METT-T AND THE OPERATIONAL LEVEL DECEPTION PLANNING PROCESS

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4 MAY 1987

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ABSTRACT

METT-T AND THE OPERATIONAL LEVEL DECEPTION PLANNING PROCESS.
by MAJ Harold G. Waite Jr., USA, 48 pages.

This study is a theoretical, historical, and doctrinal analysis of current deception planning procedures in accordance with FM 90-2, Battlefield Deception Operations. Initially, there is a discussion of military theorist's opinions as to the importance of surprise and deception at the operational level of war. Then there is an analysis of the historical use of surprise gained through deception efforts and the utility of METT-T as a deception planning tool at the operational level.

The paper demonstrated the dialectic quality of METT-T as well as concluded that the use of METT-T from both a friendly and enemy perspective is an imperative in the development of an operational level deception plan. The paper also concluded that a doctrinal void does exist in the Preliminary Draft of FM 90-2 in regards to the deception planning process. This void is extremely significant in that a process that merely considered the deception operation from a friendly perspective would only fulfill half of the requirement for a comprehensive METT-T analysis.
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Accepted the 11th day of May 1987.

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INTRODUCTION

AirLand Battle Doctrine is "based on securing or retaining the initiative and exercising it aggressively to accomplish the mission." Thus contemporary NATO commanders at the operational level of war are constantly concerned with maintaining the initiative or seizing the initiative from a Warsaw Pact enemy who is normally superior in numbers. FM 100-5 goes on to define initiative as "... setting or changing the terms of battle by action...". The word "action" implies a positive proactive state such as movement or maneuver. However, when faced with an enemy who retains the initiative and also outnumbers the friendly forces, how does the operational commander go about seizing the initiative?

The tactical level commander's ability to influence the battle and seize the initiative is normally measured in force correlations, i.e., fighting units, their quantity, type, and location. The tactical commander uses the planning factors of METT-T (Mission, Enemy, Terrain, Troops Available and Time) to develop courses of action and ultimately an operations order. But the operational commander's dilemma is somewhat different in that he is ultimately considered an allocator of resources and a manager of time and space. But the factors of METT-T are still a valid means of determining possible courses of action even at the operational level. The operational commander evaluates these factors according to the current and anticipated situation resulting in the formulation of possible courses of action and
ultimately a campaign plan. In the developmental stages of the campaign plan, the commander focuses his staff on the sequencing of actions to attain the strategic aims and goals of the campaign plan. It is during this planning phase that the commander must visualize his concept of seizing or maintaining the initiative. However difficult accomplishing his task may be, the commander must consider every available asset in order to gain "relative numerical superiority." Clausewitz defines this concept as "... the forces available must be employed with such skill that in the absence of absolute superiority, relative superiority is attained at the decisive point." He goes on to state that: "... the universal desire for relative numerical superiority leads to another desire, ... to take the enemy by surprise. This desire is more or less basic to all operations, for without it superiority at the decisive point is hardly conceivable. Surprise therefore becomes the means to gain superiority ..." and hopefully a means to secure the initiative. Yet Clausewitz considers surprise a tactical rather than operational concern and in Chapter Ten of Book Three he downplays the importance of deception (cunning) as well.

But the significance of deception and surprise may have been overlooked by Clausewitz. FM 100-5 considers the deception plan integral in the preparation of a campaign plan. All too often contemporary planners consider the deception plan as an afterthought and a mere appendage to the plan. This paper will consider five historical examples of deception at the operational level that permitted the operational commander to surprise the
enemy and gain the initiative.

The important question becomes: "Is deception an important consideration in the development of campaign plans and can METT-T be used in the development of a deception operation at the operational level? In order to develop these thoughts we will first define deception and surprise and discuss their inseparable relationship. Then the paper will review some of the military theorists and their thoughts on these topics. The paper will go on to discuss and analyze the historical use of surprise gained through deception efforts at the operational level of war. Through the use of the historical examples we will develop the use of METT-T as a deception planning tool at the operational level of war. As previously discussed, METT-T is habitually associated with the tactical level of war. This paper will demonstrate the dialectic quality of METT-T and progress to a discussion of the use of METT-T from an enemy as well as friendly viewpoint. In fact the use of METT-T from the enemy perspective is critically important in the development of a deception operation at the operational level of war."
HISTORICAL REVIEW

From the use of the Trojan horse in the Siege of Troy to the sophisticated electronic measures employed in the Sinai, deception operations have played a key role in the success and failure of numerous battles and campaigns. FM 100-5 states that "An integral part of any . . . campaign or major operation is the deception plan . . . . Every successful operation in World War II devoted a significant effort to deception." But this author feels that the end of World War II marked the end of movement of operational size forces on any battlefield. Over the next thirty years the United States Army lost not only its focus but also its expertise in a vital portion of its doctrine -- the operational art. Included in that loss was the dissipation of the concern with deception at the operational level of war. In fact the publication of FM 90-2 in August, 1978 completely eliminated deception at the operational level.

"Military deception can be strategic or tactical. Strategic deception may extend political deception by using military activities . . . . Tactical deception actions may support a strategic effort."

This document simply mirrored the doctrinal attitudes of the U.S. Army during this period, i.e., the Active Defense and its focus on the tactical level of war in a European scenario. With the publication of FM 100-5 in August 1982, the operational level of war was once again recognized as an integral part of American warfighting doctrine. But thirty years of creative thought in the area of deception operations had been lost.

With this loss of emphasis on operational level deception, a
doctrinal void was created in regard to the techniques associated with deception planning. Although technological advances may have dramatically altered the means and counter-means of deception at this level of war, its use and importance have not diminished. The use of historical example should offer insight into operational deception and its successful result -- surprise -- in order to emphasize their importance as well as identify the "how to" of deception planning at the operational level.

To understand best the impact of deception at the operational level and its influence upon the commander's ability to gain surprise, the terms surprise and deception must be clearly defined:

**Surprise** is simply striking "... the enemy at a place or time, or in a manner for which he is unprepared."10

"**Battlefield deception operations** are those operations or measures conducted by commanders at echelons theater and below to purposely mislead or confuse the enemy decision maker by distorting, concealing or falsifying indicators of friendly intentions, capabilities or dispositions. Battlefield deception operations result in the enemy taking operational actions favorable to friendly plans and operations."11

Military theorists have had differing opinions on the importance of surprise and deception and their interrelationship. A number have emphasized that deception and surprise are analogous and in fact one represents a cause while the other is an effect. In the most detailed analysis of surprise and deception conducted to date, Barton Whaley states that: "The incidence of surprise and deception among the 16 wars examined between 1914 and 1968 shows that they are fairly ubiquitous
phenomena, and "... are commonly associated." In this careful investigation of 168 battles from 16 wars, Whaley concludes that "... these phenomena are very much a part of modern warfare," and where you find one you will commonly find the other.

Whaley's view of deception and surprise was in concert with the oldest known military theorist -- Sun Tzu. His work was considered by Liddell Hart as "... the best short introduction to the study of warfare." Sun Tzu wrote that "All warfare is based on deception." His writings constantly referred to the importance of deception and surprise as two key principles of warfare. Sun Tzu even devoted a portion of his teachings to the importance of secret agents and their use. His impact upon warfare is still relevant as evidenced by one of his most faithful advocates, Mao Tse-Tung, who emphasized both deception and surprise in his writings.

Two of the "classical" military theorists, Jomini and Clausewitz, discussed the value of both these elements of warfare. Jomini briefly wrote on the importance of surprise and deception but their merit carried little weight in his overall scheme of warfare. When speaking of "diversions", Jomini stated that "... it must be constantly borne in mind that they are always secondary in importance and that the essential thing is to be successful at the decisive points." But Clausewitz suggested "... that surprise lies at the root of all operations without exception..." and "... each surprise action is rooted in at least some degree of cunning (deception)."
Clausewitz focuses the importance of surprise and deception towards the tactical level rather than the operational level of war. According to Barton Whaley's analysis of the theory of "Strategem" he concludes that the "principles" of surprise passed into virtual limbo during the period 1800-1939, only to be restored during World War II. In the years preceding World War II two military authors, B.H. Liddell Hart and General Waldemar Erfurth, expressed their views on surprise in war. Liddell Hart espoused the view that the strategist's aim is not so much to seek battle as to seek a strategic situation so advantageous that if it does not of itself produce the decision, its continuation by a battle is sure to achieve this. In other words, dislocation is the aim of strategy. He goes on to state it is usually necessary for the dislocating move to be preceded by a move, or moves which can best be defined by the term 'distract'. The purpose of this distraction is to deprive the enemy of his freedom of action to mystify and mislead constitutes distraction, while surprise is the essential cause of dislocation. Thus Liddell Hart's view of deception and surprise were definitely involved in his views on the "indirect approach" and the development of operational level plans. General Erfurth referred to the Clausewitzian approach to surprise and deception but did not feel that either was limited to the tactical level of war. In fact Erfurth states conclusively that: "Every military plan and its execution should be conceived in view of the necessity of surprise. Surprise thus appears as the primary objective of military planning." His views about deception were equally as strong. "Every means
permitted which deceives the enemy and induces him to the wrong steps." He was convinced that: "The lion's bravery and the fox's cleverness must combine to wrest victory from the enemy. In War, the unexpected is the most successful. Thus, surprise is the key to victory."  

Of the military theorists discussed in the previous paragraphs, only Jomini downplayed the importance of deception and surprise. Sun Tzu, Mao, Clausewitz, Liddell Hart and Erfurth recognized the overall significance of deception and surprise in the conduct of war. The writings of these theorists indicate the commonality of deception and surprise, i.e., deception representing the cause while surprise is an effect resulting from a deception. While it is surprise that offers the opportunity to seize the initiative and limit the freedom of action of the opponent, it is normally a deception effort that creates the foundation for that surprise to occur. With this basic understanding of deception, surprise and their relationship, the need for a study and analysis of the historical application of these topics naturally follows. "Clausewitz insists that because of the nature of the art of war, one needs the experience factor of historical example rather than the pure empirical data of science." The historical examples of the Battle of Chickamauga, the Normandy Invasion, the Irrawaddy Campaign, the Soviet Invasion of Czechoslovakia and the Arab-Israeli War of 1973 will provide the antecedents from which the "how to" of operational level deception planning level will be developed.
THE BATTLE OF CHICKAMAUGA

After the Battle of Stones River in 1863, General Braxton Bragg, commanding the Confederate Army of Tennessee withdrew to a position south of Murfreesboro, Tennessee. General Rosecrans, Commander of the Army of the Cumberland, positioned his forces in and around Murfreesboro. Both commanders were satisfied with their positions and each wintered in their respective locations for a period of six months. By June Rosecrans was ready to move against the strategic Confederate communications center at Chattanooga, Tennessee. After a nine day withdrawal, General Bragg positioned his forces on the eastern side of the river in order to prevent both the crossing of the Tennessee and the capture of Chattanooga. During the next month and a half General Rosecrans devised a deception operation aimed at General Bragg’s perception of the location of both Federal forces and their prospective crossing sites. General Rosecrans’ plan was to cross southwest of Chattanooga while conducting a demonstration to the north of the city. He sent one corps north of the city while the remainder of his army (approximately 4 corps size units) would cross in the south. Colonel John T. Wilder was the primary instrument of the deception:

"... by operating ingeniously along the north bank of the river so as to suggest a movement in force above Chattanooga. He with his mounted infantry..., occupied the attention of an entire Confederate Army corps by threatening suddenly and haphazardly to attack at the different crossings. Every night he sent out details to build large campfires behind the fords, thus indicating the presence of sizeable forces: divisions or Army corps. To give the impression of large-scale pontoon building, he had his men saw boards and throw the end pieces into the creeks feeding the Tennessee. To enhance the illusion he had them pound on barrels, and even a sailor might..."
mistake the sound of hammering on the sides of boats."^{29}

General Bragg remained convinced of Rosecrans' intention to cross the Tennessee north of Chattanooga until 8 September when "... he learned that the entire Federal Army had crossed the river and was moving against his rear."^{30} Bragg evacuated Chattanooga and on 9 September "... elements of Rosecrans' Army of the Cumberland entered Chattanooga, Tennessee. "... without the loss of a man."^{31}

THE NORMANDY INVASION

Early on 18 August 1942, the Allies began an amphibious assault on the German occupied French port of Dieppe. Essentially, the raid on Dieppe was intended to be a dress rehearsal for a future large scale invasion.^{32} The raid on Dieppe was an almost total failure. Losses to Allied Forces were immense totalling 3,648 of the 5,100 who landed on the beaches. German losses were fewer than 600.^{33} The tragedy did however, provide Allied planners with many lessons learned. Lessons that on D-day were believed by Admiral Mountbatten to have saved the lives of 10 soldiers for each that died at Dieppe.^{34} The most significant lesson learned was that surprise (e.g., the effect) would be critical for success. As Sir Winston Churchill said, "Fortifications and steel, armed with resolute men, could only be overcome by surprise."^{35}

After Dieppe, Allied planners realized that success on D-Day would require preventing the Germans from employing their strategic reserves. Before it was over the Allies would employ
every known method of deception to cause this to occur. The overall deception plan was code-named Bodyguard. Initially, the plan's intent was to convince the Germans that the Allied invasion of Europe would begin through Norway to cause Hitler to keep 27 divisions and their air and naval support tied up waiting to repel any Allied attack on Scandinavia. The primary deception effort of Bodyguard centered on construction of a purely fictitious fighting force, the British "Fourth Army." The Fourth Army was dispersed amongst the ports of Scotland and Northern Ireland, where they would have the shortest striking distance to Norway. To validate its existence, dummy camps were established for German reconnaissance planes to film and normal radio traffic between headquarters was established. Radio transmissions also simulated requests for logistical support, such as, "80 Division requests 1800 pairs of Kandahas ski bindings." and "VII Corps requires the promised demonstrators in the Bilgeri method of climbing rock faces." This operation continued throughout July 1944, one month after the Normandy Invasion. The Germans were so convinced that the Fourth Army, believed to consist of 250,000 men, was real that they failed to withdraw any forces from Norway to reinforce Rommel at Normandy.

The next phase of the Allied deception plan, and probably the most important, was called Operation Fortitude. The intent of Operation Fortitude was two-fold: First, to convince the German High Command that the thrust of an Allied invasion would be at the French town of Pas-de-Calais. Second, that the invasion at
Normandy would only be a diversion prior to the main attack at Pas-de-Calais. Again the Allies relied on all forms of deception to make Operation Fortitude work. They began with a misinformation campaign indicating that the main invasion would be at Pas-de-Calais sometime in the second half of July. The distance between Great Britain and the continent is shortest between Dover and Calais. Information about troops massing at Dover lent credence to the Calais invasion site theory. In retrospect, the simple act of using what appeared operationally reasonable, was part of the genius of the Allied deception plan.

The Allies strengthened this deception in many ways. The most impressive was the formation of another large imaginary force, complete with decoys built and displayed for the Germans to see. First, the Allies established the First U.S. Army Group (FUSAG) comprised of two assault armies and headquartered at Kent, England. To make FUSAG even more believable, the Germans were allowed to learn that it was commanded by General George S. Patton. The actual forces involved in the Normandy invasion were massing in South Hampton. Patton's FUSAG has been considered, by some at least, to be "the greatest hoax in history."

The Allies constructed fake landing craft, ammunition dumps, hospitals and kitchens. In addition inflatable rubber decoys were used to simulate tanks and trucks marshaled for the invasion. They were so realistic that Allied cameramen were often fooled by them. Robert Luce, in his book, The Tangled Webb says that "... with a few good men, several truckloads
of equipment, and lots of hot air, the Allies managed to create "... a vast armored force and its transport massed at the beachhead." 46

The D-Day deception operations were all encompassing. Land, sea and air forces were involved in operations that continued to reinforce the Pas-de-Calais landing theory and mask the real intentions of the Allies. This included false convoys and continued bombing attacks in the area of the Pas-de-Calais. Thus the Germans were so convinced that the attack on Normandy was merely a diversion that they continued to focus their attention on the Pas-de-Calais and failed to reinforce the Normandy coast in a timely manner. Deception operations Bodyguard and Fortitude were a total success. Surprise, so critical to the Allied plan, was achieved. 47

THE IRRAWADDY CAMPAIGN

On 8 July 1944 the Japanese began their withdrawal from India across the Chidwin River into Burma. During the previous three month battle of Imphal-Kohima the Japanese had suffered "... the greatest land defeat in history." 46 The British 14th Army, commanded by Lieutent General William Slim, sought to exploit the recent success of Imphal-Kohima by pursuing the enemy and driving them from Burma:

"I wanted to fight the battle on ground where our superiority in the air and in armor would have its greatest scope, that is in comparatively open country. The obvious place was the Schwebo Plain, a great loop of land between the Irrawaddy and the Chidwin, immediately northwest of Mandalay. ... I was quite sure he would fight in the Schwebo Plain." 49
But the Japanese failed to comply with Slim's analysis and continued to withdraw across the Irrawaddy rather than remain forward. Thus convinced of the Japanese intention to defend Mandalay and Meiktila behind the Irrawaddy rather than forward, General Slim restructured his campaign plan. His new plan was based upon a deception operation that would draw the Japanese forces north while his main effort was to be against Meiktila in the south. The 33rd Corps was to force crossings north of Mandalay and convince the enemy of the "strength" of the bridgehead. "Meanwhile 4th Corps, moving secretly south up the Ganqaw Valley would suddenly appear at Pakokku, seize a crossing, and without pause, strike violently with armored and airborne forces at Meiktila."50

In order for this plan to succeed it was essential that the 4th Corps operation be concealed until its execution. General Slim's headquarters devised a means to deceive the enemy as to the unit's actual location. His staff created a dummy 4th Corps headquarters that served to create an electronic signature similar to that of the real 4th Corps. The "... traffic was made to conform to having both corps concentrated in the Schwebo Plain."51 In addition 4th Corps was to begin its crossing of the Irrawaddy simultaneously with the 33rd Corps, thus further deceiving the enemy about their location and intent.

The enemy was completely deceived by this operation and committed a significant force against the crossings in the north. In their haste to respond to the crossings, the Japanese piecemealed their counterattack force into the battle, failed to
achieve mass and were unsuccessful in destroying the British bridgehead. By the 26th of February, 1945 the breakout from both the north and the south bridgeheads began and by March, British forces were entering Mandalay.

THE SOVIET INVASION OF CZECHOSLOVAKIA

The Soviet invasion of Czechoslovakia began at 2230 hours 20 August, 1968 with the seizure of Prague’s Ruzyne airport by an airborne unit. At approximately 2300 hours that same day, some 150,000 to 200,000 Soviet and Warsaw Pact ground forces began crossing the Czechoslovak borders. The mass of the Soviet ground forces sped from the East German border to Prague in a little over three hours, while supporting attacks crossed directly from the Soviet Union and Hungary.

"High priority was given to the takeover of Czech airfields. This was part of the initial stroke and was conducted according to a carefully designed program whereby a small commando unit would fly in to seize the airport communications and administration after which larger forces would land to provide local security until the overland arrival of ground forces."52

The Soviet invasion was virtually bloodless with few casualties on either side. This outcome was a direct result of the deception operations that allowed the Soviet and Warsaw Pact forces to gain complete surprise.

"While the evidence is by no means all in on the Soviet Invasion of Czechoslovakia in 1968, quite enough is known to identify it as a successful case of surprise through deception."53 The deception operations were considered primarily strategic because of the national use of the Soviet controlled...
press and carefully controlled leaks of information. The use of large scale military maneuvers to disguise the build-up of invasion forces was operational in nature; "The most effective form of deception used during the Czechoslovakia crisis was probably the continuous series of military exercises which very likely desensitized Czechoslovakian and Western leaders and analysts to the possible invasion." 54 Another deception operation occurred that was operational in nature, i.e., the large scale jamming of NATO radar. This type of operation had been previously conducted in concert with such maneuvers. Thus the combination of these operations successfully accomplished two missions:

a. The reduction of NATO's ability to interpret the actions of the Soviet and Warsaw Pact forces and
b. The creation of the "believable illusion" that the jamming and the maneuvers were "business as usual."

The failure of the Czechs to respond correctly to either of these deceptions cost them dearly.

THE 1973 ARAB-ISRAELI WAR

On 6 October 1973 a combined Arab offensive of both Syrian and Egyptian forces began: "... the greatest collaborative effort the Arabs had achieved in a generation." 55 The Egyptians were the primary instigators of the road to war in October 1973 and were principally responsible for the surprise that was gained. The attack caught the Israelis unprepared for such an assault simply because of the comprehensive deception effort in the months preceding the war.
Key members of the Israeli defense establishment had downplayed the prospect of war with the Arabs. The Israelis felt that "... the Egyptians would not embark upon a new war until they felt capable of striking at Israeli airfields and neutralizing the Israeli Air Force. ... Because of this, and believing that the Egyptian Air force would not receive the necessary reinforcements before 1975, Israeli intelligence assumed that there was no real danger until approximately 1975."56 In order to circumvent this problem in an expeditious manner, thus upsetting the Israeli timetable, the Egyptians created "... one of the densest missile walls in the world, composed of a mixture of various types of Soviet ground-to-air-missiles ..."57 The Egyptians sought another means to deceive the Israelis as to the nature of their technological advances and.

"The deception plan that emerged ... was designed to utilize Western (and Israeli) images of the Arabs, especially those images that stressed the following elements:

(1) the Arab's inability to keep a secret
(2) the general ineptness of Arab military forces
(3) the Arab's inability to plan or conduct any sort of coordinated military action."58

Because of the deception effort that considered this Israeli prejudice, an attack earlier than 1975 was now possible and would create an element of surprise. The Egyptians again capitalized upon this preconceived attitude of the Israelis by forming a special staff, "... which had been assembled for this purpose, (misinformation campaign) monitored the operation and guided it in such a way as to confirm those preconceived concepts..."
Part of the deception operation included: "Special units known as lazy squads . . . detailed to set on the canal bank, fish, dangle their feet in the water and eat oranges giving the impression of total unconcern (and also playing into Israeli imagery concerning the ineptness of Egyptian troops,)" while in actuality the Chief of Staff of the Egyptian Armed Forces, Lt. General Shazley, had conducted an extensive overhaul of the training, leadership, and morale of the Egyptian Army. The most critical element of the deception operation involved the "noise level with which the Israelis had to contend." This was approached in a number of ways. First, through a series of alerts and subsequent mobilizations in May, August, and September, second, by increased radio traffic that simulated exercise play during the mobilizations; and third, through a series of media and diplomatic means that caused the Israelis to view the Egyptian government as maintaining its usual state of confusion.

The net effect of all these factors was the Israeli failure to respond quickly to the Egyptian and Syrian mobilization in late September and early October. Despite a 24 hour warning, the surprise attack that occurred at 1400 hours, October 6, 1973, caught the Israelis not only unprepared for the assault, but unaware of the dramatic improvements that had occurred in the Egyptian Army since 1967.
ANALYSIS OF
DECEPTION AT THE OPERATIONAL LEVEL

Chapter five of the Preliminary Draft of FM 90-2, Battlefield Deception Operations is entitled "Deception Process." This chapter devotes considerable explanation to the deception process and to the planning factors, METT-T. The first portion of the chapter describes in detail who is responsible for what aspect of the planning and execution of a deception operation. The second half of the chapter discusses the importance of METT-T in the development of a deception operation. It is in this vital part of the manual that guidelines are detailed for the practitioners of deception. But there appears to be an oversimplification or too narrow a focus in FM 90-2's approach to the METT-T appraisal. Chapter Five describes each element of METT-T from the friendly perspective and how each one of these elements will impact upon the friendly deception plan. However, this concept needs to be expanded. METT-T needs to also be analyzed from the enemy perspective. If the factors of METT-T were used from both the enemy and friendly perspective, I feel the process would be considerably more useful and accurate. Because METT-T is an extremely important analytical tool in the development of a concept of operation, I also feel that its role is equally important in the development of a deception operation at the operational level and must also be considered from both the enemy and friendly perspective.

The use of METT-T has long been a tool of tactical level commanders in the development of courses of action.Operations
plans and orders. METT-T also has operational consequences as well for it is through the use of these simple planning factors that the operators, logisticians and deception planners will develop the campaign plan and the deception operation for that campaign plan.

MISSION

"The first consideration in planning a deception is the mission. The mission is the who, what, when, where and why of what is to be accomplished. The commander and staff analyze the overall mission to understand the objective that deception might support."53

This is the sole paragraph devoted to the first of the five planning factors in the development of a deception operation. Recognizing that this document is only a preliminary draft, this definition and discussion will probably merit further amplification. But the emphasis of the Mission definition is entirely one-sided. The deception planner must also put himself into the "mind" of the opposing commander. He must ask himself the following question: "If I were the enemy commander, what would my thoughts be as to the operational mission (campaign plan) of the opposing force?" Understanding this view of the planning process should allow the deception planner to orient on blue intent from a red position.

In one of the historical examples, the commander considered this analytical perspective. Prior to the capture of Chattanooga, General Rosecrans considered the perspective of the Confederate commander when he selected the crossing sites below Chattanooga. Bragg knew that Chattanooga was a vital
communications node of operational value for the South and believed that this would be Rosecrans' objective. Rosecrans was indeed interested in denying the Confederates the use of Chattanooga but his primary objective was Bragg's force—the Army of Tennessee. Thus Rosecrans decided upon a deception operation that would persuade Bragg that Chattanooga and the crossing sites above the city were of primary interest. Bragg's acceptance of this viewpoint led to his failure of the defense of Chattanooga and ultimately resulted in the Battle of Chickamauga.

In contrast to deceiving the enemy as to the mission of the forces, the operational commander has another alternative. He may not attempt to deceive the opposing commander as to his mission but as to where, when, how and by whom the mission will be executed. Prior to the Normandy invasion the Germans knew the Allies were intending to invade the continent. The Allied deception planners also knew that there was no future in attempting to disguise the fact that invasion was imminent. Instead the planners employed several means to disguise the time, the location of the invasion site and the size of the force to be employed.

Inherent in the mission of an operational commander is deep operations. "At the operational level, deep operations include efforts to isolate current battles and to influence where, when, and against whom future battles will be fought." Deep operations can take on a variety of different forms. These attack methods include interdiction by surface to surface and air to surface systems, electronic warfare efforts to disrupt enemy
command and control as well as deception efforts to mislead the enemy commander as to the future operations of the friendly force. As the operational commander considers the who, where, when, and how of deep operations, so too must the deception planner. The deception planner must consider these operations from the enemy perspective in order to gauge his reaction/response to this attack. The manner in which the enemy perceives the conduct of friendly deep operations may dictate the manner in which he allocates forces for the fight 72 to 96 hours hence. Thus the deception planner at the operational level must attempt to affect the freedom of action of the opposing commander. He must determine whether the deception efforts will be through means of exclusion or inclusion. But whatever the means, the consideration of deep operations in the deception plan is an imperative. Operation Fortitude used the Allied bombing effort to assist in the disguise of the location of their landing site. By continuing to bomb the Pas-de-Calais in mock preparation for D-Day, the Allies reinforced the German belief that the invasion would occur there.

The deception planner at the operational level must see the campaign as the enemy sees it. The commander must then decide whether to mask the campaign or plan a deception that creates an illusion as to the execution of an obvious mission. The deception planner must analyze the enemy’s perspective of a friendly campaign in order to understand how that enemy sees the sequence of events unfolding in the theater.
ENEMY

"Current information concerning the enemy's probable courses of action must be considered."^65

This one sentence, although extremely brief, does focus upon one aspect of deception worthy of discussion. The enemy commander's mission must be researched, investigated and reported. On the battlefield of the future the enemy will most assuredly not be waiting for friendly actions. In fact the enemy will most likely retain the initiative, thus the deception planner must consider the impact of his operation upon a unit already in motion. The analytical tool "Enemy" must include an understanding of enemy response to the deception plan rather than simply researching his likely courses of action. Consequently, deception planners must consider what actions will the enemy commander take and what type of deception operation can cause that commander to alter his campaign.

Rather than simply considering the enemy probable courses of action it is also necessary to consider the enemy's ability to detect the nature of friendly forces. With the current sophisticated, real time intelligence gathering capability of most modern nations, deception planners must understand their own signature upon the enemy's sensors. In order to create the proper deception, the deception must orient on the enemy sensors. In other words the deception effort must create a signature that causes the enemy to analyze incorrectly the output of his own sensors. A further extension of this concept is worthy of note, that is, to know your own emitters equally well. Understanding what images you create will allow the operational commander to
portray a believable picture to the enemy. Both the Soviets and the Arabs considered the ability of their enemy to detect movement of forces prior to their attacks. In order to deceive the enemy as to their intent they both used the guise of exercises to mask their concept of operations.

Another aspect of "Enemy" is understanding the enemy decision cycle and its impact upon their response to a deception operation. Prior to the 1973 War, the Arabs caused the Israelis to mobilize for war on two separate occasions, costing $10 million each time. The Israeli abhorrence of wasted dollars led the Arabs to conclude that another mobilization would not be as quick to come because of the Cabinet's reluctance to waste more funds. If and when the mobilization did occur, it would be too late. Likewise in 1968 the Soviets "banked" on the Czechoslovakian reluctance to believe that a Soviet invasion would occur. This understanding of the enemy decision makers their decision cycle and cultural biases aided the aggressors in the preparation of the deception operation.

One additional aspect of "Enemy" that merits consideration at the operational level of deception planning is how the enemy sees the friendly commander. At the operational level of war the personality of the commander weighs heavily upon the nature of the campaign. The use of General Patton as the commander of the imaginary First U.S Army Group for the Normandy invasion relied upon the enemy's acceptance of this deception as reasonable. Some Germans felt Patton was the most aggressive Allied land force commander in the theater. Therefore an Army Group
commanded by him was believable. The enemy has access to voluminous amounts of information about U.S. commanders, their traits and tendencies in certain situations. It is this "profile" that must be used against the enemy. As he develops courses of action that include an analysis of friendly commanders, deception planners must consider a means to use this information against him.

The enemy is a formidable opponent in that not only can he plan and execute as well as U.S. forces, he also has the potential to do so on a scale much larger than the U.S. But understanding his capabilities, technically and psychologically, can give an advantage to the deception planner. Armed with the knowledge of an enemy's capabilities, expected courses of action and expected responses, the deception planner can attempt to create an illusion that will equate to decisive relative combat potential on the battlefield.

TERRAIN

"The third consideration in planning the deception is terrain. The G2 staff evaluates the weather and terrain. Analysis focuses on the effects of the environment on enemy collection efforts and the impact on friendly counter-measures. Analysis includes:

Observation
Concealment and Cover
Obstacles
Key Terrain
Avenues of Approach"55 (OCCOA)

This is one part of the Preliminary Draft that is covered in detail. It considers not only the friendly view of terrain and weather but its impact upon the enemy as well. In regard to
Observation, the blue deception planners must consider the electronic and visual line of sight from the enemy's side of the battlefield. A method of analysis is templating the line of sight capabilities from the highest terrain features in the area of operations. Once this has been accomplished, a pictorial display of the "dead space" allows the deception planners to see the battlefield better than the enemy. The planners must also consider enemy aerial observation from rotary and fixed wing assets as well as satellite capabilities. These platforms carry extremely sophisticated equipment that "see and hear" the battlefield in a variety of ways. Understanding these capabilities allows the planners to identify the weaknesses of the enemy analysis and prey upon that weakness in the creation of the necessary illusion. Weather is far from neutral in the planning of a deception operation. A favorable condition for an attacker can equally assist a defender or the reverse can be true. In the analysis of the Normandy invasion, weather definitely delayed and impeded the invasion from England. But its severity prevented the acquisition of the sea and air movement of forces by the Germans and was another aspect of the Allied surprise of the German defensive forces.

Concealment and Cover are two planning factors that are predominately associated with the tactical level of War. Cover is strictly concerned with protection from the effects of direct and indirect fire. But Concealment may be another matter in that its consideration is merited in the development of a deception plan. If a force of operational consequence can be concealed from the enemy then the effects of that deception are
significant. At the operational level, concealment may be more akin to concealing the movement or development of operational reserves from engaged units. The operational deception planner must consider concealment in relation to enemy methods of observation and if possible incorporate the enemy weakness into the deception operation.

Obstacles can be either man-made or natural and used with the intent of delaying or disrupting the enemy movement. But an obstacle may present the enemy such a formidable challenge that the friendly forces become complacent in their defense. The enemy view of that obstacle and his perception of your concern about that obstacle must be considered. The Israelis failed to understand the Arab view of the Suez Canal and the sand barrier built behind it. The strength of this obstacle was such that the Israelis underestimated the Egyptian capacity to develop a means to breach the obstacle. In addition an obstacle to the enemy can also be an obstacle to friendly operations if the enemy uses that same obstacle to his benefit. At Chattanooga, General Bragg considered the Tennessee River a formidable obstacle which favored him in the defense. However, General Rosecrans saw the obstacle as an opportunity to seize the initiative and gain operational surprise. He felt that the river's length prevented a proper defense thus he used deception to occupy the attention of the Confederate commander. The Tennessee River both shielded the Union forces from reconnaissance and presented an operational opportunity for the Union forces. Slim's use of the Irrawaddy was much the same in that he used forces to distract the Japanese
commander to the north while the main force crossed in the south.

KEY TERRAIN

Key terrain is best explained in terms of omission, i.e., if not retained or gained, it would have a significant impact upon the execution of the mission. The importance of terrain has already been discussed in a previous paragraph and key terrain merely emphasis specific terrain features within the area of operations from the enemy and friendly perspective, i.e., Normandy and the Pas de Calais.

AVENUES OF APPROACH

The final factor of the analysis of Terrain is Avenues of Approach. As defined by FM 90-2 it "... is an area which offers a suitable, relatively easy route for a force of a particular size to reach an objective or critical terrain feature."67 This is an extremely important concept to consider when developing a deception operation. The most likely avenues of approach (from a friendly perspective) represent a means to deceive the enemy. It is the unlikely avenues that can assist in creating an operational deception and gaining surprise. Both Rosecrans and Slim took the most unexpected routes in order to conduct river crossings. Likewise the actual invasion routes across the English Channel were unexpected. Thus an appreciation of the enemy's perspective of friendly avenues of approach allows for maximum creativity in the deception operation. The conduct of ruses and feints or the use of decoys can all be used on
likely avenues of approach; while the main effort takes a slower, less advantageous route, but one whose selection evolves from an appreciation of the enemy perspective.

One operational consideration outside the parameters of "DDOKA" is the concept of space. At the operational level of war terrain begins to take on less of a specific nature and more of a general nature. Terrain becomes "mountainous, high desert or densely vegetated as opposed to a very specific tactical analysis of the variety of terrain. Thus the length, width and depth of the terrain in a spatial context is an important concept at this level of war. A deception planner must assume the role of the enemy and visualize the friendly campaign within the spatial confines of the theater. Using this bias as a basis for information he can then tailor a deception effort that will take advantage of the enemy's spatial conception of the battlefield.

Both Rosecrans and Slim recognized this critical element in the development of their deception operations. Each commander used the enemy's defense of a river line to his advantage. Because of the defenses that attempted to span the entirety of the length of the rivers, both the Confederate and the Japanese commanders reduced the depth of their forces. When they were unable to respond in mass to any of the crossings, the friendly forces were able to penetrate to operational depth. Thus the deception plan and the crossing crossings had definite operational impact.

TROOPS AVAILABLE

The quantity, level of training and psychological state of friendly forces must be considered by deception planners. This should include an assessment
of the availability of critical equipment."

As in the other descriptions of the planning factors of METT-T, this merely identifies the friendly view of their own strengths and weaknesses. In the planning of deception operations, the converse is true as well. The friendly planners must consider the enemy's view of friendly troops available.

At the operational level of war, what forces should concern the enemy operational level commander? All commanders are intuitively concerned with the forces involved in the immediate battle. But operational commanders must look beyond this battle and plan within the confines of the next battle. At the operational level it is the operational reserve that offers the opportunity for a commander to exploit success. Thus the deception planner at this level of war must be concerned with both the forces in contact and the operational reserve. The construction of a notional British Army and American Army Group during the preparation for the Normandy invasion are dramatic examples of a commander's concern with the enemy's perspective of operational size forces. Rather than hide the strength of friendly forces, the Allies chose to amplify their strengths through deception and create a fictitious operational reserve. This approach proved to be extremely effective and was responsible for some of the German confusion and lack of action that occurred on D-Day.

General Shazley's physical and psychological turn-around of the Arab forces in a five year period was a remarkable example of an operational commander's concern with the time dimension.
training, and psychological state of friendly forces. Likewise General Slim's resurrection of a defeated British Army in China, Burma, India accomplished the same task. These complete reversals of armies allowed the deception planner to prey upon the preconceptions of an enemy. An appreciation for the enemy's evaluation of friendly forces is essential in the development of the operational deception plan. In both cases the enemy was surprised by the quality of the force that he was facing due to the deception efforts of friendly planners. The operational impact of this type of deception is extreme in that tactical units will vary in quality with little or no operational impact but the underestimation of the quality of an operational size force can result in operational size consequences.

An additional aspect of Troops Available at the operational level of war is the "jointness" of operations that will occur. The conduct of AirLand battle at the operational level is virtually impossible without air forces and will most certainly contain some aspect of naval forces within the theater. The enemy perspective of the magnitude and inter-operability of these forces is a definite consideration in the development of a deception operation. Not only must the enemy be deceived as to the capabilities of these forces but he must be misled as to their use and location. Operation Fortitude involved the use of land, air and sea forces to deceive the Germans as to the who, what, where, when and how of the Normandy Invasion. Again, the enemy's view of the battlefield was distorted through the use of all available means as to the employment of those means within the theater.
TIME

"The time available to plan, prepare, and execute operations must be considered for both enemy and friendly forces. The planning process involves a number of judgement calls which must be made by the commander or his staff officers:

- Time of maximum disadvantage
- Enemy force execution
- Enemy commander's decision
- The enemy intelligence system
- Execution of the deception tasks
- Dissemination of the deception plan" 70

This is one of the most descriptive discussions of a planning factor in the manual. It is extensive in regards to both friendly and enemy concerns with the time factor. It must be remembered that time, at the operational level, is thought of on a much larger scale than at the tactical level. Tactical units may focus on activities that extend out to 72 hours, while the operational level planners begin thinking at the 72 hour mark and extend for considerably longer periods of time. The response time of operational units are longer in contrast to the relatively quick responses of the tactical units. The deception planners at this level must consider time in reference to the enemy's conception of friendly response time. And the comparison of time between friendly and enemy units results in the development of a relative time factor.1.e.. Speed.

Speed represents a means by which friendly forces can penetrate the enemy decision cycle. "Successfully planned and executed battlefield deceptions can give our commanders the ability to act faster than the enemy to make decisions." 71 Hill Lind feels that this concept is the most important of all factors
in the conduct of maneuver warfare: "Maneuver means ..., being consistently faster ..., until the enemy loses his cohesion ... until he can no longer fight as an effective, organized force."72 Speed equates not only to making decisions faster than the enemy but reacting faster as well. If speed is not gained through the deception plan then it is the enemy's perception of friendly speed that is necessary. Either has the same effect and both are results of the consideration of the enemy's concern with time. Speed therefore becomes a decisive result of the deception plan and consequently a form of surprise. The Soviet invasion of Czechoslovakia dramatizes the concept of speed and surprise as a result of a deception effort. Prior to the Soviet invasion, an analysis of the Czechoslovak response to the use of ground forces was considered. The Soviets felt that the Czechoslovak response would be confused as well as disparate. Their indecisiveness would allow the Soviets to conduct their operations in a hasty manner before any Czech response was marshalled. The first Soviet force entered Prague three hours after crossing the Czech border. Speed and surprise were the results of an operational deception that equally fooled both NATO and Czechoslovakia as to the nature of the Soviet intent. The deception operation created the necessary window of opportunity as well as the means to accomplish successfully the strategic goals of the campaign.

An additional aspect of Time and one of the basic tenets of American AirLand Battle Doctrine is synchronization. "Synchronization is the arrangement of battlefield activities in
time, space and purpose to produce maximum relative combat power at the decisive point.\textsuperscript{73} FM 100-5 does not limit this definition to the aspect of time but encompasses other elements as well. But it is the "timing" of these activities that creates an effect at the decisive point. Synchronization does not limit its application to one point in time but it is an orchestration of events that create an overall effect at the decisive point and moment. Deception planners must consider how the enemy views the activities that are directed against his forces. Deception efforts can be used to disguise these actions or they may be utilized to disguise their intended results. Whatever the decision, they must be considered in the deception plan. The Israelis considered the Egyptian Air Force to be incapable of participating in a war prior to 1975. But through the development of a comprehensive air defense network synchronized with the ground campaign, the Egyptians were able to overcome this shortcoming. The deception effort that disguised this technological advance deprived the Israelis of the knowledge of the air defense potential which neutralized and desynchronized Israeli air/ground capability.

\textbf{SUMMARY}

"... one of the personal qualities required for deception is being able to imagine yourself in the position of your adversary and to look at reality from his point of view; this includes not only being able to sense the world through his eyes and ears, and their modern analogs such as photographic and electronic reconnaissance, but also to absorb the background of his experience and hopes, for it is against these that he will interpret the clues collected by his intelligence system."\textsuperscript{74}

The preceding analysis has been primarily devoted to the
discussion of the use of the METT-T planning factors from an enemy perspective in the development of an operational campaign plan. The deception that focuses on the "Mission" of the friendly force from an enemy perspective represents an extremely viable opportunity for surprise. If the enemy can be mislead as to the mission or objective of the friendly campaign plan then the enemy's response may in fact be inappropriate. "Therefore, the hopeful deceiver should recognize that surprise in itself is nothing more or less than the victim's own wrong pick among alternatives."

If the mission or objective is all too obvious then the alternate solution is to create an illusion as to the who, where, when and how of the concept of operation rather than concealing the mission itself. The deception effort at the operational level seeks to disguise the sequencing of actions to attain the strategic aims and goals within the theater of operations. The deception planner must visualize the friendly campaign plan from an enemy viewpoint and orient the deception plan on deceiving the enemy as to its intent or its execution. But whatever the decision, "Make the enemy quite certain, very decisive, and wrong."76

Rather than merely considering the "Enemy" probable courses of action it is necessary to be concerned with the enemy's ability to sense the movement and location of friendly forces. Thus the friendly planners must understand the enemy's means to view the battlefield, i.e., the capabilities and responses of the electronic receptors. Armed with this perspective, the friendly planners must portray a believable but incorrect campaign plan.
through the deception effort. In addition the enemy must be understood as to the nature of his decision cycle. If the enemy decision methodology is researched and understood then the friendly potential to get inside the enemy decision cycle exists. Making decisions faster than the enemy commander results in his reacting to friendly actions, consequently, losing the initiative. Extremely important at this level of war in the analysis of the "Enemy" is his view of the friendly commander. The preconceived ideas of an operational commander's tendencies can offer an operational opportunity for deception.

The enemy may "see" the terrain the same as the friendly forces or it may differ radically. Therefore analyzing the terrain from a friendly perspective is only the beginning. The enemy's view of that terrain has to be considered as well. As "operators" use the acronym "OCOKA" so too must the deception planners. "Terrain" at the operational level is somewhat different than at the tactical level. The deception planners must be concerned with the enemy's perception of length, width, and depth of the theater of operations in the development of the deception plan.

The need to deceive the enemy as to the strength of the "Troops Available", is an obvious statement but one left from the METT-T analysis. Therefore the enemy's concept of friendly strength must be invalidated. This can be accomplished through a deception effort that conceals the strength and morale of the friendly force resulting in the enemy misconception of force correlations. The friendly force can either create imaginary
forces, conceal units, or use technology to upset the balance of forces. In the consideration of "Troops Available" the impact of operational reserves is key in deception planning. It is the concealment of their strength, location, movement or objective that an operational deception may want to accomplish.

The enemy's perception of "Time" in relation to friendly forces is the final planning factor of the METT-T analysis. Time merits two considerations, i.e., scale and speed. Time at the operational level of planning is thought of in longer time increments than at the tactical level. Thus the planning, timing an execution of the deception effort must consider the effect of an expanded time factor. The relative comparison of enemy and friendly concepts of time results in speed. It is speed in operations that can be attained if the deception operation can effectively distract, misorient or mislead the enemy.
CONCLUSIONS AND RECOMMENDATIONS

In his book on surprise, General Waldemar Erfurth very succinctly states that: "It is not enough to pay mere lip service to surprise."77 Consequently his view of operations at any level of war supported the Clausewitizian view that "... surprise lies at the root of all operations without exception..."78 An operational commander must consider how and if he can gain surprise, and what will be the cost and result of efforts directed toward that surprise. If he decides that a surprise of some type is warranted, then the concept of operations must include some form of deception. In this era of sophisticated electronics, deception is the precursor for surprise.

Sun Tzu was quite clear in his statement, "All war is deception."79 The operational commander who has made the decision to surprise the enemy must consider the deception operation. "An integral part of any... campaign or major operation is the deception plan..."80 But how does the operational commander and his staff develop a deception plan that will lay the foundation for an operational surprise? One of the fundamental aspects of the development of the concept of operations and the deception plan is the use of the METT-T planning factors. But in the planning of a deception operation the correct perspective must be considered. That perspective is simply using the METT-T planning factors from both a friendly and enemy point of view.

If this is the proper method to conduct deception planning
then a doctrinal void, however slight, does exist in the Preliminary Draft of FM 90-2. The manual briefly speaks to the friendly aspect of METT-T but fails in reference to the enemy analysis of the same planning factors. Ultimately deception and surprise may be the only means that a U.S. commander may alter the force correlations in a European scenario. This is primarily due to the limitations placed on the commander by unit strengths, mobilization schedules and budget constraints. Therefore, the operational commander must recognize the importance of deception and surprise. During a recent series of briefings and subsequent exercises that involved echelons above corps, deception proved to be merely a word in our lexicon rather than a real concern of the commanders and their staffs. Simply having a doctrinal document that describes the details of battlefield deception is insufficient. A true understanding of the importance of deception and surprise must permeate throughout the U.S. forces in order to attempt to amplify the scarce resources that are available to counter the Soviet threat.

Machiavelli was of the opinion that a good commander "... never attempted to win by force ..." what "... he was able to win by fraud."81 Both he and Sun Tzu believed that through the use of deception and surprise a victory could be won. The use of deception to gain surprise is the implementation of the principle of war: economy of force. "... the minimum means employed in an area other than the main effort."82 Surprise at the operational level of war sets the stage for the gaining of the initiative because the enemy is forced to react to a situation for which he is unprepared. Gaining the initiative and
setting the terms of battle can alter the combat power equation on the AirLand battlefield and create an opportunity for victory. It is through the comprehensive development of a deception plan that the opportunity for surprise arises. And the comprehensive development of the deception plan must include a rigorous analysis of friendly and enemy potential through the use of METT-T.
ENDNOTES

2. Ibid., p. 15.
4. Ibid., p. 196.
5. Ibid., p. 198.
7. F.M. 100-5, p. 53.
8. Ibid., p. 53.
10. F.M. 100-5, p. 176.
11. F.M. 90-2, p. 91.
13. Ibid., p. 113.
16. Ibid., p. 53.
18. Ibid., p. 209.
23. Ibid., pp. 327-328.

25. Ibid., p. 114.

26. Ibid., p. 114.


33. Ibid., p. 33.

34. Ibid., p. 33.

35. Ibid., p. 54.


37. Bottino, pp. 55-56.

38. Ibid., p. 56.


40. Ibid., p. 56.

41. Bottino, p. 55.

42. Belchem. p. 57.


45. Ibid., p. 138.

46. Ibid., p. 138.

50. Ibid., p. 393.
51. Ibid., p. 395.
52. Whaley, p. 616.
53. Ibid., p. 605.
57. Ibid., p. 227.
60. Ibid., p. 328.
61. The entirety of Chapter Three in The Crossing of the Suez is devoted to describing the radical change of the Egyptian Army from 1967 to 1973.
62. Amos, p. 323.
63. U.S. Army Field Manual 90-2 (Preliminary Draft) Battlefield Deception Operations. Ft. Huachuca, 1986, Chapter Five. Because this is a preliminary draft it is intended to be a working document. Consequently, a number of the pages are not numbered.
64. F. M. 100-5, p. 17.
65. Ibid., Chapter Five.
66. Ibid., Chapter Five.
67. Ibid., Chapter Five.
68. Ibid., Chapter Five.
69. Ibid., Chapter Five.
70. Ibid., Chapter Five.
71. Ibid., p. 4.
73. F. M. 100-5, p. 73.
75. Whaley, p. 131.
76. Ibid., p. 131.
77. Erfurth, p. 114.
78. Clausewitz, p. 198.
79. Sun Tzu, p. 66.
80. F.M. 100-5, p. 53.
81. Whaley, p. 91.
82. F.M. 100-5, pp. 174-175.
BIBLIOGRAPHY

BOOKS


Cruickshank, Charles G. Deception in World War II. New York: Oxford University Press.


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1986.
