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Cavalry Operations in Support of Low Intensity Conflict

A Monograph
by

Major Patrick J. Becker
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School of Advanced Military Studies
United States Army Command and General Staff College
Fort Leavenworth, Kansas

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LIC is not new to the American Army. Our Army has been involved in insurgencies both in and out of country from its creation. The Army has fought in numerous insurgencies, however, its involvements in the Philippines, Mexico, Dominican Republic, and Grenada are studied as are the U.S. Marine Corps interventions in Nicaragua and Haiti and the British Army's actions in Malaya and Kenya. These insurgencies were fought in different environmental settings, against different types of insurgents, by different intervening nations. These examples are too few to provide an accurate data base for statistical analysis, however, they provide enough diverse information for comparative analysis by comparing the missions that were assigned to the reconnaissance units involved.

An investigation of our current doctrinal literature suggests that there are some omissions in our doctrine. Lessons learned in our conflict experience should be reflected in our doctrine. After attempting to track some lessons from the conflicts studied, I discovered that some have been lost.

Analysis of the missions performed by reconnaissance units in these conflicts indicates that there are many nonstandard missions assigned to these units. Although these missions are characterized as nonstandard from a doctrinal point of view, their appearance in several of the historical examples warrants evaluation by our doctrine writers.

Historical analysis suggests that our organization for the reconnaissance squadron is sound, however, the squadron may not be optimally equipped. Historical requirements for ground cavalry vehicles suggests that high mobility multi-purpose wheeled vehicle (HMMWV) equipped troops may not possess a vehicle that has adequate crew protection, armament, or amphibious capability that our conflict experience indicates necessary.

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MONOGRAPH APPROVAL

Major Patrick J. Becker

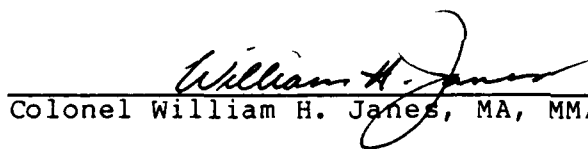
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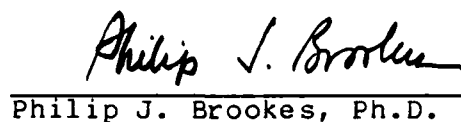
Lieutenant Colonel Gerald R. Thiessen, MS

Monograph Director



Colonel William H. Jones, MA, MMAS

Director, School of
Advanced Military
Studies



Philip J. Brookes, Ph.D.

Director, Graduate
Degree Program

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ABSTRACT

CAVALRY OPERATIONS IN SUPPORT OF LOW INTENSITY CONFLICT; by Major Patrick J. Becker, USA, 65 pages.

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The structure of this monograph is to explain the nature of LIC and assess its impact on reconnaissance forces, describe a comparison methodology, conduct historical analysis, analyze the results of the comparison, and then to make conclusions and offer recommendations. The information collection effort was focused on primary source reports from the Army, Marine, and British Army commanders involved, directed research analysis, and personal interviews.

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Cavalry Operations in Support of Low Intensity Conflict

*"Politics is war without bloodshed, while war is politics with bloodshed."*¹

Mao Tse Tung

SECTION I - INTRODUCTION.

My purpose is to indicate what may be the strengths and weaknesses of our current light infantry divisions' reconnaissance squadrons in terms of organization, equipment, doctrine, and techniques when operating in a low intensity conflict (LIC) environment. This paper is neither an attempt to produce a prescriptive method on the use of reconnaissance forces in LIC nor to simply provide a historical analysis of cavalry's role in LIC. An analysis of our past actions, however, should indicate possible impacts on the organization, training, and equipping of our reconnaissance or cavalry forces when viewed from a LIC perspective.

The significance of this monograph is that this analysis will identify the strengths and weaknesses of current organization, equipment, doctrine, and training for a reconnaissance squadron when operating in a LIC environment. The identified deficiencies should indicate the requirement to modify doctrine, training, force design, or warrant a systemic approach in the research and development (R&D) of technology responsible to security and reconnaissance requirements in LIC.

Cavalry and reconnaissance units of the United States, have been historically involved in conflicts that lie in the realm of LIC (e.g., the Second Regiment of Dragoons was formed in 1836 for use in the Second Seminole War).² Our early reconnaissance units spent the majority of

their existence conducting operations similar to the counterguerrilla operations of today. Many of the conflicts reviewed in this study were either fought in areas of contemporary concern or in terrain similar to Southeast Asia, Central America, parts of South America, and Africa.

A LIC has the highest probability of employment of the U.S. Army.³ As Warsaw Pact/NATO relations move into a period of reduced tensions and negotiations reduce the physical means of waging war, the probability of war between the Warsaw Pact and NATO is reduced. As a result of our previous involvements in conflict and lessened tension in Europe, the Army's attention is focusing on its preparedness to conduct successful operations in the less dangerous but more probable environment of employment ...low intensity conflict.

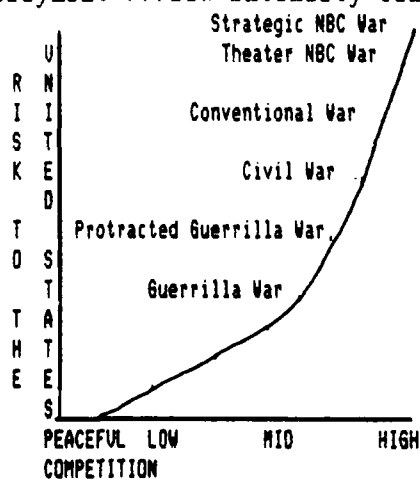


Figure A - Spectrum of Conflict⁴

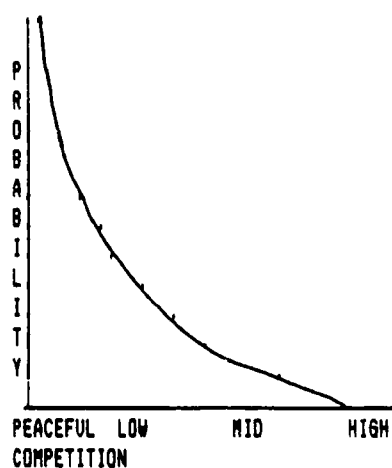


Figure B - Probability of Employment⁵

A LIC is the most probable realm of employment and the Army has tailored some of its forces for employment in this environment. FM 71-100, Division Operations, states, "Normally the most appropriate force in the U.S. divisional structure to conduct combat operations in LIC is the light infantry division."⁶ This statement when coupled with Figure B, which indicates the probability of conflict versus the spectrum of

conflict, shows that there is great probability of employing the light infantry division (LID) (consequently its reconnaissance squadron) in a LIC environment.

Joint Chiefs of Staff Publication 0-2, Unified Action Armed Forces, specifies a function of the Military Departments "...to prepare forces and establish reserves of manpower, equipment, and supplies for effective prosecution of war and military operations short of war...." Assigned this mission, it is essential to determine if reconnaissance forces are organized, trained, and equipped for employment in the most probable scenario. It is important to have doctrine that addresses this environment.

After reviewing several historical documents concerning operations in a LIC type environment, one sees that reconnaissance plays an absolutely essential role in LIC. Despite America's massive strength and firepower, our operations in Vietnam often struck empty blows at an enemy who was extremely elusive. Because of the abstruse nature of the enemy and his elusiveness, reconnaissance is necessary in order to locate the enemy and determine friend from foe.

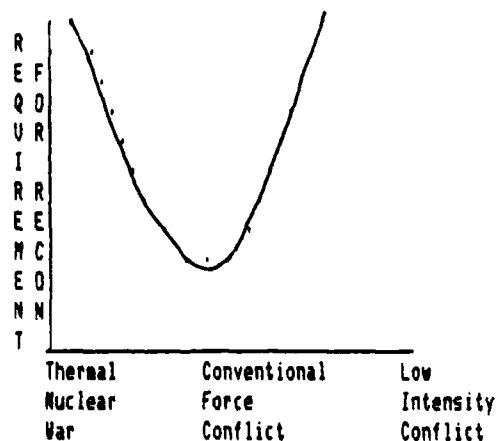


Figure C - Requirements for Reconnaissance
Figure C shows the requirements for comprehensive reconnaissance.

This model indicates the opinion that for thermal nuclear war and LIC, the requirements for comprehensive and thorough reconnaissance are compelling. This is not to imply that thorough reconnaissance is not necessary for a conventional force conflict (whether mid or high intensity), but that the conventional force conflict commander generally has adequate force sufficiency and time to attenuate the effects of less than thorough reconnaissance. The underlying rationale for the model is that, for the commander in thermal nuclear war, the requirement for nearly perfect intelligence is vital. If the commander's intelligence is too faulty, then the results of his nuclear attacks may leave too many operational enemy missiles. These missiles could provide the means of destruction of his force or his nation. This is the guiding principle for second strike and a major rationale point for the Peacekeeper Missile (MX).⁷ The model also indicates a compelling need for comprehensive and thorough reconnaissance in LIC. Without being too superficial, our ungratifying sweeps for the Viet Cong and the confusing nature of the enemy bore this out. Thorough reconnaissance in LIC is necessary in order to promote success and minimize the needless destruction of the populace's property and life.

Having established that LIC will be the most probable realm of employment for the Army and the necessity for reconnaissance in that realm, the fundamentals for the employment of military force in that environment must be discussed. Military operations in a LIC environment have fundamentals that provide the principles that govern action. Military operations in support of LIC often differ from those of mid to high intensity. These operations require a new philosophical framework in which the commander must operate. Defining this framework requires

an entirely different set of imperatives and operational categories that shape the military's activities.

LIC differs from conventional war and the imperatives that apply in LIC as defined in FM 100-20, Military Operations in Low Intensity Conflict, differ from those as defined in FM 100-5. These five imperatives provide direction for the conduct of military activity. In LIC, the military contributes to what is a joint political, economic, military, and informational campaign to achieve U.S. goals. The military must provide a secure environment in which the other aspects of national power can enjoy success.

The preeminent imperative for the conduct of military operations in LIC is that of **political dominance**. Political objectives must influence all military decisions. In a LIC environment, we are not only trying to defeat the enemy but, also, to gain the support of the populace. The military must understand that firepower and force can often be counterproductive in LIC.²

Since political considerations are the primary influence over the exercise of national power, military action must correspond to that direction. It is only through **unity of effort** or the totally integrated effort by all elements of national power that we can expect success. This degree of interaction requires a great deal of cooperation between the military and other governmental agencies. This may necessitate some nonstandard command relationships between the military and other governmental agencies (e.g., State Department).³

Every LIC situation will be different. Every respective country will be different as will be the extent of U.S. presence and influence. The military must be **adaptable**. The Army must be willing and capable of

changing its organization or methods, techniques, and procedures to operate in a LIC environment. Most of our conventional forces are trained and organized to perform optimally in a mid-to-high intensity environment. If these forces are to be employed in a LIC environment, they must be able to change their operations to each different situation presented in the four operational categories of LIC (insurgency and counterinsurgency, combatting terrorism, peacekeeping operations, and peacetime contingency operations).¹⁰

Political considerations underpin all activity in LIC. The right to rule or its legitimacy is an essential aspect of any successful LIC operation. Legitimacy is important not only for the nation concerned, but for the U.S. also. The international community must eventually recognize our efforts and both the nation involved and the U.S. must win domestic support for their actions. Legitimacy is the chief concern of LIC participants. The insurgents seek to gain legitimacy, the group in power strives to maintain legitimacy.¹¹

Insurgencies often have an unclear beginning interwoven with political failure. It is often difficult to discern when an insurgency begins and when it ends. The Malayan insurgency is an excellent example; the British ended their counterinsurgency in 1960 whereas the insurgents officially ended their insurgency in 1989. It is apparent that a patient long-term perspective be maintained when involved with either a counterinsurgency or an insurgency. The goal of our national agencies must be to achieve our long-term goals. This may mean that a commander must accept short-term failure for long-term success. In a war that may have no discernable beginning or end, patience is critical.¹²

Military activity in LIC is categorized in four operational categories. LIC operations may involve either one or more of these categories. These different operational categories necessitate different behavior of the military participants.

The first and most difficult of these operational categories is the conduct of an **insurgency** or **counterinsurgency**. Our nation may feel compelled to support either the government-in-being or the insurgents. The goal of the counterinsurgents (the government-in-being) is to mobilize the nation against the insurgents. The insurgents' goal is to capture support for the revolution.¹³

Combatting terrorism is an operational activity that need not take place in another nation's territory but can occur here in the U.S.. Military action in this category is to provide protection for installations, units, or individuals. These actions include antiterrorist activities (defensive in nature) or counterterrorism (offensive in nature).¹⁴

One of the more frustrating LIC operations with the greatest restraints to our military is **peacekeeping operations**. This is a very restrictive category that imposes a military force between two parties that are at a diplomatically negotiated peace. It is a restrictive category because normally the use of force to maintain peace is prohibited, and thus there is high personal risk to the forces involved.¹⁵

The most prevalent form of LIC operations is **peacetime contingency operations**. Military operations in this category are the most diverse and can range anywhere from relief operations to land, sea, and air strikes. These operations are diverse in that they may require the

military - exercise great restraint or violent military action.¹⁶

Understanding the nature of LIC is a even more complex task. This is largely because the interaction of the government, people, and the army (both the government's and the insurgent's) is more interwoven and yet nebulous than in conventional warfare. LIC is not a new realm in the spectrum of conflict and antedates what we consider contemporary war. The net result of investigating LIC in history is that, through analysis, the characteristics and theoretical framework for this realm of conflict can be discerned and then applied to current crises. Four writers Sun Tzu, Mao Tse-Tung, T.E. Lawrence, and Carl von Clausewitz have studied warfare in the realm of LIC and have provided insight into its theoretical nature.

Sun Tzu was one of the first great military writers to study the art of war. Sun Tzu attempted to get at the essence of war, both war as defined in the mid-and high-intensity context and as we label conflict in the low intensity realm.

To subdue the enemy without fighting was Sun Tzu's most effective manner to wage war. To do this required an indirect approach by attacking the enemy's psyche, not necessarily his forces. To achieve this, Sun Tzu recommended spreading false rumors, misinforming, corrupting or subverting the enemy's government, creating internal discord, and using spies and fifth columns (clandestine organizations).¹⁷

Sun Tzu's views influenced revolutions in Asia, China, and Vietnam. The writings of Sun Tzu influenced the thoughts of revolutionary leader's like Mao Tse-tung, Ho Chi Minh, and Vo Nguyen Giap.¹⁸

Another Chinese author who both wrote about and experienced LIC operations as a combatant was Mao Tse-tung. Mao Tse-tung is one of the most influential theorists concerning guerrilla war or insurgency. Mao's strategy, although developed for China's revolutionary war, has been found to have worldwide application. The cornerstone of Mao's strategy is popular support gained through an organizational network. Mao's organization has provisions for the political and military aspects of the insurgency incorporating the participation of the entire population armed with the political motivation to pursue a "protracted war."¹⁹

Key aspects of Mao's strategy include the need for mass popular support, intensive organization (political and military), a favorable environment or secure bases (particularly rural ones), external support, an army, and initial government superiority. The criteria are not all necessarily equally weighted, but all are characteristic of a Maoist type insurgency. One important factor that is characteristic of Maoist insurgencies is that time is relative, thus his belief in protracted war.²⁰ The overriding consideration is that the insurgency will eventually be successful.

Mao's strategy develops in three phases in which progression is not necessary and advancement to one phase does not preclude a return to an earlier phase.²¹ Mao's three phases, latent and incipient insurgency, guerrilla warfare, and war of movement, have so characterized contemporary insurgency that they have been incorporated into our doctrine.²²

While the Russians were in the process of deposing the Czar and before Mao Tse-tung formulated his thoughts on modern revolutionary war,

T.E. Lawrence was applying his brand of insurgency against the Turkish Empire. Although Lawrence was an outsider aiding the Arabs fight their war with the Turks, the strategy he used to guide his counsel to the Arab insurgents has contemporary utility.

Lawrence, like Mao, formulated a thesis that governed the conduct of his insurgency. The characteristics of his insurgency could be used to counter other insurgencies. Lawrence's criteria for successful insurgency include five fundamental elements. First is the requirement for an unassailable rebel support base. Second, the enemy must be more sophisticated (dependent on formal lines of communication) than the rebel force and that the enemy not possess sufficient force to occupy all of the rebel's territory. This requires the enemy to secure his lines of communication and he then presents himself in small detachments that the rebels may attack. Third, like Mao, Lawrence saw the requirement for a friendly population. Unlike Mao, however, Lawrence felt that only 2 percent of the population should be active in the combat force while the remaining 98 percent be passively submissive. Fourth, Lawrence's rebels must have endurance, speed, and the ability to operate without regards to lines of communication. Fifth, the rebel force must have the means to disrupt or destroy the enemy's lines of communication [materiell]. Lawrence felt that, if the rebels were granted mobility, security, time, and ideology, their insurgency would succeed.²³

Unlike Mao and Lawrence who actually fought as insurgents, Carl von Clausewitz's experience is that of conventional warfare. Clausewitz was aware of insurgent warfare and did include some observations about it in his treatise about war. Clausewitz thought that "war was not to be

considered as an independent thing, but as a political instrument; and it is only by taking this point of view that we can avoid finding ourselves in opposition to all military history."²⁴ War is a political instrument. Clausewitz describes war as a continuation of politics by other means. A contemporary update for this treatise by Brigadier General Michael W. Davidson is that "war is a continuation of national policy by additional means - the use of warmaking force."²⁵

Revolutionary wars, or "people's wars" as Clausewitz referred to them, were not the type of wars that Clausewitz was most comfortable in defining. Clausewitz showed some insight into some aspects of revolutionary warfare indicating five conditions for an effective insurgency. The first of these is that the war must be fought in the interior of the peoples' own country. This provides the rebels the means of support and security. Second, the uprising to succeed, it must not be decided by a single stroke of the enemy (a climactic battle). Third, in order to tax the enemy and provide the rebel freedom of action, the theater of operations must be an extensive area (T.E. Lawrence would agree). A fourth factor is that the national character must be suited to armed confrontation (important in contemporary Europe). The fifth factor necessary for a successful fight by the populace is that the terrain in which the insurgency is to be fought must be rough and inaccessible because of mountains, forests, swamps, or the local methods of cultivation (Lawrence would hasten to add the vast desert).²⁶

Clausewitz discerned that during revolutionary war, one side (normally the government-in-being) usually enjoyed technical superiority over its opponent. Revolutionaries, he observed, enjoyed the advantages

of fighting on familiar territory, had greater tactical flexibility, and had the support of the populace.²⁷

The military force of the revolutionaries was of such character that you could not discern them from the rest of the population and an attempt to destroy them could cause the destruction of a large portion of the population. In LIC, firepower and force are often counter-productive because of collateral damage. This confusing phenomena makes Clausewitz's principle of destroying the enemy's army difficult to achieve.²⁸

The problem confronting our military is to maintain or restore internal security, thus enabling the other aspects of the counter-insurgency program to operate.²⁹ The problem centers around the use of force and the enemy. Fighting an enemy that looks and acts like the general populace, but, only appears long enough to attack and then disappears, may warrant a reassessment of our doctrine, organization, and tactics to defeat such an enemy.

SECTION II - HISTORICAL ANALYSIS.

*"The American Cavalryman, trained to maneuver and fight with equal facility on foot and on horseback, is the best type of soldier for general purposes now to be found in the world. The ideal cavalryman of the present day is a man who can fight on foot as effectively as the best infantryman and who is in addition unsurpassed in the care and management of his horse and in his ability to fight on horseback."*³⁰

President McKinley's message to Congress, 1901.

Despite the American Army's nearly continuous operations against the Indians, we were slow to incorporate the lessons of these wars into our doctrinal literature. Instead we opted to place information of this nature in professional journals and left the doctrinal manuals for fighting war as one would fight in Europe. Although we had been involved in fighting Indians as an Army for nearly half a century, a

writer at the time of the Second Seminole War was prompted to write, "none of the arms of the service...were trained for the sort of war which was fought in Florida."³¹

The Army has fought numerous LIC operations, and the lessons learned from those operations can be distilled from analyzing some of our previous experiences. One of our more contemporary LIC operations that included many of the tactical organizations present in today's Army is the Army's punitive expedition into Mexico from 1916 to 1917.

The conditions that caused the commitment of a punitive expedition into Mexico were a result of a previous American intervention into Mexico. President Wilson sent a Navy-Marine task force into Veracruz and an Army brigade from Texas in an effort to depose the Heurta regime and forestall German or Japanese intervention into Mexico.³² The resulting Mexican power struggle between Venustiano Carranza and Francisco "Pancho" Villa was to eventually cause the commitment of more American forces into Mexico.

Pancho Villa was a Mexican revolutionary who did not enjoy the support of the American government. Villa was frustrated by America's backing for Carranza and conducted a raid against Columbus, New Mexico, in March 1916 causing the death of American civilians and soldiers. Although meant to discourage further American support for Carranza, the raid into Columbus had just the opposite effect. Because of the raid, President Wilson decided to commit a punitive expedition to destroy Villa's band once and for all.³³

Brigadier General John J. Pershing lead 10,000 soldiers which eventually dispersed Villa's band. The cavalry forces for Pershing's expedition included the 7th, 10th, 11th, and 13th Cavalry Regiments.³⁴

The lessons learned from the employment of reconnaissance assets in Mexico were:

1. The punitive expedition was accompanied by reconnaissance aircraft that were used to search for the enemy, keep Pershing's headquarters updated concerning friendly dispositions, and perform liaison missions.³⁵
2. Trucks/automobiles and motorcycles were used effectively to perform reconnaissance. Trucks were also used to move troops and for command and control. A detachment under Second Lieutenant George S. Patton Jr., became the first Americans to fight mounted in a motorized vehicle.³⁶
3. The punitive expedition's rules of engagement forbade firing against Mexicans "until their hostile identity was certain."³⁷ This prohibited destructive reconnaissance and compelled the cavalry to close with the enemy.
4. Lines of communication proved to be a considerable concern for the expedition to the extent that it was said that "It will take many of us to beat the Mexicans in battle but it will take a lot [more of us] to cover the lines so that those who fight may also eat."³⁸
5. Mexico proved to be suitable for air reconnaissance and ground cavalry and less suited for infantry. This was chiefly due to the vast distances covered by the expedition and the severe, arid climate.
6. Broad cavalry "sweeps" (a term used later in Vietnam) were added to the reconnaissance and scouting missions of the cavalry. Pershing thought that the cavalry should be prepared to fight either mounted or dismounted.³⁹
7. Apache scouts, who were familiar with Mexican territory, were used to augment American cavalry scouts.⁴⁰
8. Air and ground reconnaissance units cooperated tactically to locate the enemy for the first time in American history.⁴¹

America's intervention in the Dominican Republic (1965-1966) is an example of one of the more contemporary American involvements in LIC.

The First Squadron (Airborne), 17th Cavalry deployed with the 82nd Airborne Division to the Dominican Republic making them the first cavalrymen committed to combat operations since the Korean War. The squadron was prepared for either airborne or airlanding entry into the San Isidro airhead. Troop A was the lead element of the squadron entering the island on 30 April. Upon arrival, the troop was committed to seize a bridge over the Ozama River. The troop then conducted reconnaissance patrols into the city and awaited the remainder of the squadron.⁴²

Troop B and the squadron headquarters were immediately committed to the center of Santo Domingo and went directly to the U.S. Embassy area where Troop B began the first evacuations of U.S. and foreign nationals under harassing sniper fire. The squadron then settled down conducting security operations along the Ozama River, convoy escort, and occasional rotations as the airport security force. While performing these missions, the squadron provided humanitarian assistance with the surgeon providing medical aid and the reconnaissance platoons distributing food to the local population.⁴³

Throughout the period 30 April through 28 May the squadron was subjected to rebel small arms, mortar, and tank fire as well as friendly fire from anti-rebel forces. Under "no fire" orders, the squadron was subjected to rebel action without the opportunity to retaliate. On 15 June, the Third Brigade was given permission to act against the rebels and the cavalry provided fires in support of the brigade. Although the air cavalry elements of the squadron flew hundreds of hours of combat support missions, task force restrictions prohibited the delivery of aerial munitions.⁴⁴

The lessons learned from the employment of reconnaissance assets in the Dominican Republic were:

1. Task force restrictions forestalled the use of the unit's armed aircraft in support of the reconnaissance effort. The aircraft were still used to fly reconnaissance missions and were said to be of deterrent value to rebel actions.⁴⁵
2. The use of observation aircraft was invaluable.
3. Due to the restrictive "no-fire" orders, the ground cavalry became oriented on the security of fixed sites (antenna sites, water points, road blocks, and installations) and convoy escorts and not involved in the aggressive collection of intelligence.⁴⁶
4. The squadron's combat support, as well as the combat forces, became actively involved in the civic action program providing medical coverage and food distribution for the local populace.

5. The squadron, because of its tremendous mobility, communications means, and firepower, could be ordered a wide variety of missions (eg., the evacuation of the noncombatant Americans and foreign nationals). These missions were not designated battle tasks (either combat or non-battle tasks) and showed both the adaptability of the cavalry squadron and the flexibility of the cavalrymen.

Even as we were involved in the Dominican Republic, we were escalating our support of the Republic of Vietnam. Our most extensive counterinsurgency since the Philippines, Vietnam was to become a laboratory for the examination of counterinsurgency. Fortunately, the U.S. Army did extensive research into the employment of cavalry in that conflict with the intent of evaluating doctrine, tactics, and techniques for our cavalry.

Cavalry/reconnaissance organizations deployed to Vietnam involved the entire spectrum of existing U.S. reconnaissance organizations cavalry, armored cavalry and air cavalry. The first reconnaissance unit introduced into Vietnam accompanied the first U.S. combat unit. The consensus of senior Army leadership was that only air and light cavalry would have any use in Vietnam and initially they did not permit incoming divisions to deploy with their armored cavalry assets. The Chief of Staff eventually decided to permit the 1st Infantry Division (Mechanized) to deploy with its organic armored cavalry unit, the 1st Squadron, 4th Cavalry.⁴⁷ The squadron proved to be a useful and invaluable asset for the division. As a result, the Army's senior leadership revised their estimate concerning the usefulness of armored forces in Vietnam. The Army then deployed armored cavalry, armor, and mechanized forces to Vietnam. Because of the requirements to secure the vast lines of communication between different American forces, the 11th Armored Cavalry Regiment was eventually deployed.

Warfare in Vietnam was vastly different from that for which we had trained. The battlefield was characterized as "non-linear, multi-directional, unconventional, or area warfare."⁴⁸ In essence, seizing terrain and maintaining one's lines of communication had limited significance. In lieu of these objectives were the objectives of fighting organized forces (either North Vietnamese or Viet Cong), defeating the guerrilla, developing area stability, and protecting our own lines of communications (LOC) (the area itself being too vast to secure).

The doctrinal manuals for that period were written for conventional war and found to be generally applicable for Vietnam except for the addition of several missions and different methods, techniques, and procedures that modified the use of some of our equipment and organizations.⁴⁹

Vietnam was fought as an "area war" with the areas being defined either geographically (terrain dependent) or politically. This approach facilitated troop assignment due to trafficability rationale and the establishment of secure bases. Secure bases gave the Americans the same advantage as secure bases to the guerrilla (reasonable security from the enemy), except that our locations were well known to the enemy. Bases for logistics, fire support, communications, surveillance, and air support were located in each area. These bases not only provided combat support and service support to our maneuver units, but also, long-term support to American forces aiding the government in attempting to win the populace from the Viet Cong. A disadvantage to the base support concept of Vietnam's area war was that the bases attracted enemy activity. This activity could come from any direction, at any time, and

from a region in which the populace and the enemy were alike and indistinguishable.⁵⁰

The missions assigned to reconnaissance units were expanded from those indicated in the doctrinal literature. One of the variants, search and destroy, was a variant of area reconnaissance with the emphasis of employing destructive reconnaissance - find the enemy and destroy him before he can escape. Search and destroy operations were of short duration and included operations like encirclement, pursuit, raid, and counterattack. A second adaptation, clear and secure was similar to search and destroy operations, but operations were sustained and units had terrain and political objectives assigned to be secured. The last notable mission was revolutionary development. Revolutionary development provided assistance to the local populace and is now called humanitarian assistance.⁵¹

The lessons learned from the employment of reconnaissance assets in Vietnam were:

1. An area of operations (AOR) should be analyzed by region, by season when considering the deployment of ground (armored or motorized) cavalry into the AOR.⁵² This was not initially done in Vietnam and consequently some of our forces deployed without their organic ground cavalry.
2. U.S. Army night fighting capability, both air and ground, restricted the movement and limited the initiative of the enemy. Our night fighting capability was enhanced by night vision devices, ambush operations, roadblocks (traffic control), night patrolling, remote sensors, and radars.⁵³
3. Close proximity engagements are typical. These engagements require armor protection for the reconnaissance crew and weapons with a high rate of fire and lethality.
4. Dispersion in the defense is generally required for survivability of the force. Against an enemy that attacks using infiltration tactics and does not possess antitank, artillery, or air forces, however, tight consolidation may be more effective.⁵⁴
5. The use of helicopters substantially facilitated command and control and liaison operations.
6. The air and ground cavalry was useful in performing reconnaissance and surveillance operations with the aim of collecting intelligence. Ground and air reconnaissance units, when used in cooperation with one another, were extremely well-suited to counterinsurgency operations in

- difficult terrain.⁵⁵ Route, area, and zone reconnaissance (to a lesser extent) were still valid reconnaissance missions for our cavalry units.
7. Armored cavalry units were particularly suited for employment against tactical insurgent forces.
 8. Long-range reconnaissance patrols (LRRP), the predecessors of today's long-range surveillance detachments (LRSD), were extremely useful when inserted into an area to determine enemy operating patterns or left to stay behind in well concealed observation points.⁵⁶
 9. Air cavalry should be placed under the operational control of supported units and not normally attached. This command relationship gives the squadron commander a greater degree of flexibility (particularly for day/night operations).
 10. Air cavalry units possessed tremendous capability being organized with aeroscouts (mounted in observation helicopters), aeroweapons (mounted in the utility helicopter (UH)-1C or UH-1M, then later the attack helicopter (AH)-1G), and the aerorifle platoon (forty heliborne infantry reconnaissance troops).
 11. Cavalry troops equipped with 1/4 ton and 3/4 ton vehicles (capable of being slingloaded) were well suited to convoy escort, route security, and airmobile reconnaissance operations.⁵⁷ Wheeled vehicle off-road capability, at that time, limited their off-road usefulness.
 12. Air cavalry is effective in supporting air assault operations, not as an escort, but as a reconnaissance, suppression, and fire support element.⁵⁸
 13. Air and air transportable cavalry proved extremely flexible and mobile.⁵⁹
 14. Air cavalry was, at times, limited by weather, environmental flying conditions, darkness, dense forests, lack of protection, and limited flight time.⁶⁰

The cavalry was committed to yet another LIC operation when the 1st Squadron (Air), 17th Cavalry deployed with the 82nd Airborne Division to Grenada. The squadron assault command post and Troop B deployed to an intermediate staging base on Barbados during 27 October 1983. With the exception of a small advance party, the squadron remained on Barbados until committed to Grenada on 30 October in concert with the breakout of the division from the airhead at Point Salinas. The squadron took control of Pearls Airport from the Second Battalion, Eighth Marines, 22 Marine Amphibious Unit (MAU). The cavalry immediately began conducting air and ground reconnaissance throughout the entire island and in a specified squadron sector north of St. Georges.⁶¹

The squadron, while assigned this sector, received attachment of an

infantry company, the division reconnaissance platoon (later to become the division's LRSD). The reinforced squadron conducted dismounted and mounted (motorcycle) patrols and roadblocks in sector. The squadron's mission was to patrol all offshore islands (save Carriacou) belonging to Grenada in order to control possible weapons infiltration efforts. The squadron's scout weapons teams conducted aerial reconnaissance over the entire island area to include overflight of small vessels. Some of the vessels were compelled to return to port due to suspicious activity. Aerial reconnaissance teams also conducted an evaluation of the Grenadian coastline for possible small boat landing sites that could be used for troop or weapons movements.

Some atypical (e.g., not a battle task) missions assigned to the squadron of a combat nature were to: apprehend "most wanted" Grenadians, perform G2/S2 liaison missions, function as the aviation headquarters for all division air operations, seize weapons, perform air liaison with the naval task force, provide air movement of prisoners of war, and provide command and control flights and troop airlift for 3d Brigade, 82nd Airborne Division. The squadron was also given the noncombat missions to: provide air movement to the press, operate Pearls Airport (in conjunction with an element of the Barbados Defense Force), and assist with terminal operations in support of the Salvation Army.

The lesson learned from the employment of reconnaissance assets in Grenada were:

1. The UH-60A gave a cavalry troop considerable airlift capability beyond what was needed for its own operational and logistical requirements in a confined area of operations like Grenada. This capability was used to meet the airlift demands of the division. This was often to the detriment of the troop reconnaissance platoon which had to wait for UH-60A support to extract them from their completed missions.

2. The rules of engagement were not as restrictive as during the intervention in the Dominican Republic; however, shots were only fired twice during the Grenada operation by the attack aircraft to compel suspicious small boats to return to harbors for inspection by ground forces. Scout/weapons teams conducted reconnaissance continuously during the day and periodically at night.⁶² Also, one scout/weapons team was continuously maintained on five-minute reaction strip alert. These missions eventually became a "show of force" and were seen locally as a significant deterrent.
3. The use of observation aircraft was invaluable for reconnaissance, liaison, and command and control missions. The squadron intelligence officer (S2) did a great deal of liaison work for the division intelligence officer (G2) and routinely delivered division intelligence summaries to other battalions. Scout pilots were asked to evaluate possible small boat landing sites to determine the degree of difficulty required for the Grenadians to land supplies (e.g., easy, difficult, or impossible).
5. One observation helicopter (OH)-58C was daily provided to the 3rd Brigade and then the 1st Battalion (Airborne), 508th Infantry, for command and control flights. This daily loss did not impair the squadron's aerial reconnaissance effort.
6. The troop's motorcycles were noisy but effective in extending the ground reconnaissance capability of the troop and were frequently used to transport personnel due to the lack of organic transportation.
7. The squadron proved to be well suited to undertake the reconnaissance of the surrounding islands as it had its own organic lift, ground scouts, and AH-1E fire support. Often these islands were beyond the range of supporting artillery. Ground scouts often had to be inserted by rappelling from helicopters and extracted by a stabo rig (a harness and line attached to the aircraft that permit extraction without the aircraft landing).
8. Although a troop of the squadron was an element of the division ready brigade (DRB), it was not deployed as planned in accordance with the division readiness standard operating procedures (RSOP). This left the DRB without a reconnaissance unit. The lack of this unit was one reason for an unclear understanding of the enemy's strength and disposition in the Caligny Military Base area.⁶³
9. On 29 October 1983, the division wanted to send a mounted task force out of the airhead in order to determine the enemy's disposition prior to the division's breakout. What was desired was this force to be accompanied by some sort of armored escort. The division had M551 armored reconnaissance assault vehicles assigned, but had not deploy them to Grenada. One escort vehicle discussed was an armored car. Although not assigned to the division, someone thought that the Marines may have had some. The Marines did not. The force eventually deployed in sandbagged 2 1/2 ton and 1/4 ton trucks.

An American ground force that has as much experience in LIC as the Army is the U.S. Marine Corps. The Marine Corps has had a role in almost every war or conflict in which our nation has been involved.

The U.S. Marines have fought on every continent of the world save for Antarctica and Australia since 1775.⁶⁴ This provides the Marines abundant opportunity to perfect operations in a LIC environment. Marine experience in this environment can provide the Army historical examples, lessons learned, and a tested doctrine from which to refine Army doctrine.

One Marine LIC experience was its operations in Nicaragua during the period 1910 to 1927. Nicaragua has been an area of American concern prior to arrival of Daniel Ortega and the Marines have been committed into Nicaragua often. Because of the extent of the Marine involvements in Nicaragua and Nicaragua's proximity to today's contemporary hotspots, studying Marine operations there can provide meaningful information to the Army.

The Marine operations in Nicaragua were to involve periodic commitment for twenty years and span World War I. Nicaragua was the largest of their interventions in South and Central America. With the commitment of up to brigade strength, Marine operations in Nicaragua were nearly as broad as is now expected for operations involving Army forces.

President Taft committed U.S. forces in Nicaragua after the dictator Jose Santos Zelaya shot two American citizens. Zelaya was attempting to resist the efforts of foreign investors and the Nicaraguan Conservative party to depose him. President Taft was initially reluctant to intervene in the Nicaraguan situation but was eventually compelled to do so by the loss of the American lives.⁶⁵ Acting to safeguard American lives and business interests and at the request of the Conservative party, the Marines were committed. This was to be the

start of a twenty-year intervention that was often unwelcomed by the Nicaraguans.

The Marines, in 1912, were initially interested in separating the antagonists (the Conservative and Liberal parties), safeguarding American citizens and property, keeping the conservative President in power, and securing insurgent strongholds.⁶⁶ Upon completion of these tasks, the bulk of the Marine forces was withdrawn in 1914.

Political turmoil and the destruction of American property again warranted the return of the Marines in 1927. On 6 January 1927, the Marines were again landed in Nicaragua on an even greater scale than the 1912 intervention. Upon arrival, the Marines took over the defense of Managua and garrisoned 14 towns along the railroad. The 2d Marine Brigade, composed of the 5th and 11th Regiments and several aviation squadrons, was to be involved in a counterinsurgency that would last another five years.⁶⁷

The lessons learned from the employment of Marines in Nicaragua were:

1. The Marines, despite the absence of cavalry, used mounted forces to pursue rebel forces.⁶⁸
2. Reconnaissance aircraft were used to support Marine ground forces. These aircraft were specifically assigned to the ground force commander for this purpose.⁶⁹
3. Marines attempted to deny rebel forces secure basing areas by maneuvering forces into the depth of the rebel's territory.⁷⁰
4. Humanitarian operations in support of the Nicaraguan people were conducted by the Marines, particularly after the earthquake of 1931.⁷¹
5. Marine aviation was used to reposition forces, logistics, and livestock throughout the area in order to be more mobile than the rebel forces.⁷²
6. Marines were used as officers in the newly formed, U.S. backed constabulary, the Nicaraguan *Guardia Nacional de Nicaragua*.⁷³

A nation that has centuries of experience in LIC operations is Great Britain. The British Army is one of the most experienced armies

in the world in terms of LIC operations. It was originally organized, manned, equipped, and trained to be both an instrument of the foreign office, in order to maintain the empire, and to defend the United Kingdom.⁷⁴ Confronted with the dissolution of the empire after World War II, the British Army gained considerable experience in sixty-three LIC operations. Most of the insurgencies were conducted while attempting to establish stable conditions in their colonies prior to the colonies being granted independence. These efforts were made to forestall the spread of communism or to ensure that the newly independent nations were not confronted with revolutionary power struggles at the onset of their independence. The British were extremely successful in adapting to the situation and bringing many of their counterinsurgencies to a successful end. The British successes in places like Kenya, and in particular Malaya, were often used to guide our activity in Vietnam.

One of the most successful anti-communist insurgencies was the British action in the Malayan Emergency. Although a successful counterinsurgency, the circumstances of the insurgency in Malaya were unique, and a successful strategy in Malaya may not necessarily be relevant for an insurgency elsewhere. The scope of the British involvement in Malaya and its complexity and nature was such that much of it was pertinent to the United States as it participated in Vietnam.

The Malayan Communist Party (MCP) emerged as one of the most powerful parties after the defeat of Japan in postwar Malaya. The MCP organized the Malayan People's Anti-Japanese Army (MPAJA) which was the only significant resistance to the Japanese. The MPAJA was an experienced battle unit which, in conjunction with the Malayan People's

Anti-Japanese Movement, provided the MCP an armed force that had established ties with elements of the Chinese population.⁷⁵

General Sir Gerald Templer was appointed high commissioner in Malaya and helped formulate a four action strategy that focused activity designed to destroy the MCP organization and diminish their popular appeal, tactically counter the moves of the communists, normalize the activity of the Malayan Government (as if there were no insurgency...in preparation for independence), and set the stage for the evolution of Malayan society.⁷⁶ One of the major actions of the British was the Briggs Plan. The plan's major emphasis was the elimination of the Min Yien, the insurgent's logistics organization based in the cities and the edge of the jungle, from the insurgency. This was done by resettling the Chinese inhabitants on the edge of the jungle, thus disrupting the insurgent's logistics infrastructure.⁷⁷

The lessons learned from the employment of the British Army in Malaya were:

1. Armored cars proved to be effective escorting convoys, establishing engagement areas, providing liaison and command transportation, and supporting police operations in urban terrain. The police were initially reluctant to use armored cars in order to restore public confidence. They felt that if they had used the armored cars initially, it would appear that the guerrillas were in a dominate position.⁷⁸
2. The jungle often precluded effective air reconnaissance and fire support.⁷⁹
3. The British took a legalistic approach to the insurgency clearly placing the conduct of the campaign in the hands of the civil leadership.⁸⁰
4. "No military unit can be more mobile than its logistics permit."⁸¹ - One aspect of the British strategy was to separate the guerrillas from the Min Yien.⁸² By defeating its means of support, Chin Peng's Malayan Races Liberation Army (MRLA) was tied down to limited operating areas.
5. British counterguerrilla forces moved more quickly and with greater firepower than the guerrillas. This is largely due to the logistical weakness of the MRLA.⁸³
6. The British, at times, held a ten-to-one advantage over the the MRLA (this is roughly on line with a typical ratio of police to criminals).⁸⁴ This may be a meaningful statistic for an Army operational planner.
7. Military decisions impacted on social and political life and civil

actions influenced military operations. This indicated the need to assign appropriate missions to the proper instrument of government. Also, the initial decisions made by the government set the stage for the whole counterinsurgency. The British insisted on maintaining this as a legalistic action. This approach clearly placed the military in a support role to the legal system.⁸⁵

8. Two key military lessons were that psychological warfare themes had to be integrated into all military operations (much like a deception effort) and that intelligence (both military and police) was essential for successful operations. Merging military information with police information enabled the Army to gain tactical advantage over the guerrillas.⁸⁶

9. Captured communists were successfully "turned" and often helped government troops search for insurgent bases.⁸⁷

10. "It is better to police villages than destroy them, one stray bomb killing one innocent child can make a thousand enemies."⁸⁸

11. Air reconnaissance was used to locate MRLA jungle garden plots which were then destroyed by ground forces.

12. General Templer assigned several British Army majors to the police force as training officers.⁸⁹

13. British forces operated in the jungle more efficiently than the guerrillas. The British patrolled the jungle for extended periods rather than conducting search and destroy operations thus denying them secure bases.⁹⁰

14. Although predominantly an infantry war, the British relied heavily on helicopters for: reconnaissance, troop lift, resupply operations, medical evacuations, and for the rapid evacuation of captured guerrilla documents. Helicopters were also used to provide fire support and psychological warfare platforms (loudspeakers) in the remote jungle.⁹¹

15. Special Air Services (SAS) forces were used to conduct covert long-range, long duration (90 days) patrols into the jungle.⁹²

16. Air reconnaissance caused the guerrillas to operate in smaller groups.

17. Air and armored reconnaissance were used in close cooperation with one another in search and destroy operations. This was particularly noteworthy in that these forces were assigned to different services.

SECTION III - ANALYSIS.

*"Know the enemy, know yourself; and victory will never be endangered. Know the ground, know the weather; your victory will then be total."*⁹³
Sun Tzu

Analysis of our historical examples will not only provide some insight into cavalry requirements in LIC but may, also, provide insight into the guerrilla. One should not lose the lessons of history because of the differences of time or technology. By reviewing the examples cited, you see that contemporary problems in LIC have been prevalent in

LIC situations throughout history and that our predecessors have often found successful solutions to these problems.

	U.S. ARMY*	U.S.M.C.*	British Army*	
	P	M	D	V
	H	E	O	I
	I	X	M	E
	L	I	T	N
	I	C	R	T
	P	O	E	N
	P	P	A	A
	I	U	M	U
Cav used to secure Flanks and Pursue	X	X	X	X
Escort Supply Trains	X	X	X	X
Use of LRSD-like Deep Reconnaissance	X	X	X	X
Cav Units maintain Contact with Enemy	X	X	X	X
Cavalry raided Guerrilla Bases	X	X	X	X
Cav provides Humanitarian Aid	X	X	X	X
Air Recon cooperates with Ground Cav	X	X	X	X
Ground Recon was Motorized NOTE 1	X	X	X	X
ROE prohibits Destructive Recon	X	X	X	X
Cavalry conducts "Sweep" Operations	X	X	X	X
Native Scouts guide Cavalry NOTE 2	X	X	X	X
Mounted Forces form HN Constabulary	X	X	X	X
Cav is used to Secure Fixed Sites	X	X	X	X
Cav performs nonstandard mission NOTE 3	X	X	X	X
Arm/wheel Cav used in No Go Terrain	X	X	X	X
Night Reconnaissance used Extensively	X	X	X	X
Air "Cav" facilitates C2	X	X	X	X
Armored Cars used in Recon NOTE 4	X	X	X	X
Cav cuts Guerrilla Infiltration Routes	X	X	X	X
Cav Units use War dogs	X	X	X	X

FIGURE D - Cavalry Mission Analysis Matrix

* - The army in the Philippines, Marines in Haiti, and the British in Kenya were also researched.
 NOTE 1 - Cars and trucks were used in Mexico and trucks and motorcycles in Grenada.
 NOTE 2 - There is no mention of their use in the Dominican Republic and Grenada. Although not specifically mentioned the U.S.M.C. did officer host nation (HN) constabularies and may have accompanied Marine predominate patrols.
 NOTE 3 - Nonstandard missions include examples like: NEO, command and control flight, and troop air assaults.
 NOTE 4 - Armored cars were used by South Vietnamese cavalry squadrons and by some American forces (military police).

Figure D, the cavalry mission analysis matrix, itemizes some of the common missions of the counterinsurgencies studied. Interpretation was needed because not all subject force structures were the same. They involved different nations' responses, and not all after action analysis

by the departments concerned were as succinct as the U.S. Army's after Vietnam. The matrix analysis does show some interesting commonality which should be of immediate interest to the contemporary cavalryman and Army doctrine writers.

The examples in the cavalry analysis mission matrix cover a wide spectrum of involvement in diverse geographic regions and against different types of insurgents. These examples are too few to provide an adequate data base for accurate statistical analysis of cavalry missions; however, for the purpose of this study they are adequate for trend analysis.

As we can see in the analysis matrix, the use of LRSD-like reconnaissance assets has been an integral aspect of cavalry operations in LIC operations. FM 7-93, Long Range Surveillance Unit Operations, states that the LRSU will operate at a reduced distance and for longer duration than usual when they are involved in counter guerrilla operations. Considering that the other troops in the cavalry will probably be involved in some form of area reconnaissance in the same area, this provides an opportunity for a closely integrated intelligence collection effort without necessarily disclosing the presence of the LRSU. By tasking the cavalry for all reconnaissance unit human intelligence (HUMINT) collection, the cavalry commander can analyze each area of concern and select the appropriate type of cavalry to ensure that there is complementary and redundant coverage of the area.

A common assignment for cavalry in LIC has been to escort convoys or "secure" lines of communication. Historically, both air and ground assets have been used to accomplish this mission. This is because the cavalry has been the most mobile force on the battlefield, and they

routinely perform security or reconnaissance missions (particularly route reconnaissance). The cavalry should continue to be one of the most mobile forces in the division and have sufficient firepower and shock action to deal with these missions.

Mobility, protection, and firepower are contemporary problems confronting the squadrons in the light divisions. In this regard, there is some real concern that high mobility multi-purpose wheeled vehicle (HMMVV) mounted cavalry may not be capable of performing this mission because it has limited firepower, armor protection, and it can not swim (not necessarily needed for escort duty but useful in many other applications). I agree with this sentiment and believe that we should procure either the Marine light armored vehicle (LAV) (much respected in Panama today) or an armored car.

An ideal light cavalry armored car is one that is: protected by reactive armor or composites (capable of defeating an RPG-like weapon), armed with either the 25mm chaingun or a MK19 automatic grenade launcher and an M2 Heavy Barrel Machine Gun. To increase mobility, the vehicle should also be able to swim and to be externally transported by a CH-47D (although the CH-53 is often available in LIC operations). The ability to swim was a desirable capability in most contemporary documents as was the ability to carry personnel above the requirements of the crew for NEO and LRSD insertion missions. Improvements in cross-country capability and in the ability to swim permit armored car operations in areas previously thought not trafficable to wheeled vehicles.

Armored cars have been used effectively in LIC operations in Malaya, Kenya, and the Republic of Vietnam. The South Vietnamese employed armored cars in their six cavalry squadrons and the French have

and still do use them with great success.⁹⁴

The introduction of a light armored vehicle (LAV) would enhance the capability of the reconnaissance squadron. The key issue concerning the introduction of a LAV into the LID is that mobility should equal transportability. Trade-off evaluations must be made to determine transportability costs of the LAV or an armored car-like vehicle in the reconnaissance squadron.

A force that can be useful to support a host nation in the earlier phases of an insurgency or supplement the limited cavalry capability of a light division is the light cavalry regiment (LCR). The LCR is a force earmarked for the contingency corps in mid to high level conflict or can supplement a light division for a LIC environment.⁹⁵ This force would, also, be ideal to augment our own overtaxed border patrol as it attempts to conduct counter-drug operations in conjunction with its regular mission.

The planned LCR possesses highly mobile air and ground cavalry equipped with helicopters and armored cars (the intent is to purchase the LAV).⁹⁶ This provides an economical, highly transportable, mobile force which is ideal as a supplement to a light division and could be an ideal organization for patrolling in the rough terrain and on the highways along our southern boundary with Mexico. If armed with a vehicle like the LAV, the LCR would possess a vehicle that would have armored protection and considerable firepower potential and yet is not too unlike the vehicles organic to many host nation (HN) police forces. The ramification of this similarity is that the LCR may be viewed as a less threatening force to the HN populace, an important consideration in a LIC environment.

As a supplement to a light division in a LIC situation, the LCR could either support in mass or provide squadrons and reaction forces to the commander on a regional basis; the Americans did this to some extent in Vietnam, however, the South Vietnamese allocated their six cavalry squadrons predominantly on a regional basis quite successfully. 27

Although the mobility of the squadron is important to gain superiority over the insurgent, the ability to locate him is equally important. Special equipment like thermal sensors, odorimeters (human scent sniffers), magnetometers, ground remote sensors, and laser sensors should be considered as contingency mission equipment to aid in surveillance. Although not routinely needed in other aspects of the spectrum of war, these devices could enhance the squadron's day or night acquisition capabilities. The night has long been conceded to the guerrilla. With these technological innovations, the night may no longer be safe for the guerrilla.

Mobility and acquisition systems are critical capabilities for the cavalry and each form of cavalry has a particular strength vis-a-vis another form. Air and ground cavalry integration is a prevalent historical theme and our force structure ably reflects this. Dependence on one means of cavalry can be folly. Aircraft are weather dependent, yet extremely flexible due to their mobility and speed. Ground cavalry is needed to minimize the effects of weather, and is a force better suited to maintain pressure on the guerrilla on the ground, and to provide more thorough ground reconnaissance. Therefore, air and ground cavalry should operate in conjunction with one another.

When to commit the cavalry in the conflict is an important issue. The answer to this question is the earlier, the better, if politically

feasible. A cavalry force properly integrated with the activities of a HN police force could assist by augmenting the capability of the police force. Generally, cavalry or reconnaissance forces are less intimidating than the introduction of other types of combat forces such as infantry, armor, or artillery. Reconnaissance forces are information collectors and depending on the team configuration and the procedures for cavalry/HN patrol integration, could tremendously extend the capabilities of the HN police without the introduction of the more intimidating types of combat forces. The most difficult aspect of determining when to introduce the cavalry is the political difficulty in recognizing when or if an insurgency is in progress. The sooner the cavalry can start building their "data base" on normal operations in an area, the sooner they can begin to perceive when change occurs (like the introduction of an insurgent force in the jungle).

Cavalry forces should be committed early. Cavalry is useful in all phases of an insurgency. In Phase I (latent insurgency), the cavalry collects information mostly about the terrain. By doing so, they become familiar with the country and its populace and can note changes like people's attitudes, unexplained cultivation activities in remote areas, or new housing in the jungle. The cavalry focuses on guerrilla activities in Phase II (guerrilla warfare), although the area orientation of Phase I is still pertinent. During Phase III (war of movement) the cavalry can either operate in conjunction with the other maneuver forces involved in the war of maneuver or they can remain oriented on an area in case the enemy attempts guerrilla activities in support of the war of maneuver. FM 90-8 indicates the usefulness and necessity for reconnaissance in the statement:

The role of reconnaissance and surveillance units in counter guerrilla operations at all levels of conflict is of prime importance. Reconnaissance and surveillance units are critical; without them the chance of success in counter guerrilla operations is significantly decreased. 33

A final note, in regard to the phasing of cavalry forces, is that aviation is thought by many to be less threatening than other maneuver forces. The thought of sending a ground maneuver force across the Inter-German Border is politically unthinkable and yet the same does not hold true for an aviation unit (LAM SON 719 again demonstrated this same phenomena). It is not unreasonable to believe that the first units introduced to support a HN counterinsurgency would be aviation units, possibly air cavalry. Aviation support was some of the first support in Vietnam and in some other counterinsurgencies.

If we have been politically permitted to commit our balanced multi-sensor cavalry force, then we must concern ourselves with the relative power of the cavalry vis-a-vis the insurgent. Cavalry, although now designed primarily for reconnaissance missions, still needs considerable punch. History has shown that reconnaissance units on purely reconnaissance missions often blundered into sizable guerrilla forces due to the cavalry's speed, flexibility, and stealth. The squadron must have the ability to task organize forces that can survive these contacts. Additionally, the guerrilla is quick to disperse when discovered. This may require a cavalry force that can either find and destroy the enemy or react rapidly before the guerrillas succeed in breaking contact. The reasons for these forces are not necessarily to conduct "sweep" operations (which have historically been unsuccessful) but to exploit a reconnaissance success.

Beside searching for the enemy, the cavalry has often been called

upon to secure remote fixed installations. This is largely because small cavalry units possess a great deal of firepower. The squadron itself has fast and mobile reaction forces. However, these security missions are often beyond the range of supporting artillery. So, this mission generates the need for some sort of indirect fire support means. Therefore, the addition of the 60mm mortar at either the squadron or troop may be useful.

The cavalry can be useful in isolating the guerrilla from his support. In Grenada, this involved patrolling routes through the off-lying islands and conducting coastline landing area analysis; both with the aim of isolating the insurgent from any possible means of external support. The British prevented the Malayan rebels and the Mau Mau in Kenya from both any external support or a favorable environment for self support. Thus, they denied the guerrilla access to external support and safe bases (as Mao required) or their unassailable rebel base (as T.E. Lawrence required). These bases may be the guerrilla's center of gravity.

Cavalry units perform reconnaissance and surveillance. Constant surveillance of the rebel operating areas can preclude the formation of the rebel army. The British in Malaya successfully kept the Malayan rebels from forming an army that had any substantial capability in the field.

If properly equipped, cavalry forces can be more mobile than the rebel forces. That mobility for the rebel be greater than their opponent was a requirement for insurgent success identified by T.E. Lawrence. Mobility was necessary to the rebel for successful operations thus enabling him the means to "dissipate" after action and thus evading

the opposing force. The more open (less concealment) the terrain, the more mobile must be the rebel force and, therefore, the more mobile must be the cavalry.

A review of current cavalry doctrine is essential in order to evaluate preparedness for our next LIC involvement. This doctrinal review is to see if our doctrine reflects the lessons learned from our previous experiences in LIC. If LIC is the most probable conflict warranting the employment of our Army, then our doctrinal manuals should place appropriate emphasis on that subject. After comparing historical documents with current doctrine, I feel the current cavalry doctrine is slowly incorporating the benefits of our experiences in LIC. The doctrinal manuals in this section and annotated in Annex A, reflect not only the most current U.S. Army doctrine, but also, doctrinal selections from the U.S. Marine Corps and the British Army.

The doctrinal manual for the air cavalry troop is FM 1-116, Air Cavalry Troop. Although an excellent manual for mid-to-high intensity conflict, it has little specific information to offer for LIC operations. Although a lot of what cavalry does is similar in any form of conflict, our experience in the conflicts previously discussed do warrant some additional attention. Save for the mention of guerrillas in the section about assembly area security, there is no information about what actions one might take against them. There is some mention about security of fixed installations and actions against stay-behind forces, but again, these have a mid-to-high intensity perspective. For a troop level manual, FM 1-116 needs to capture some of the lessons that previous air cavalrymen learned in battle.

The actions of the LRSD are the topic of FM 7-93, Long-Range

Surveillance Unit Operations. This is an excellent manual that provides the LRSD with good operating doctrine in any spectrum of war. Although the description of counter guerrilla operations is only a page long, when coupled with the general doctrine, it provides a sufficient theoretical framework for integrating the LRSD into a LIC environment. Some of the factors distinct to LRSD LIC operations suggest that there may be more team movement, with teams deployed for a longer duration, and in more restrictive terrain than for conventional war.

The keystone doctrinal manual for all cavalry is FM 17-95, Doctrine for Cavalry Operations. It is currently under revision and the revised edition provides one of the most enlightened considerations of LIC by a branch. This document discusses the differences between LIC and conventional war and the intelligence preparation of the battlefield (IPB) including terrain, weather, threat evaluation, and threat integration. FM 17-95 addresses possible missions for both light and heavy cavalry units that include most of the LIC spectrum. The battlefield operating systems are addressed with a clarity that shows that the studies about Vietnam have been read and will be incorporated into the doctrine. The current edition of FM 17-95 (February 1986) is lacking any mention of LIC operations.

The doctrinal manual for the ground cavalry troop is FC 17-101, Light Cavalry Troop. This manual is another good product that acknowledges that LIC is a reality. Pertinent LIC oriented comments are in every major section of the manual: however, the reader is mostly referred to FM 100-20 if he really wants more information about LIC. Unfortunately, FM 100-20 does not contain the type of detail that a cavalry troop commander needs. Although LIC oriented comments are in

every section of the book, none of the "how to" narratives or figures use a LIC scenario to describe an operation (e.g., how to conduct area reconnaissance). Although the manual repeatedly states that LIC is the focus of the light cavalry troop, there is little grass roots discussion (e.g., in listing the disadvantages to reconnaissance by fire, none of the LIC considerations learned by our history are reflected...one being the needless destruction of the friendly populace's property or life...thus alienating the populace from the government).

The manual does clearly have some pertinent LIC oriented information and wants to focus the attention of the reader to a LIC orientation. However, if LIC is the light cavalry troop's focus, then more of the examples and "how to" information should be directed to support that orientation.

Providing doctrinal direction for the squadron is FC 17-102, Reconnaissance Squadron (LID). FC 17-102 states that the reconnaissance squadron for the LID, "provides the division with the capability to conduct reconnaissance and security operations in a low to mid intensity conflict."²⁹ FC 17-102 does address contingency operations briefly, but in a broad perspective, but not to any degree of tactical usefulness. The reconnaissance squadron is the first tactical unit that possesses the air, ground, and long-range reconnaissance units whose mixture proved so effective in Vietnam and in our other conflicts. Despite this historical insight, FC 17-102 lacks the appreciation and perspective that both the coordinating draft of FM 17-95 and FC 17-101 possess, and all these documents were written at Fort Knox.

All the examples and figures in the FC are examples of cavalry use in mid-to-high intensity conflict. Yet, the manual acknowledges that

"the strategic mobility inherent to light divisions all but guarantees deployment to crisis areas where little may be known about either the enemy of the terrain."

As this section and Annex A illustrates, the current doctrinal manuals are lacking LIC emphasis in their discussions in the basic chapters of the manuals and normally only minimal consideration in annexes. Our current doctrinal manuals do little to incorporate our experience as identified by this study. FM 34-130, Intelligence Preparation of the Battlefield, and FM 17-95, Cavalry Operations (Coordinating Draft), both do much to focus their readers in that direction throughout the manuals. Other manual writers would do well to review their techniques.

SECTION IV - CONCLUSIONS.

*"This is another type of war new in its intensity, ancient in its origins - war by guerrillas, subversives, insurgents, assassins; war by ambush instead of by combat; by infiltration, instead of aggression, seeking victory by eroding and exhausting the enemy instead of engaging him...it requires in those situations where we must counter it...a whole new kind of strategy, a wholly different kind of force, and therefore a new and wholly different kind of military training."*¹⁰⁰

John F. Kennedy, 1962.

"Reconnaissance is a means to an end, not an end in itself. Reconnaissance is essential for successful maneuver, maneuver being the end."¹⁰¹ In our wars, our cavalry has always been assigned reconnaissance and security missions. These missions are still applicable in LIC, but the missions identified by the historical analysis encompass a much more diverse role for the cavalry. Yet, the armored and air cavalry developed, based on previous conventional conflicts, have been successfully adapted in our latest LIC involvements.

The aim of our LIC doctrine is to provide the campaigner a perspective that can succeed and forestall involvement in the protracted war that everyone seeks to avoid. The imperatives for LIC are: political dominance, unity of effort, adaptability, legitimacy, and patience. These imperatives must govern the employment of reconnaissance forces as much as any tactical principle, for the battles in LIC are not necessarily best won in combat. Principles, not strategies, should endure from one insurgency to the next.

Although not totally inclusive, sound LIC doctrine is being published. The problem is that doctrine writers have tried to "modularize" LIC from war in a unit's doctrinal source manual (e.g., FM 71-100, Division Operations). Although this may work as far as the printed word, equipping and training forces necessitates a commitment to an employment means. Units cannot be readily equipped or trained for one mission and then used for another. To be employed effectively and time.y, they must be properly armed both physically and mentally for a particular mission from the start if one wants to avoid a protracted conflict as they adapt their organization to thier new environment. Our forces in Vietnam required a great deal of time to adapt men and equipment to the situation.

This suggests that a more appropriate strategy for some units is to be trained and equipped for their most probable employment scenario rather than the worst case scenario. Coupling this with the new era of peacefull relations between the Warsaw Pact and NATO, more funds can and should be redirected for suitable strategic mobility, equipment, and training for our light forces.

Insurgencies cannot be generalized. A successful strategy for one

insurgency may be irrelevant to the next.¹⁰² Therefore, categorizing insurgencies and counterinsurgencies may have more utility than applying a past strategy to a current situation (the British discovered this in Kenya). Mao definitely agreed with this sentiment as he was careful to define all aspects of war and guerrilla operations from a Chinese perspective, based on Chinese requirements.

SECTION V - RECOMMENDATIONS.

"As a nation we don't understand it (low intensity conflict) and as a government we are not prepared to deal with it."¹⁰³

General Wallace H. Nutting

Although recommendations are not normally an aspect of a monograph of this scope, the study certainly suggests that the cavalry may encounter some difficulty in its next LIC involvement. I have included some recommendations that can mitigate the impact of some of these training or doctrine shortcomings.

When considering an appropriate force for use in a LIC environment, MG J. F. C. Fuller, in a series of lectures in 1932, stated that "The problem is...one of space and the conquest of space, it is, therefore pre-eminently a problem for machinery, and the machines which off-hand suggest themselves are the airplane, motor vehicle, and scout tank."¹⁰⁴ The reconnaissance squadrons of the light divisions are organized to incorporate Fuller's thoughts.

The time and place to determine how to support our next LIC operation is now in our garrisons. It is apparent that training for operations in a LIC environment is different than for conventional training. Although history has shown that the cavalry generally possesses both equipment and doctrine that is flexible enough to accommodate the demands of this type of conflict, what must be done now

is the intellectual preparation for how we might accomplish this.

It is apparent from our experiences in history that the cavalry may be called upon to do more than route, zone, or area reconnaissance or to screen the force. At squadron level, this may warrant the production of an standard operating procedures (SOP) or probably a handbook that should address topics like: combined cavalry and HN police patrolling, the squadron surgeon's ability to support a small HN population, or load planning squadron assets for noncombatant evacuation, amongst other topics.

As a means to formalize this intellectual preparation, a unit LIC handbook may be appropriate at the squadron level; however, a handbook or SOP would/should more probably be a division product that certainly our light divisions should have. Those divisions that are allocated for possible employment in LIC probable areas should develop a handbook or SOP that sets the parameters for their subordinate units, assigned or trace units. The intellectual wargaming to develop this SOP should occur with the regularity that we wargame our mid to high intensity plans. This SOP should include trace units (e.g., an ACR allocated to support a light division in a particular scenario).

A good example of a force attempting to come to grasp with the need for LIC doctrine is the Marine Corps. The U.S. Marine Corps Small Wars Manual should be the template for any handbook that a division may develop. More importantly, the Small Wars Manual should be the start point for the effort of a special study group (to include the Army, Navy, Air Force, Marines, State Department, and numerous other federal agencies) or the Center for Low Intensity Conflict to develop an operational LIC doctrine. Understandably every LIC situation is

different, but many of the players are the same players in each situation and the process for their interaction should be conducive to standardization. In other words, joint doctrine incorporating other federal departments and agencies.

A review of current Army doctrine shows that there are some lessons from our last conflicts that will be lost. Techniques like "watch the water buffalo and go where he goes for he must stand on the bottom or yellowish reeds and cloudy water means soft bottoms"¹⁰⁵ are not war winners; however, if forewarned, then maybe some of our initial tactical encounters will not be mere learning experiences but successes. The point is that there were ten years of education acquired in Vietnam that have not been incorporated into special environmental manuals (if that is a desirable method) which will soon be lost to our tactical units. The manual for the reconnaissance squadron (the lowest level integrating ground cavalry, air cavalry, and LRSD) has little mention of LIC operations although it is their most likely mission.

A notable omission in the LRSD doctrinal manual is some of the detachment skills that are needed. LRSD-like forces have been a critical participant in previous LIC operations and, although documented in history, techniques like tracking are not mentioned in the current LRSD manual. Tracking, in particular, is a skill that should be sustained in training.

We must not only prepare ourselves intellectually for LIC, but, also, we must properly equip ourselves for this contingency. Reconnaissance must be continuous, particularly at night when insurgent guerrillas are most active. The ramification of this is that all cavalry assets must possess a night sensor capability. These sensors

may not only include passive or thermal sights, but also, possibly a magnetometer, odorimeter, or laser warning indicator. In reference to the magnetometer, if a helicopter can locate parts from an airline mishap in the cornfields of Iowa, then they can be used to find guerrillas (locate their weapons) in the jungle. These magnetometers should be small portable devices that can be installed in an observation or utility helicopter.

Sensing the change in the environment is an important capability of the cavalry. One interesting aspect of cavalry operations in the historical analysis was that the cavalry operated as if assigned operating regions, almost as if conducting a continuous area reconnaissance. Any cavalryman that has operated in an area for a while can readily detect change. He may initially not know what it is, but he will know something is different. This adds credibility to Sun Tzu's "...know the ground, know the weather; your victory will then be total."¹⁰⁶ The cavalry can sense changes in the network of trails, campsites, camps, crop growth, or movements in open terrain.

A good ground platform for multisensor packages would be either a LAV or an armored car. Tradeoff evaluations should be made to determine transportability costs of the LAV or an armored car-like vehicle in the reconnaissance squadron versus the HMMVV. The LAV is a family of vehicles and, if the trade-off is not too unfavorable, could be used to replace other HMMVV vehicles in the division (e.g., air defense artillery vehicles).¹⁰⁷

One good tradeoff for the LAV is that it has the same turret as the M3 Bradley cavalry fighting vehicle (CFV). This would simplify the transfer of cavalrymen assigned to the M3 for at least turret and

gunnery considerations, increase the densities of those repair parts, and facilitate the transfer of turret mechanics for that system. At the theater level, if the light divisions and the Marines (two probable LIC participants) were equipped with the same type of vehicles, it would reduce a theater commander in chief's (CINCH) problems for logistics.

Doctrine, organizations, equipment, tactics, and techniques must evolve as a result of our previous experience in conflict. There was discussion in our Army in the mid-seventies about the nature of war as viewed from the perspective of our Vietnam experience. We decided that what was learned there could not help us win in the forests of Germany...and we were correct. However, LIC is a different kind of war and Vietnam was that kind of war; so it would be tragic to maintain that there is little to be learned from Vietnam. Some have disparaging remarks about the way the Army fought in the Dominican Republic and Grenada, particularly because of the lack of actual shooting that occurred. However, actions like these are becoming the nature of contemporary warfare and the most probable employment setting for much of our Army. It is time to revise all of our doctrine, organizations, equipment, tactics, methods, and techniques to accommodate the use of our "Strategic Army" in all levels of war.

ANNEX A - DOCTRINAL ANNOTATED BIBLIOGRAPHY

1. FM 1-100, Army Aviation in Combat Operations, addresses joint, combined, and contingency operations. The contingency section addresses operations in support of foreign internal defense, peacekeeping, counterterrorism, and peacetime contingency operations. Although informative, it does not reflect some major lessons of our experience in Vietnam, the Dominican Republic, Grenada, and more contemporary lessons from Honduras and Panama.

2. The United States Army Aviation Center's "Army Aviation Employment in Counter-Drug Operations" (White Paper) is one of the center's many excellent "think-piece" documents that are on the leading edge of doctrine development (particularly for the LIC environment). The center is clearly anticipating future involvement in counter-drug operations and has released this paper to various schools, units, and Army legal authorities in order to develop doctrine for the involvement of forces in this conflict.

The center is currently envisioning aviation units used to conduct the following missions in support of counter-drug operations: reconnaissance, surveillance, and security; air assault operations (e.g. in conjunction with the Drug Enforcement Agency [DEA]); attack operations (counter-movement operations); air movement; air traffic services; and other missions (deception, delay, raids, and link-ups). Some of these missions are currently legally unfeasible; however, if the scope of the military's involvement is increased, emergency legislation may be enacted that may provide the legal means to accomplish these tasks. The important point to be made is that the Aviation Center is attempting to develop the doctrine before it is required. As more drugs

are moved by ground across our southern boundary, the Army's involvement may have to be increased and refined in order to assist an already inundated United States Border Patrol.

3. The United States Army Aviation Center's "Cavalry Operations" is a 1988 product that describes cavalry operations. This paper's purpose is to acquaint the reader with cavalry organization, capabilities, and missions. The emphasis, however, is on mid-to-high intensity considerations.

4. Another example of the Aviation Center looking at a LIC problem is another White Paper, "A Scenario: Diving Fire for Attack Helicopter Operations During a Low Intensity Conflict." This educational document clearly incorporates some of the lessons learned in Vietnam, our subsequent experiences, and improvements based on technology into our aerial gunnery techniques.

5. FM 34-1, Intelligence and Electronic Warfare Operations, provides a good insight into intelligence and electronic warfare operations in general. The book addresses operations in a generic sense although the examples and diagrams are oriented on mid and high intensity examples. Chapter 12, special operations and environments, does present an adequate intellectual discussion of differences in the intelligence system in a LIC environment.

6. FM 34-130, Intelligence Preparation of the Battlefield, is one of the first manuals that includes LIC considerations as an integral aspect of all discussions thus providing the reader LIC pertinent information throughout the entire spectrum of conflict. Appendix E, Intelligence Preparation of the Battlefield (IPB) in Counterinsurgency Operations, is the most comprehensive and useful non-LIC-specific

document for Army planners that I encountered in my research.

Counterinsurgency operations require a new manner for analyzing the battlefield due to the elusive nature of the enemy and his abstruse method of conducting the conflict. Until the guerrilla commits to phase III, war of movement, conventional IPB products have little usefulness and may even adversely effect Army operations. Conventional IPB products, when used to analyze a LIC situation, can often misdirect military activity by emphasizing aspects of the environment that are not pertinent to the counterinsurgency effort.

7. FM 71-100, Division Operations, like many other contemporary doctrinal manuals, fails to integrate LIC considerations throughout the entirety of the document. There is a comprehensive discussion of LIC in Appendix B, low intensity conflict, but it does not include the battlefield operating systems in this discussion. The unique manner in which the battlefield operating systems are applied in a LIC situation are worthy of discussion in a division level manual. Division level lessons learned in Vietnam and Grenada should be surfaced in this document, if not throughout the document, than more of this information should be included in the LIC appendix.

8. FM 90-8, Counterguerrilla Operations, is a great manual that gets into specifics and incorporates the lessons of our past involvement in counterguerrilla operations. It is the first doctrinal manual to mention that minimum essential force is probably the most appropriate approach for the tactical commander. This manual clearly stresses the government forces' needs.

FM 90-8 discusses the nature of insurgency and counterinsurgency down to the level of tactical usefulness. The battlefield operating

systems are addressed in such detail as to aid a force planner and tactical commander make the correct choices for success based on our historical experiences.

9. FM 100-5, Operations, clearly is oriented towards operations in the mid to high intensity aspect of the conflict spectrum. This is not necessarily a failing for it does address those aspects admirably. Presumably any further discussion of military operations in LIC (other than its six pages for LIC and contingency operations) is left for FM 100-20. What FM 100-5 does for us is establish that there is a spectrum of conflict.

10. FM 100-6, Large Unit Operations, articulates the nature of conflict that would warrant the employment of large units. The manual's emphasis is almost exclusively oriented toward mid to high intensity operations. The discussion of the enemy is strictly about Soviet forces. Campaign planning (necessary to link ideas developed in FM 100-20 to actions) addresses only the military aspects of campaigning and does not provide a framework for interagency campaign plans. Large unit operations in even the mid-to-high intensity come close to national political goals and in these conflicts, military action is preeminent. In LIC, political actions become the dominant consideration and our campaign planning should institutionally reflect this linkage and establish a interagency planning procedure.

11. FM 100-15, Corps Operations, discusses LIC at a level useful for the strategic and operational planner but not for a tactical planner. Depending on the role of the corps in a particular situation, this may be of little use to the corps. Although corps contingency operations are addressed in Chapter 8, it does not provide any

particular insight into how to select the proper force for the appropriate mission. Obviously FM 100-20 and FM 90-8 may provide meaningful information, but FM 100-15 alone does not address battlefield operating systems in terms of a LIC environment. Although the manual is well written and uses many pertinent historical examples, these examples all fall in the realm of mid to high intensity conflict.

12. FM 100-20, Military Operations in Low Intensity Conflict, is the keystone Army/Air Force manual governing military operations in a LIC environment. Of equal importance to its doctrinal impact is FM 100-20's effort to establish an intellectual framework for evaluating LIC. The manual is an excellent document for the strategic and operational level planner but has little for the tactical planner. This is not a failing in terms of counter guerrilla operations (FM 90-8 covers that aspect admirably); however, the missions of peacekeeping, peacetime contingency operations, and combatting terrorism are not specifically covered in any manual to the degree FM 90-8 covers counter guerrilla operations. Since the majority of our conflict operations after the Second World War fall largely in these categories, there is a doctrinal void for these actions.

13. The United States Marine Corps' Small Wars Manual, although written in 1940, is the finest U.S. manual for linking theory to action for military operations in a LIC environment, particularly for counterinsurgency and peacekeeping operations. This manual addresses the finer points of inter-department and inter-agency cooperation at the operational level. It describes techniques that the tactical commander must know.

Although Marine reconnaissance units did (do) not have organic air

assets assigned, the interaction of the ground and air assets called for in the Small Wars Manual were predictive of the Army's reconnaissance units of today. The Small Wars Manual addresses everything from horse transportation to establishing a constabulary, from air reconnaissance to boat movements, and from preparation training while onboard ship to staff operations. In essence, it is extremely thorough. This book should be a must for our light divisions' libraries for it is useful from squad leader through commanding general.

14. The British Army manual, British Army Counter Revolutionary Warfare and Out of Area Operations is one of the most comprehensive manuals covering LIC operations for both theory and application and is nearly on par with the U.S. Marine Corps' Small Wars Manual.

To the British, intelligence is the first priority for a military force involved in LIC operations.¹⁰⁸ The British consider reconnaissance troops, observation points, and air operations as invaluable collection means in a LIC operation. They feel, however, that these troops should be equipped with additional sensors and that reconnaissance operations should be conducted only after careful and detailed planning and briefing.¹⁰⁹ Augmentation by surveillance aids assist reconnaissance units; however, the British feel that aggressive patrolling by reconnaissance units can provide accurate and timely information concerning enemy numbers, intentions, and direction of movement.¹¹⁰ Air and ground reconnaissance units can be used for route clearance, as a picket (screen) force, and for escort.

Figure 4 presents a British perspective on the phases of an insurgency (communist modeled) and provides some insight into the characteristics of the phases on which a reconnaissance unit can focus.

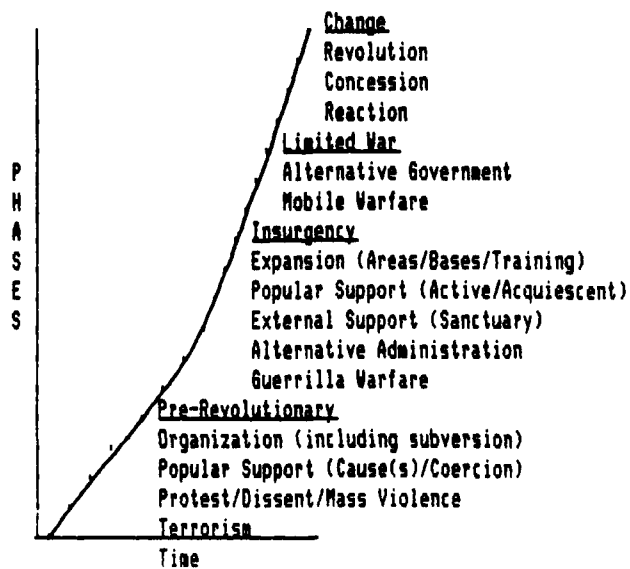


FIGURE D - Revolution - The Classic Communist Model'''

This is an outstanding LIC manual that, although not as thorough as our Marine's Small Wars Manual, is certainly contemporary and battle tested.

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- ⁹⁹ FC 17-102, p. 1-1.
- ¹⁰⁰ FM 90-8, p. iv.
- ¹⁰¹ Charles L. Crow, The J-Series Cavalry Squadron and Its Reconnaissance Mission, (A Student Thesis), (Fort Leavenworth, Kansas: U.S. Army Command and General Staff College, 1985), p. 25.
- ¹⁰² Lessons from the Malayan Struggle Against Communism, p. 2.
- ¹⁰³ _____, Joint Intensity Conflict Project Final Report, Volume I. Analytical Review of Low Intensity Conflict, (Fort Monroe, Virginia: U.S. Army Training and Doctrine Command, 1 August 1986), p. 1-1.
- ¹⁰⁴ J.F.C. Fuller, (MG, British Army), Armored Warfare, (Harrisonburg, Pennsylvania: The Military Publishing Company, 1943), p. 165.
- ¹⁰⁵ Mechanized and Armor Combat Operations in Vietnam, p. 23.
- ¹⁰⁶ Sun Tzu, The Art of War, p. 129.
- ¹⁰⁷ Department of the Navy, Reed Bolick (LtCol, USMC), "The Light Armored Vehicles Program," (Washington, D.C.: Program Manager, September 1989).

¹⁰⁸ M.M. Haynes, Counter Revolutionary Warfare and Out of Area Operations, (Camberly, England: Staff College, 1988), p. 5-1.

¹⁰⁹ Ibid., pp. 5-9-10.

¹¹⁰ Ibid., p. 6-11-13.

¹¹¹ Ibid., p. 1-7.

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