moved throughout the theater by aircraft. Training on air movement was conducted in the training bases. This proficiency allowed the allies to continually wrest the initiative from the Japanese. Deception operations and economy of force actions drew the enemy into ground favorable for their destruction. The massing of friendly tanks and accompanying close air support allowed Slim's 14th Army to destroy the Japanese forces. Instead of spreading the critical elements of combat power across the theater, Slim did the hard thinking to determine the decisive time and place where those elements should be concentrated. This concentration gave the allies the relative combat power needed to destroy the Japanese 15th Army on the Imphal Plain.

Summary

Both Greene and Slim focused on the maintenance of friendly freedom of maneuver and the restriction of the enemy's freedom of maneuver. Both commanders relied on deception activities to disguise their

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true intentions. They were both masters at keeping friendly forces dispersed long enough to avoid decisive early combat, then concentrating forces at the decisive point and time.

Operational Protection

Operational protection is the conservation of friendly combat power so it can be applied later at the decisive time and place. The main component of this system is the theater indications and warning (I&W) procedures which prevent enemy surprise. Operational protection also includes operational security and personnel discipline procedures, preventive medical efforts, antiterrorism measures, and theater air defense/ airspace control.

Greene

The dispersion of Greene's forces and their willingness to retreat to fight another day were critical to the preservation of operational and tactical combat power. Greene established bases deep in the safety of the interior's restrictive terrain. Greene's preference for strict discipline and arduous training maintained cohesion and order amongst the colonial forces. As in the Northern theater, Greene realized the importance of protecting the core regular force of his Army. Its preservation was necessary to maintain credibility with the civilian population and inspire his militia and partisan forces.

Slim

Slim felt the best way to protect his force was to raise their morale, confidence and level of training. He insisted on all friendly forces being

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able to defend themselves including rear area personnel. Security was provided by aggressive patrolling, hardening rear areas and mobile counterattack and reinforcing strike forces. Slim created health teams to provide preventive medical service to the force. Subordinate leaders were accountable for the maintenance of troop morale, health, strict discipline and realistic training. Slim convinced his subordinates that good training and good medical practices provided good force protection.

Summary

Greene and Slim devoted the bulk of their protection efforts to the creation of a confident, capable and cohesive army. They both chose subordinate tactical commanders that would continue initial efforts which forged strict discipline and high morale into previously defeated troops. They were able to convince their forces that initial defensive and delaying actions taken to preserve the force were not desperate actions, rather they were prudent and wise measures taken to defeat the enemy over time. They were able to impart to their soldiers that these actions were only temporary in order to preserve their strength while draining the enemy's.

Chapter 5: Conclusions

The operational operating systems serve as a good basis for developing a framework for operational synchronization. The OOS represent the major military activities which must be synchronized to insure that a relative combat power advantage is achieved at the decisive time and place. The operational commander is concerned with not only how the tactical battles are progressing, but also how well the proper sequencing of the battles is accomplished. The operational commander must synchronize

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combat power at his level so his subordinate tactical commanders have sufficient means to conduct their battles and he has sufficient means to impart operational action. If a battle does not set the proper conditions for the next battle, then the commander must consider the application of some form of operational combat power to establish the proper conditions. The operational commander must be prepared to attack enemy forces at operational depth with aircraft, deep artillery fires or deep maneuver. These actions cannot be desperate acts but synchronized applications of operational combat power. Synchronization planning must occur at the operational level as well as the tactical level.

Operational Synchronization: Historical Lessons

The historical analysis of Greene's and Slim's campaigns indicates that combat power has an operational perspective. The campaigns were not merely made up of numerous tactical actions. Greene and Slim, as operational commanders, had the opportunity to employ units and systems to impart operational action. These units and systems became the elements of operational combat power which were arranged to achieve a complementary affect on the enemy. The operational commander is responsible for developing a campaign plan that becomes the ways to apply the means, or combat power. Synchronization planning, conducted in the campaign planning process, insures the most effective application of combat power by giving the friendly force a significant relative combat power advantage.

Our analysis of Greene and Slim's campaigns showed us that synchronization was the intellectual process which allowed them to concentrate operational combat power at the decisive point and time. The principal components of Greene and Slim's operational synchronization

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process were clearly articulated in the commander's intent, operational objective, and the enemy center of gravity. These were the prerequisites for the plan for the synchronization of combat power. These three components are found within the elements of the operational operating systems. Special emphasis must be given to them if the OOS are to be considered an adequate framework for operational synchronization planning.

Operational Synchronization : Future Implications

An assumption of this monograph is that some future U.S. operational force may find itself outnumbered by a capable foe. For any chance of success, U.S. forces must be able to rapidly synchronize combat power to create a relative advantage at the decisive point and time. The operational commander must start his campaign prepared to conduct some operational level action if needed. Waiting for build-up of combat power or the completion of a string of tactical engagements is not prudent against a capable foe. Detailed smart thinking must start prior to the first tactical action. Today's quest for quick decisive victory means that synchronization has become even more important. The expectation of decisive victory has risen while current fiscal realities decrease the means for our military forces. We must do more with less. Intellect is a premium trait for today's operational commander and planner. Zeal and brawn have been supplanted by cunning. A cunning application of combat power results in synchronization.

If our military plans and trains as if it will always have sufficient resources and overwhelming combat power, then it will lose the ability to think its way out of desperate situations. Given today's force projection strategy, we must insure that a contingency force could withstand the pressure of a larger enemy force until the arrival of follow-on heavier friendly forces. It makes good sense to train under conditions of

constrained resources to develop the requisite innovation and shrewdness that can create a relative combat power advantage despite unfavorable odds. A force that develops this skill under constrained resources has the potential to achieve a quick decisive victory when it possesses overwhelming combat power.

Our force projection strategy requires that contingency forces be able to apply operational combat power during the initial deployment phase of a campaign. Initial ground forces in the theater will be focused on building up combat power at a lodgment site or air/sea port of entry. They will be relying on the deterrent value of the entire operation for force protection. If our troop deployment does not convince our enemy of our resolve then operational combat power may need to be used on our foe before his forces can threaten our forces in the lodgment. The operational commander must have the means and ways at his level to conduct an attack to prevent the enemy from preempting his plan before he has established a lodgment. A synchronized plan must exist which can control carrier or land based aircraft, sea or air launched cruise missiles, or reconnaissance/ surveillance/targeting systems. Operational action calls for more than getting there first with the most. The operational commander must not only have attack systems available, he must have a sound plan and an effective infrastructure to execute operational fires and/or maneuver to protect his deploying forces.

Conclusion

The OOS serve as the core of an operational synchronization planning model. The OOS allow the operational commander to efficiently assess his total combat power then arrange the application of that combat power in the

proper sequence. The OOS provide a holistic approach to the available elements combat power and directs them toward accomplishing a sequence of events which result in achieving the operational objective. The lessons from Greene and Slim indicate that special emphasis must be given to commander's intent, enemy center of gravity and the operational objective when applying the OOS to synchronizing combat power.

This monograph has proven the need to synchronize combat power at the operational level. It has also tested the adequacy of the OOS as a framework for operational synchronization. Campaigns of past commanders suggest minor modifications to improve the OOS when use for synchronization planning. History demands that operational commanders do hard thinking up front on the determination of the commander's intent, operational objective(s), and enemy center of gravity. When special emphasis is given to these components then the OOS become an adequate framework for operational synchronization.

ENDNOTES

[1] General Gordon Sullivan, "Synchronization", _Military Review_, Sep 92. p.9.

[2] Headquarters, Department of the Army, FM 100-5, _Operations._ (Washington,D.C., May, 1986), p.17.

[3] Joint Chiefs of Staff, JCS PUB 3- 03, (Washington, D.C.,), p. II 1-3.

[4] Colonel Wass de Czege, " Understanding and Developing Combat Power", (USACGSC, Feb, 1984), p.12.

[5] Baron Antoine Jomini, , _Roots of Strategy book 2._ (Harrisburg,Pa., Stackpole Books, 1987), p.456.

[6] Lieutenant Colonel James M. Dubik, "A Guide to the Study of Operational Art and Campaign Design", (USACGSC, SAMS, 1991) p. 5-6.

[7] National Defense University, Armed Forces Staff College, AFSC Pub 2 _Service Warfighting Philosophy and Synchronization of Joint Forces_ , (Norfolk,Va. Oct 1991) p. II-3-2.

[8] David A. Tretler, _The Making of a Revolutionary General-- Nathanael Greene: 1742-1779._ (Ann Arbor,Michigan, University Microfilms International, 1986), p. 474.

[9] Ibid, pp. II and III

[10] Tretler, p. 310.

[11] John Frost, LL.D, _The American Generals_, (Boston, Horace Wentworth, 1850), p.117.

[12] Tretler, p.354.

[13] Ibid, p.293.

[14] Major Edward E. Hoffer, "Operational Art and Insurgency War: Nathanael Greene's Campaign in the Carolinas", (USACGSC,SAMS, 1988), p. 15.

[15] Ibid. p.15.

[16] John Morgan Dederer, _Making Bricks Without Straw_ (Manhatten, Kansas, Sunflower University Press,1983), p. 2

[17] W. Robert Higgins, (Durham,N.C. Duke University Press,1979) p.134.

BIBLIOGRAPHY

a. <u>Government Publications</u>

U.S. Army, FM 22-103 , <u>Senior Level Leadership:</u> Washington D.C.:
        Department of the Army.

U.S. Army, FM 100-5, <u>Operations:</u> Washington D.C.: Department of the
        Army, May 1986.

U.S. Army, TRADOC Pamphlet 11-9, <u>Blueprint of the Battlefield</u>; U.S.
        Army Research Institute, Feb 1991.

Joint Chiefs of Staff, JCS PUB 3-03, : Washington D.C.

National Defense University, Armed Forces Staff College, AFSC PUB 2,
        <u>Service Warfighting Philosophy and Synchronization of Joint</u>
        <u>Forces,</u> Norfolk, Va., Oct. 1991.

b. <u>Books</u>

Dederer, John M. <u>Making Bricks Without Straw,</u> Manhattan, Kansas:
        Sunflower University Press, 1983.

Evans, Geoffrey. <u>Slim as Military Commander,</u> London, B.T. Bradford
        Ltd., 1969.

Frost, John, LL. D. <u>The American Generals,</u> Boston, Horace Wentworth,
        1850.

Higginbotham, Don. <u>The War of American Independence,</u> Boston:
        Northeastern University Press, 1983.

Paret, Peter. <u>Makers of Modern Strategy,</u> Princeton: Princeton
        University Press, 1986.

Slim, Field-Marshal Viscount. <u>Defeat into Victory,</u> London:
        Papermac, 1986.

Tretler, David A., <u>The Making of a Revolutionary General-- Nathanael</u>
        <u>Greene: 1742-1779,</u> Ann Arbor, Mich. University Microfilms
        International, 1986.

c. <u>Unpublished Papers</u>

Dubik, James M. "A Guide to the Study of Operational Art and Campaign
        Design", USACGSC, SAMS, 1991.

Hamilton, William W. "Operational Vision- An Essential Trait for
        Army Operational Commanders", SAMS Monograph, 1991.

Hoffer, Edward E. "Operational Art and Insurgency War : Nathanael
        Greene's Campaign in the Carolinas, SAMS Monograph, 1988.

Knightly, William S. "Campaigning in the Secondary Theater:
        Challenges for the Operational Commander", SAMS Monograph,
        1987.

Long, Clyde L. "Synchronization of Combat Power at the Task Force
        Level : Defining a Planning Methodology", MMAS Thesis, 1989
Riley,Don T. "The Reconquest of Burma, 1943-45", SAMS
        Monograph,1981
Schlott,John E. " Operational Vision: The Way Means Reach The End",
        SAMS Monograph, 1992.
Twohig, John J. "Playing Second Fiddle : Conducting the Operational
        Art in a Secondary Theater of War with a Passive Aim", SAMS
        Monograph, 1987.

d. Speech
Slim. "Higher Command in War", USACGSC, 8 Apr 1952.