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AN ANALYSIS OF OPERATION URGENT FURY

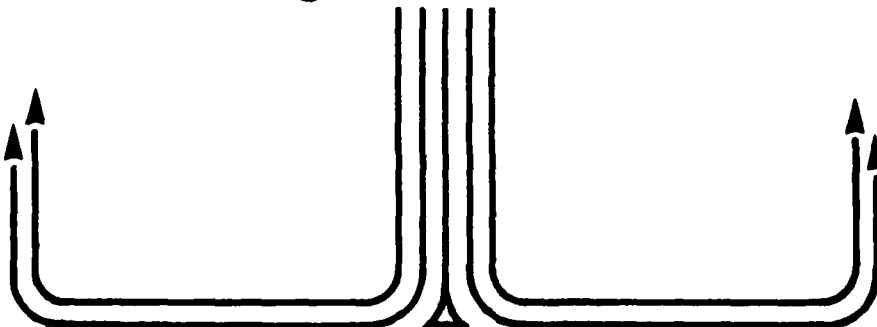
MAJOR DAVID T. RIVARD

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Submitted to the faculty in partial fulfillment of
requirements for graduation.

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PREFACE

Great battles of history are studied for a number of reasons. Past battles serve as learning instruments from which valuable lessons may be learned by analyzing what went right or what went wrong. We can learn from the past battles and incorporate this knowledge in hopes of not repeating the mistakes in future battles. Military professionals analyze battles as a purist- a professional seeking to learn all he can learn about his trade. Unclassified official after action reports were not available at the time of publication. In order to keep this report unclassified I have relied heavily upon the news media reports backed-up by personal interviews with participants to document the research. It is my belief the use of special operation forces is the main cause for the high classification of official reports.

Operation Urgent Fury took place in the Caribbean on a small island called Grenada 70 miles off the coast of Venezuela 25 October 1983. The battle itself was not significant in terms of men and equipment deployed or in the fact that the United States intervened militarily. The United States has intervened militarily in the Caribbean and Latin America many times historically. President Reagan stated there were basically three reasons why the intervention took place: " First, and of overriding importance, to protect innocent lives; second, to forestall further chaos; third, to assist in the restoration of conditions of law and order and of government institutions to the island of Grenada". I believe there are two other reasons for the operation that were just as important- It demonstrated American resolve to again physically confront and challenge the spread of communism in the Caribbean and Latin America; plus it served notice to the Russians and Cubans that America had emerged from the post Vietnam doldrums and again had the national will to use military force to stop communist imperialism.

This paper will present a background of the events leading up to the operation and the battle itself. I will then analyze the battle in the context of the Principles of War as stated in AFM 1-1. The adherence to or the deviation from these Principles of War may highlight the areas that succeeded because they were congruent with the principles or succeeded inspite of deviation from the principles. Finally, I will attempt to use this battle as a case study providing some of the answers to the problem of projecting airpower where we do not have existing forward airbases.

ABOUT THE AUTHOR

Major David T. Rivard graduated from Bemidji State College in 1970 with a Bachelor of Science degree in mathematics. He received his commission through Officer Training School 30 June 1971. He completed a Masters degree in Business Administration from the University of Troy in 1977.

Major Rivard completed pilot training at Laughlin AFB, Texas graduating in July 1972. He was assigned to RAF Woodbridge, United Kingdom flying rescue HC-130's. Following this four year assignment he was assigned to Aerospace Rescue and Recovery Service Headquarters at Scott AFB, Illinois. He served 18 months in the Rescue Command Post and 18 months in the acquisition branch before transferring to tactical airlift C-130s. He was assigned to Clark AB, Philippines. He served 12 months in the 374th TAW Command Post working strategic airlift missions before becoming the Chief of Standardization and Evaluation section prior to attending Air Command and Staff College in residence in 1984. His PME includes Squadron Officer School by correspondence and in residence. He completed ACSC by seminar in 1982.

As can be seen by this brief, Major Rivard brings extensive C-130 airlift and command and control experience to this research project.

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Chapter One

THE INVASION COUNTDOWN

Events leading up to the invasion of Grenada can be traced back to the government of Maurice Bishop. Mr. Bishop came to power through a coup d'etat on 13 March 1979 and led a marxist government with strong Cuban and Russian backing until 13 October 1983 (31:17). He had invited Russian and Cuban assistance in building a new 9,000 foot runway at Point Salines on the Southwest point of the island of Grenada. President Reagan had become increasingly concerned about the possible use of this runway for Soviet/Cuban military purposes. In a televised speech on 23 March 1983, he warned the American people of the growing threat to this region. He said:

On the small island of Grenada at the southern end of the Caribbean chain, the Cubans, with Soviet financing and backing, are in the process of building an airfield with a 10,000 foot runway. Grenada doesn't even have an air force. Who is it intended for? The Caribbean is a very important passageway for our international commerce and military lines of communication. More than half of all America's oil imports now pass through the Caribbean. The rapid build-up of Grenada's military potential is unrelated to any conceivable threat to this island country of under 110,000 people, and totally at odds with the pattern of other Eastern Caribbean States, most of which are unarmed. The Soviet/Cuban militarization of Grenada, in short, can only be seen as power projection into the region, and it is in this important economic and strategic area that we are trying to help the governments of El Salvadore, Costa Rica, Honduras and others in their struggles for democracy against guerrillas supported through Cuba and Nicaragua (26:1).

This statement was followed by other statements warning the Cubans, Russians and Grenadians that America was becoming uneasy over the events in Grenada. Maurice Bishop may have understood these warnings and visited the United States in June 1983 in an attempt to pacify Washington's growing concern in Grenada. The highest ranking official to meet with him was the National Security Advisor, William Clark. His visit to establish good will with the U.S. and to lessen ties with the Cubans was not successful. Nothing changed in the relationships between the two

countries. On October 13th, Bishop was arrested by communist extremists in a power struggle led by Bernard Coard and General Hudson Austin. They felt Bishop was trying to make a deal with the Americans that was contrary to the revolution. Then on 19 October, thousands of Bishop's supporters marched to Bishop's home and freed him from house arrest. They then proceeded to Fort Rupert where the crowd disarmed the garrison and Bishop took over the fort's central office. A few hours later, armored personnel carriers and troops converged on the fort. In the confusion that followed, the government APCs fired into the crowd killing and wounding many people. Bishop and five other key followers were brought into the fort and executed. There were an estimated fifty casualties, including women and children (32:36).

Radio Free Grenada announced the deaths and the formation of the new government headed by Army Chief Hudson Austin. That night an around-the-clock shoot on sight curfew was announced until October 24 at 6:00 a.m. Pearls Airport was closed, a commercial airlines flight from Barbados was turned back, and all subsequent flights were cancelled (34:58). International journalists were forced to depart the country immediately. The newsman who covered the freeing of Bishop, his arrest, and shooting at Fort Rupert was arrested and held in prison until released by the rescue forces (31:30). On Friday, October 21, Donald Cruz, a U.S. consular officer from Barbados flew into Grenada. He met Major Leon Cornwall who had succeeded Bishop as head of the Revolutionary council. Major Cornwall couldn't even name the other council ministers. The medical students told Cruz that they were scared. The Organization of Eastern Caribbean States (OECS) were very concerned about the apparent chaos and anarchy that was occurring in their powerful neighbor. Grenada's Governor General Paul Scoon smuggled a letter to the OECS requesting help. On Saturday, 22 October, Washington received a cable from the OECS requesting help in restoring order to the island. Concern was raised over the possibility of the students being taken hostage in the same manner as the Iranian hostages (8:75).

Precautionary planning and measures had already started on Thursday, 20 October. In response to the unstable conditions that followed Bishop's assassination, the aircraft carrier Independence and her battle group (21 ships) enroute to the Mediterranean Sea were diverted to the Caribbean. On October 23rd, after the request for help from the OECS and growing concern for the welfare of 800 American students attending the medical college at St. George's, President Reagan tentatively decided to launch the rescue mission (22:32). He ordered the full authority for the mission be vested in the Joint Chiefs of Staff (JCS). On Monday at 2:00 p.m., General John W. Vessey Jr., chairman of the JCS, reaffirmed an earlier estimate that casualties would be light. At six p.m. that evening, President Reagan gave the official go ahead to Defense Secretary Weinberger. Later that evening congressional leaders were informed of the impending operation.

The plan, called Operation Urgent Fury, was finalized by 24 October 83 (24:86). Admiral Wesley L. McDonald, Commander of U.S. forces in the Atlantic region and his staff, planned the operation in roughly two and one-half working days. Planning started 21 October and invasion was launched 25 October (7:2). The final plan was a combination of individual service plans worked together in an attempt to use the best available units on particular military objectives. The special operations forces had devised a plan in which they would have completed the mission with the help of the 82nd Airborne Division. The details of how this mission would have been conducted are classified. It is suffice to say they had a viable concept of operations, but were directed by the JCS to modify the plan to include other forces. The Navy also devised a plan that called for basically the carrier task force and the Marines to do the job unassisted. It was felt by the JCS the enemy could field nearly 5,000 troops and the Marine battalion would not be sufficient to accomplish the objectives; in face of the possible worse case opposition. Therefore; the final plan involved all four of the services with the main goal of rescuing the Americans while minimizing loss of life of all concerned (33:332).

The plan was basically this: Shortly after midnight on 25 October, an Army special forces unit of commandos would parachute onto Grenada. Their mission was primarily to clear the runway at Point Salines of any obstructions in time for a scheduled 5:00 a.m. landing of C-130's carrying Army Rangers (12:51). Three Navy Seal teams would be airdropped near the coast and infiltrate ashore. They had three basic objectives: to capture the government radio station in St George's, secure the safety of Grenadian Governor Paul Scoon being held under house arrest in his residence at the governor's mansion, and help clear any Cuban/Grenadian army patrols from the Point Salines Airport (23:26). Approximately one hour later, 700 U.S. Rangers would either airland on Point Salines or be airdropped by C-130s. At the same time a Marine assault force consisting of 400 Marines would assault the smaller northern airfield at Pearls. The 82nd Airborne would airland on Point Salines after the Rangers had secured the runway and allow the Rangers to press forward with their assault toward St. George's and the campus facilities to rescue the students. The students were known to be located at True Blue Campus, located very close to the Point Salines runway. The assault force would be covered by AC-130s, naval guns, and carrier fighters. Three hundred troops from neighboring islands would be flown into Point Salines once the airport was secure. The island was split basically in half with the Marines covered by carrier aircraft in the northern part and the Rangers with gunship support in the southern half. Each force would have its own commander reporting directly to Adm Metcalf on the USS Guam. To preclude any possible attempt by Cuba to come to Grenada's

aid, F-15's, AWACS, and SAC tankers would be deployed to Roosevelt Roads, Puerto Rico to serve as a blocking force (7:1).

Key allies such as Britain were to be notified in advance and a request made for their support. Concern was raised over the possible use of the American students or political prisoners as hostages. Unnecessary collateral damage and casualties would be kept to a minimum. The ground commanders were instructed to maneuver cautiously to avoid casualties. U.S. troops would be withdrawn as soon as the resistance was crushed. Governor Scoon would then head a temporary government until the political situation stabilized and elections could be held (23:26).

Top security was felt to be essential in this operation to attain the element of surprise. It was about six p.m. Monday, 24 October that President Reagan signed the final order launching Operation Urgent Fury.

Chapter 2

THE BATTLE

During the pre-dawn hours on Tuesday, 25 October a 35-man Delta special operations force parachuted near Point Salines. The main objective was to clear the unfinished runway in time for the scheduled arrival of the C-130s carrying the Rangers. The Cubans guarding the airport discovered the Delta Force and pinned them down for more than four hours. Six were killed with many wounded. The Navy Seal teams under the cover of darkness were the next forces to land on Grenada. One Seal team consisting of eight men was detected approaching Point Salines and driven back by the Cubans. In the firefight, four commandos were killed and two were wounded (12:5-f). Using maps constructed from Grenadian tourist maps, they proceeded toward their objectives (24:86). Their main objectives of locating and protecting Paul Scoon and silencing the radio station were quickly accomplished. The first attempt to release Mr. Scoon was turned back by gunfire from the guards holding him prisoner in the governor's mansion. The second attack was successful and the 11-man Seal team took charge of the mansion (18:22). The attack to secure the radio station was not successful at first since the wrong building was attacked. The subsequent attack on the correct building was successful. The objective to clear the Point Salines runway failed because of the alertness of the defending forces.

Three AC-130 gunships were the next forces to arrive on scene. Their job was to provide firepower for the Ranger landing, silence any opposition, and to survey to Point Salines runway to determine if the C-130s could land the Rangers there instead of parachuting them onto the field. The AC-130 low-light TV sensors quickly spotted the runway had been barricaded with pipes, boulders, and vehicles to prevent any aircraft from landing. The decision for airdrop was implemented. The gunships were immediately engaged by anti-aircraft guns from the moment they arrived overhead. This necessitated the lead MC-130's to airdrop the Rangers from 500 feet above the ground. The MC-130 leading the first element of the airdrop came under heavy anti-aircraft fire on their approach to the drop zone. Both wingman turned away from the drop zone to avoid the anti-aircraft fire. This made for some uneasy moments for the one third of the Ranger forces that did drop and were facing hostile fire alone (12:6-f). The AC-130 flying overhead was quickly called to silence the anti-aircraft batteries and the airdrop continued. There could have

been a lot more casualties had not the decision been made to drop from 500 feet above the ground. The anti-aircraft guns had been positioned on hills near the airport and could not depress their guns low enough to effectively fire on the C-130s. As the 700 Rangers drifted toward the airstrip in their chutes, the Cubans met them with AK-47 rifle fire. Armored personnel carriers appeared within 400 yards of the landing zone and started to mortar the Rangers. The troops took cover and the AC-130 gunship overhead provided effective covering fire. The enemy forces had been waiting for the attack (18:23).

Twelve hundred Marines had commenced their attack on Pearls Airport 30 minutes before the Ranger airdrop in a helicopter assault from the Navy task force. The seas were too rough for an amphibious landing. They met only light resistance in the attack (4:1). By 7:15 a.m., both runways were reported secure. Ground units at Point Salines were reporting unexpectedly heavy resistance. By 10:00 a.m., it became clear that the Cuban forces were significant. Two battalions of the 82nd Airborne were airlanded by C-130s on Point Salines. The runway had been cleared by Rangers hotwiring Cuban bulldozers and clearing the debris off the runway. With Point Salines under control, Ranger units started sweeping through the complex of barracks and warehouses north of the runway towards St. George's. They ran into a series of sharp fire fights and heavy resistance near the stronghold of Frequente. The Rangers weren't able to capture Frequente until after sundown. At Frequente a large cache of Cuban and Soviet weapons were found. On two occasions on the first day Cubans radioed Havana requesting permission to surrender, but were told to defend their positions (28:69). The Navy Seals team at the governors mansion were under attack and requested air support to stop the approach of three Cuban-manned BTR-60 armored personnel carriers that had them pinned down. One of the AC-130 gunships quickly stopped all three of the APCs. The Seals position was still tenuous as the Seals were now trapped in the governor's mansion surrounded by hostile troops. While the 00801 team was hanging on, Adm Metcalf, the Commander of Urgent Fury, directed the redeployment of four hundred Marines from Pearls Airport back to the assault ship Guam. These Marines then made an amphibious landing on the beach with five tanks and 13 amphibious vehicles at Grand Mal, about a mile north of St. George's. The Marines pushed on to the governors house relieving the Seals team nearly 21 hours after their entry into combat. The governor and his staff were evacuated by helicopter. By the time the Seals were relieved, 10 of the 11 men on the team were wounded (28:75). It had taken 12 hours for the relief column of Marines to fight their way from Grand Mal to the beleaguered Seals team. The ground commanders were under orders to maneuver with unusual caution to hold down casualties (5:3).

The American students at the True Blue Campus of St. George's University School of Medicine, located right near the Point Salines runway, were awakened by the sounds of the battle at Point Salines Airport. They could see the anti-aircraft fire and the paratroopers landing. The students took cover the best they could since bullets were piercing their rooms. An unknown number of Grenadians and Cuban troops isolated the True Blue buildings from the rest of the campus. The Rangers were able to drive off the defending troops and rescue these students by 8:30 a.m. Information gathered from these students indicated there were more students located at the campus at Grand Anse, four miles north of the runway. Army attempts to rescue these students met determined resistance and they pulled back when they discovered the campus was ringed by a company of defenders. They feared they would jeopardize the students unnecessarily without a coordinated plan of attack. One of the students had a ham radio and was in contact with friendly forces and reported the students were not being threatened at this time. The Rangers using Marine helicopters mounted a determined attack the next day with air support and evacuated the students. Once the students were safely evacuated the defenders were quickly overrun (32:290). Although the Grenadians and Cubans never made a move to harm the students, some feared they would be taken hostage prior to being rescued. Cubans and Grenadians had surrounded the school in a defensive stance knowing the Americans could not use their heavy firepower with the students so close. By Wednesday evening all the students had been safely rescued (15:5). The liberating forces carefully avoided endangering the Soviet Embassy in St. George's where 49 Russian diplomats were hiding in seclusion. Fighting on the first day had been the most intense in the Point Salines area. Eleven Americans had been killed and several helicopters, including gunships, shot down.

There were several pockets of resistance to be cleared out. The battle for Fort Rupert was very intense with defending soldiers shooting down two Army Cobras. Eventually, the air attack reduced the fort to a smoldering shell and the ground forces cleared out the last defenders. The last three strongholds were Fort Frederick, Richmond Hill Prison and Calivigny Barracks. It took more than a day of combat before Fort Frederick fell. Delta force using Marine helicopters on a daring daylight assault tried to storm the prison, but were driven off by machine gun fire (12:5-f). The prison was abandoned later that night. Calivigny Barracks was assaulted by the Rangers using Blackhawk helicopters on Thursday afternoon. The area was thought to be strongly defended by Cuban and Grenadian soldiers. The area was heavily shelled and bombed before the first wave of four Blackhawks went in. One of the pilots was hit in the leg by small arms fire and lost control of his aircraft. It crashed into another Blackhawk. A third chopper crashed trying to avoid the first two. When the Rangers were able to regroup and move into the area, they found the majority of the defenders had moved out earlier leaving a

small element of 8-10 men. These men had taken positions on the next ridgeline during the preparatory barrage and fired on the assault troops from there. Three men were killed in the helicopter crashes and several wounded seriously (11:65).

By late Thursday, all major military objectives on the island were secured. Friday was devoted to mopping up scattered pockets of resistance. More than 5,000 paratroopers, 500 marines, 300 Caribbean troops, and 500 Rangers were on Grenada. This force had captured 638 Cubans, 10 East Germans, 3 Bulgarians, 49 Russians, and 24 North Koreans (18:25). Casualties to American forces consisted of 18 dead and 116 wounded. Twenty four Cubans were killed and 59 wounded. Forty five Grenadians died with 337 wounded. Twenty four of the Grenadians were civilians, including 21 mental patients killed when the hospital was accidentally bombed (1:3). There were 784 Cubans on Grenada at the time of the attack including the 636 construction workers with some military training. A Cuban colonel which had been flown in to organize the defense of the island only 24 hours prior to the attack was also captured (31:27).

The role of the AC-130 gunships in this operation was significant and deserves special attention. Three gunships flew non-stop from their base in Florida to Grenada on the morning of the attack to provide essential close air support to the Ranger units and the Seal teams. With their air refueling capability and support from Strategic Air Command tankers, they were able to fly tremendously long sorties over the target area. One aircraft commanded by Lt Col David Simms logged over 20 hours of flying time on the first day. The AC-130s were the first aircraft over the island and reconnoitered the Point Salines Airport for the planned assault landing of the follow-on MC-130 combat Talons carrying the Rangers. The gunships used their special sensors to detect the runway was obstructed and not available for landing. The Rangers then changed the plan while airborne for a low level airdrop. The airdrop was from 500 feet above the ground due to the amount of anti-aircraft fire the gunships were encountering. One AC-130 pilot reported that an estimated 300 rounds of 23mm fire was directed at his aircraft. Instead of finding three anti-aircraft batteries as briefed by intelligence, they found about a dozen sites manned and waiting for them. With the deadly accurate firepower from its 20mm, 40mm, and 105mm guns, the gunships were more than a match for these batteries. The AC-130s were an essential component of the invasion force. In two instances in which the Rangers requested fire support at Point Salines, a single accurate round fired the first time from the gunship was enough to convince the defending troops to surrender. In an attack on three armored personnel carriers, four 105mm rounds were fired with all scoring direct hits. There are many other stories exalting the accuracy and firepower of the AC-130s, but I think Maj Gen Edwin Trobaugh the 82nd Airborne Commander paid them the highest tribute when he told his staff, "He would

give up his offshore naval gunfire support, his landbased artillery, and his helicopters before he would release the gunships for redeployment". He wanted the timely surveillance and instant accurate fire power as long as there were enemy soldiers unaccounted for (29:53-56).

The captured documents, many of them marked Top Secret, clearly indicate the degree that Grenada was to be made into a military arsenal. Grenadians under Cuban supervision were planning on organizing a proposed army consisting of 18 battalions. Using the average size of the Cuban battalions, this force would have included at least 7,200 men. Captured documents clearly specify the arrangements that were made with the Soviet Union. It should be noted that almost all the arms to be given to the Grenadians would be funneled through Cuba. Arms were to be delivered by 1986 by the Soviets, Cubans, North Koreans, and Czechoslovakia. The projected arms delivery list is quite extensive and I have included only a partial listing to give the general idea of the nature of the build-up.

There were about 10,000 rifles, including assault rifles, sniper rifles, and carbines; more than 4,500 machine guns, 294 portable rocket launchers with 16,000 rockets. In addition to this, there were sixty anti-aircraft guns of various sizes including almost 600,000 rounds of ammunition and thirty 57mm ZIS-2 anti-tank guns with about 10,000 rounds of ammunition. Finally, sixty armored personnel carriers, 30 76mm ZIS-2 field guns, and 20,000 uniforms were also found. Large amounts of this equipment were captured still in shipping crates stored in warehouses (32:22-24).

The precise purpose of this build-up remains unclear. The possibility of developing Grenada into another fortress along the lines of Cuba is certainly a strong possibility. The possible use by both Cuba and the Soviet Union is easily recognized. Selwyn Strachan, the Grenadian Minister of Mobilization stated publicly in 1981, "that Cuba would eventually use the new airport to supply their troops fighting in Africa, and the Soviets would also find the runway useful because of its strategic location astride the sea lanes and oil transport routes" (31:31). Its geographic location (70 miles off the coast of Venezuela) would have facilitated Cuban efforts to export subversion to South America.

Chapter Three

APPLICATION OF THE PRINCIPLES OF WAR

This chapter presents an analysis of Operation Urgent Fury in terms of the principles of war. These principles are depicted in AFM 1-1, Basic Aerospace Doctrine of the United States Air Force. This manual contains the basic doctrine for preparing and employing the aerospace arm of our Nation's Armed Forces. The principles of war represent generally accepted major truths which have been proven successful in the art and science of conducting war. Since war fighting is an extremely complex activity involving widely differing circumstances and uncertainties, the relative importance among the twelve principles will vary with each situation. A commander must determine the priority of the principles in each situation to decrease the degree of risk and possibility of failure in military operations. Adherence to the principles should, theoretically, enhance the combat effectiveness of the operation. By analyzing this operation we will determine if the operation reinforces the applicability of the principles or if the principle was not valid in this case. One should realize that the principles are not a roadmap or a recipe to success in warfare. The principles are interrelated and interacting elements. Knowledge of the principles help provide a better understanding of warfare (30:2 - 5).

The first principle of war detailed in AFM 1-1 is defining the objective.

OBJECTIVE

The most basic principle for success in any military operation is a clear and concise statement of a realistic objective. The objective defines what the military action intends to accomplish and normally describes the nature and scope of an operation. An objective may vary from the overall aim of a broad military operation to the desired outcome of a specific attack. The ultimate military objective of war is to neutralize or destroy the enemy's armed forces and his will to fight. However, the intimate bond which ties war to politics cannot be ignored. War is a means to achieving a political objective and must never be considered apart from the political end. Consequently, political imperatives shape and define military objectives. It follows that

the objective of each military operation must contribute to the overall political objective (30:2 - 5).

The objectives for this operation were very clear and certainly incongruence with the principle of objective. The political objective was to depose the current regime and replace it with a moderate government friendly to the U.S. The military objectives were to engage and destroy the defending forces and insure the safety of the American students on the island. There were approximately 15 military objectives to be accomplished. The runways at Point Salines and Pearls Airport had to be captured and operational as soon as possible to provide logistics support for the operation. Capturing these airfields would also cut off the escape routes of Mr. Coard and General Austin. There were several forts and military training areas to be captured. There were no political constraints in the conduct of the battle itself. Military commanders were given a task to perform and then left to do it. In this case, military force was used effectively in accomplishing the political objective. The marxist government was overthrown, the students were not harmed, and peace and stability were returned to the region. As an added benefit, American resolve to use force if necessary to support our interests was again made clear to the world. The second principle of war is offensive.

OFFENSIVE

Unless offensive action is initiated, military victory is seldom possible. The principle of offensive is to act rather than react. The offensive enables commanders to select priorities of attack, as well as the time, place, and weaponry necessary to achieve objectives. Aerospace forces possess a capability to seize the offensive and can be employed rapidly and directly against enemy targets. Aerospace forces have the power to penetrate to the heart of the enemy strength without first defeating enemy forces in detail. Therefore, to take full advantage of the capabilities of aerospace power, it is imperative that air commanders seize the offensive at the very outset of hostilities (30:2 - 6).

Military forces were clearly on the offensive throughout this operation. The units were committed to capturing objectives. The amphibious landing of Marines at Grand Mal on the second day of the operation was a key offensive maneuver. Resistance crumbled significantly after this assault (32:286). The enemy was forced to react to U.S. initiatives and could not launch a significant counter attack. U.S. forces had complete freedom of the air and brought airborne fire power to bear effectively throughout the battle. The AC-130 gunship was superb in its ability to direct accurate close air support fire.

It repeatedly cleared the way for Ranger advances. The Cobra gunships were also very effective, but much more vulnerable to ground fire. The accurate fire from the AC-130 was enough in several cases to cause the defending forces to surrender after the first round had been fired (29:25).

Operation Urgent Fury was designed to be an offensive operation to attack and secure objectives. The enemy was completely outmatched and could not hope to succeed in defending against the attack. Effective air cover made it impossible for defending forces to mass for a counterattack. The operation validates and was incongruence with the principle of offensive.

The third principle of war is surprise. There are varying degrees of surprise. Total surprise, such as Pearl Harbor, is seldom achieved. Surprise to the degree that the enemy cannot take appropriate actions before the operation commences has been much easier to attain.

SURPRISE

Surprise is the attack of an enemy at a time, place, and manner for which the enemy is neither prepared nor expecting an attack. The principle of surprise is achieved when an enemy is unable to react effectively to an attack. It is achieved through security, deception, audacity, originality, and timely execution. Surprise can decisively shift the balance of power. Surprise gives the attacking forces the advantage of seizing the initiative while forcing the enemy to react. When other factors influencing the conduct of war are unfavorable, surprise may be the key element in achieving the objective. The execution of surprise attacks can often reverse the military situation, generate opportunities for air and surface forces to seize the offensive, and disrupt the cohesion and fighting effectiveness of enemy forces. Surprise is a most powerful influence in aerospace operations, and commanders must make every effort to attain it. Surprise requires a commander to have adequate command, control, and communications to direct his forces, accurate intelligence information to exploit enemy weaknesses, effective deception to divert enemy attention, and sufficient security to deny an enemy sufficient warning and reaction to a surprise attack. (30:2 - 6).

The principle of surprise was validated in this operation. Complete surprise was not effected during this battle. Evidence indicates the U.S. State Department advised Castro of the

invasion plan the evening of 24 October (17:1). A pentagon official stated, "Castro was told that we were not going to attack his people. We know from signal intelligence what his orders (to Cuban soldiers on Grenada) were - to fight. And they fought" (10:77). When the invasion began in the predawn hours on 25 October, Cuban troops at Point Salines were in their positions and opened fire when the first AC-130 arrived overhead. ZSU-20 anti-aircraft guns were in positions around the airfield with their gunsights set at 700 feet elevation in anticipation of an airdrop. The runway was barricaded with equipment, pipes, and stakes. Since the airdrop was conducted at 500 feet most of the anti-aircraft fire went over the top of the C-130s. The gun batteries had been positioned on hills and could not depress their guns enough to bring effective fire to bear on the low flying aircraft. Two companies of defenders were positioned away from the airport near the coast in anticipation of an amphibious landing. Although the enemy was aware of an impending attack, the element of surprise was effective in the sense the enemy could not make effective defensive preparations. A Cuban colonel had been flown in to prepare the island for possible attack a day before the invasion, but it was clearly a case of too little too late (27:77).

It is extremely doubtful complete surprise can be attained in future battles. The principle of surprise will still be valid if the enemy can be surprised to the extent he will not be able to react effectively to counter the attack. Surprise is certainly desired and effective where employed. Surprise was effective in Grenada. The defenders most likely had some advance warning of this operation even if the State Department did not tell the Cubans. Radio broadcasts from Barbados announced the pending invasion a day before the attack. Fifty Marines were seen at Barbados and local news people were putting the pieces together. The Russians were surely aware of the change in course of the carrier Independence task force and must have alerted Castro to its probable intentions. The element of surprise cannot be effected without security.

SECURITY

Security protects friendly military operations from enemy activity which could hamper or defeat aerospace forces. Security is taking continuous, positive measures to prevent surprise preserve the freedom of action. Security involves active and passive defensive measures and the denial of useful information to an enemy. To deny an enemy knowledge of friendly capabilities and actions requires concerted effort in both peace and war. Security protects friendly forces from enemy attack through defensive operations and by masking their location,

strength, and intentions. In conducting these actions, air commanders at all levels are ultimately responsible for the security of their forces. Security in aerospace operations is achieved through a combination of factors such as secrecy, disguise, operational security, deception, dispersal, maneuver, timing, posturing, and the defense and hardening of forces. Security is enhanced by establishing an effective command, control, communications, and intelligence network. Intelligence efforts minimize the potential for enemy actions to achieve surprise or maintain an initiative; effective command, control, and communications permit friendly forces to exploit enemy weaknesses and respond to enemy actions (30:2 - 6).

The element of surprise was effected in the sense the enemy did not have time to adequately prepare its defenses against the attack. Security was essential in this aspect since had the Cubans known earlier of the pending invasion they could have reinforced the island and marshalled public opinion against the attack. Great efforts were made at the White House to insure the secrecy of the mission. When the congressional leaders were briefed about the pending mission, they were quietly informed in person to come to the White House for a secret meeting with the President. American press was as big of threat to security as any foreign agent. The fear of newsleaks was very real and the number of people aware of the planning of the mission was kept to an absolute minimum. These efforts were largely successful. Defending forces were aware of an impending attack, but they did not have enough time or information to make adequate preparations. Newsmen were kept out of the battle area during the initial days of the invasion. This created much controversy from an indignant press corps. The use of the special operation forces teams is thought to be the main reason for this and the top security concerning the mission after action reports. I also feel the exclusion of the media was partly the result of unscrupulous news reporting in past events and a desire to perhaps test public reaction to barring newsmen in the interest of national security. Security was essential to the success of this operation and validates the principle of security. Effective security is essential for massing and economizing forces. In this operation the military was criticized for the large force employed.

MASS AND ECONOMY OF FORCE

Success in achieving objectives with aerospace power requires a proper balance between the principles of mass and economy of force. Concentrated firepower can overwhelm enemy defenses and secure an objective at the right time and place. Because

of their characteristics and capabilities, aerospace forces possess the ability to concentrate enormous decisive striking power upon selected targets when and where it is needed most. The impact of these attacks can break the enemies defenses, disrupt his plan of attack, destroy the cohesion of his forces, produce the psychological shock that may thwart a critical enemy thrust, or create an opportunity for friendly forces to seize the offensive. Concurrently, using economy of force permits a commander to execute attacks with appropriate mass at the critical time and place without wasting resources on secondary objectives. War will always involve the determination of priorities. The difficulty in determining these priorities is directly proportional to the capabilities and actions of the enemy and the combat environment. Commanders, at all levels, must determine and continually refine priorities among competing demands for limited aerospace assets. This requires a balance between mass and economy of force, but the paramount consideration for commanders must always be the objective. Expending excessive efforts on secondary objectives would tend to dissipate the strength of aerospace forces and possibly render them incapable of achieving the primary objective. Economy of force helps to preserve the strength of aerospace forces and to retain the capability to employ decisive firepower when and where it is needed most (30:2 - 7).

Planners of this operation have been criticized for the large size of the force used in the operation. To their credit, they massed and deployed fairly large numbers of troops in a short time. There was doubt as to the size of the force defending the island and this led to perhaps oversizing the force we deployed. Planners were reluctant to gamble and planned for the worst case scenario. Senator Tower stated this feeling when he said, "Its better to err on the large side of the force" (32:289). The ability to mass overwhelming firepower contributed immensely to the low casualties sustained by the Rangers. At every contact with the enemy, the Rangers used their available superior firepower to the maximum advantage. Key to the firepower in the southern half of the island was the AC-130. One Ranger described the gunship, "Just like having a sniper in the sky". Grenada proved the ability of airlift to rapidly deploy combat troops and equipment to battle areas. The gunship proved their ability to provide close air support for Army operations day or night. The ability to mass forces and firepower was clearly demonstrated during this operation. The principle is certainly valid in this case. The defending forces were completely outmanned and outgunned after the first hours of the invasion. It is to their credit they continued to put forth any resistance in face of clearly superior forces. Economy of force was not a factor

for the attacking force other than it created problems for airlift and resupply. The defending forces were all committed to action the first day with no ability to regroup and launch determined counterattacks. They violated the principle of mass in their defensive deployment of troops in the Point Salines area. They split up three companies of troops by deploying two companies to the seaside of the hills near the airport to defend against a possible amphibious landing. The two companies were cut off from the runway and defeated when they tried to move back to the runway. The result was the runway was operational one and one-half hours after the parachute landing (11:61). The defenders were not able to maneuver their forces to meet the changing situation.

MANEUVER

War is a complex interaction of moves and counter-moves. Maneuver is the movement of friendly forces in relation to enemy forces. Commanders seek to maneuver their strengths selectively against an enemy's weakness while avoiding engagements with forces of superior strength. Effective use of maneuver can maintain the initiative, dictate the terms of engagement, retain security, and position forces at the right time and place to execute surprise attacks. Maneuver permits rapid massing of combat power and effective disengagement of forces. While maneuver is essential, it is not without risk. Moving large forces can lead to loss of cohesion and control (30:2 - 7).

Maneuver was used in this battle to good effect. The classic case was the amphibious landing of the Marines at Grand Mal. The Marines were withdrawn from the Pearls Airport area in response to the heavy resistance encountered by the Rangers in the Point Salines area and subsequently made an amphibious landing with five tanks and 13 amphibious vehicles. The Rangers were without armor or many vehicles. This limited their ability to maneuver against points of resistance. Resistance started to disintegrate following the landing of the Marines and their armor. The use of helicopters was effective in rescuing the students at Grand Anse and relieving the Seal team protecting Mr. Scoon. The Army on three occasions were able to have Marine helicopters provide them with the desired maneuverability to launch assaults against pockets of resistance.

This battle demonstrated the difficulty in air transporting large numbers of combat troops and their equipment. Heavy tanks, APCs, and helicopters take up alot of cargo space. This restricts the maneuverability of the ground troops after they are deployed. Seaborne troops have their heavy equipment with

them when they are deployed. Several tanks in the Point Salines area would have quickly quelled the resistance encountered there. The timing of the operation in Grenada was critical to its success. It was feared by the planners the Grenadians would attempt to take the American students hostage similar to happened during the Iranian incident.

TIMING AND TEMPO

This is the principle of executing military operations at a point in time and at a rate which optimizes the use of friendly forces and which inhibits or denies the effectiveness of enemy forces. The purpose is to dominate the action, remain unpredictable, and create uncertainty in the mind of the enemy. Commanders seek to influence the timing and tempo of military actions by seizing the initiative and operating beyond the enemies ability to react effectively. Controlling the action may require a mix of surprise, security, mass, and maneuver to take advantage of emerging and fleeting opportunities. Consequently, attacks against an enemy must be executed at a time, frequency, and intensity that will do the most to achieve objectives. Timing and tempo requires that commanders have an intelligence structure that can identify opportunities and a command, control, and communications network that can responsively direct combat power to take advantage of those opportunities (30:2 - 8).

The initial timing and tempo were excellent. The chaotic conditions in Grenada after the shooting of Bishop provided an excellent opportunity to use military power to meet a political objective. The speed in which the operation was planned and implemented was essential to its success. If the Cubans had a few more days to prepare for an invasion it may have been to late. Consider what our options would have been had part of the Russian Brigade in Cuba been "requested" to assist in the defense of the island. A longer delay in the implementation would have surely resulted in newsleaks that would have made the operation politically unfeasible. The American students probably would have permitted to leave the island safely, but the radical regime of General Austin would have remained in a position to destabilize the surrounding area. The tempo of the operation was such that it prohibited the defenders from regrouping or being reinforced.

The tempo should have been faster still. The students at Grand Anse were certainly in a vulnerable position for an extended time, especially if this was one of the primary objectives of the operation. The defenders did form a defensive circle around the students knowing we could not use

heavy firepower against them with the students so close by. The tempo in this case leads one to conclude the primary objective was not to rescue the students, but to dispose the communist regime in Grenada. Using this as the primary objective the tempo of action was very good. Defending forces were systematically eliminated and U.S. casualties were relatively light. The commanders had been asked to maneuver with caution to keep the casualties low. The command structure of the operation has been criticized for violating the principle of unity of command.

UNITY OF COMMAND

This is the principle of vesting appropriate authority and responsibility in a single commander to effect unity of effort in carrying out an assigned task. Unity of command provides for the effective exercise of leadership and the power of decision over assigned forces for the purpose of achieving a common objective. Unity of command combined with common doctrine, obtains unity of effort by the coordinated action of all forces toward a common goal. While coordination may be attained by cooperation, it is best achieved by giving a single commander full authority (30:2 - 8).

Effective command and control has been a problem with American military operations since the Korean War. Grenada leads one to believe we are making little progress in solving it. Unity of command over multi-service operations continues to be a problem. In this case the island was split in half by the ground and air forces. I believe this is not congruent with this principle of war. In this case, success was obtained in spite of unity of command. There were problems in coordination between the Marine and Army ground forces. Communications between the units was made especially difficult since their radios were not compatible. Messages had to be relayed through off-shore relay stations. The Marines on the northeast side of the island were not aware of the stiff resistance the Rangers were encountering in the Point Salines area (9:3). The problem appears to stem from competition between the services. Each service is very reluctant to allow any of its forces to be under the command of another service. Each service wants action in every operation to continue justifying its budget and existence (13:21). The command structure in this case was not abnormal in the historical sense, but it still open to criticism. VAdm Watson, the overall commander, was situated on the USS Guam with limited radio communications with his two field commanders. The performance of all concerned appears to have been good. The limited capability of the opposition prevented any possibility of major failure. The problem with using a single service in this case appears to be one of service rivalries. A larger

Marine force could have accomplished the various objectives, especially if they had AC-130 gunship close air support. The Army with the Rangers and 82nd Airborne could have performed the mission, especially if they had a Naval task force offshore to support them. I feel either the Marines or the Army should have been given this mission. Grenada was not a big enough operation to necessitate the use of all the services. The Marines have historically handled missions such as these and should have handled this one too. The Army Rangers could have been standing by should reinforcements have been required. On the positive side, leaders in Washington did not micro-manage the operation. Hourly situation reports kept Washington informed. This allowed the mission commander more time to command. The plan had to be kept simple because of the variety of forces employed and the haste of launching the operation. Simplicity is another essential principle of war.

SIMPLICITY

Simplicity promotes understanding, reduces confusion, and permits ease of execution in the intense and uncertain environment of combat. Simplicity adds to the cohesion of a force by providing unambiguous guidance that fosters a clear understanding of expected actions. Simplicity is an important ingredient in achieving victory, and it must pervade all levels of military operation. Extensive and meticulous preparation in peacetime enhances the simplicity of an operation during the confusion and friction of wartime. Command structures, strategies, plans, tactics, and procedures must all be clear, simple, and unencumbered to permit ease of execution. Commanders must strive to establish simplicity in these areas, and their peacetime exercise of forces must pursue that same goal. The promulgation and exercise of mutually accepted guidelines in peacetime enhances the ability of subordinates to comprehend the orders and directions of commanders during the stress of combat (30:2 - 8).

General Gabriel said, "Keeping it simple was necessary because in this case we had damned little time to plan and little intelligence" (19:4). Because the operation was a "shortfuse" action giving the commands involved no time to conduct joint training, care was taken in planning strategy to keep the Marines and Army segregated from each other. The JCS were concerned about interface problems between the services. No one wanted casualties resulting from friendly fire. The airspace was divided in half to preclude Navy fast movers from colliding with Air Force planes. The island was cut in half with the Marines in the northern half and the Army in the south. The Marine landing at Grand Mal, in the southern half, was in response to relieve pressure on the Seal team surrounded

In the governor's mansion. The Army was meeting stiffer resistance than anticipated and unable to relieve the Seal team in a timely manner. The basic plan was simple and in congruence with this principle of war. Above all, it proved a simple plan can succeed especially if your field commanders have initiative to change and modify the plan as required. In any operation logistics is an important feature of war. In this case the capability to rapidly deploy large amounts of men and material was demonstrated. Logistics had prepackaged loads and computer generated loadplans that assisted tremendously in the very fast reaction to the deployment order.

LOGISTICS

Logistics is the principle of sustaining both man and machine in combat by obtaining, moving, and maintaining warfighting potential. Success in warfare depends on getting sufficient men and machines in the right position at the right time. Regardless of the scope and nature of the operation, logistics is one principle that must be given attention. Logistics can limit the extent of the operation or permit the attainment of the objectives (30:2 - 9).

The rapid airlift of combat troops and their equipment was certainly a success. Military airlift Command (MAC) did a superb job responding to the airlift requirements. In the first twelve days of the operation, MAC flew 750 missions hauling 18,000 passengers, 8,800 tons of cargo, and 500 aircrew (6:64). The rapid build-up and employment of combat troops limited the amount of resistance the Cubans could prepare on Grenada. The airlift of supplies was assisted by the availability of airfields in Puerto Rico and Barbados. Mounting and supplying a multi-battalion assault force 70 miles off the coast of Venezuela was a considerable logistical undertaking. The logistical demands are basically the same regardless of who are the opposing forces. Grenada demonstrates we have the capability to rapidly deploy and sustain combat forces over great distances. Problems remain in shortage of airframes during very large contingencies and the ability to handle large numbers of transports on the ground at austere locations.

The last principle of war is cohesion. Cohesion in the case of the Grenada operation was hardly tested. The battle was not of significant duration and the defending forces were so thoroughly outmatched the friendly forces never had any doubt as to the final outcome.

COHESION

Cohesion is the principle of establishing and maintaining the warfighting spirit and capability of a force to win. Cohesion is the cement that holds a unit together through the trials of combat and is critical to the fighting effectiveness of a force. Throughout military experience cohesive forces have generally attained victory, while disjointed efforts have usually met defeat. Cohesion depends directly on the spirit a leader inspires in his people, the shared experiences of a force in training or combat, and the sustained operational capability of a force. Commanders build cohesion through effective leadership and by generating a sense of common identity and shared purpose. Leaders maintain cohesion by communicating objectives clearly, demonstrating genuine concern for the morale and welfare of their people, and employing men and machines according to the dictates of sound military doctrine. Cohesion in a force is produced over time through effective leadership at all levels of command (30:2 - 9).

Cohesion was demonstrated by AC-130 gunship aircrews on the first day of operation. These aircrews flew from Florida to Grenada nonstop to provide essential close-air support. One crew's first sortie was 15 hours long, but when told they were needed for more close-air support, air refueled and flew another five hours (29:27). Rangers hotwired Cuban bulldozers while under fire to clear the runway of obstacles. One group used a bulldozer as a tank to assault a Cuban position (3:2). This type of war fighting spirit is essential to winning battles. This battle did not last long enough to build cohesion during the fighting. Leaders commanded highly motivated troops eager for action from the start. The all volunteer Army with very little combat experience did perform quite well under fire : their first taste of combat.

Chapter Four

LESSONS LEARNED

In any battle there are lessons to be learned. Areas of the operation that went well are worth remembering for future occasions. Problems areas need to be looked at in hopes we can do better next time.

The planning of the operation went very well. Admiral McDonald and his staff did a superb job in planning the fairly large operation in roughly two and one-half working days. The plan was not easy to formulate because of the lack of intelligence of opposing forces, the need for absolute secrecy, and overall number of agencies involved. The planning was criticized in a congressional report for being modified at the JCS level to include all the services so they could get "a piece of the action" (33:332). The original plan involved only the Marines and Navy. The JCS claim the Marine force immediately available would have been hard pressed to accomplish the mission alone. The forces were selected for their ability to accomplish the various objectives under the worst case scenario (20:31). I have previously stated my thoughts on this matter and will not reiterate them here.

Grenada did teach us a lesson in the value of human intelligence gathering. Satellites and aerial photography is limited in its ability to provide the information necessary to effectively plan a military operation. Planners needed to know more about the strength of the defending forces, will they offer determined resistance, and where are the objectives, such as students, located. Budget reductions and public disclosures of intelligence gathering techniques and operative names have had a detrimental effect on our ability to employ human intelligence gathering anywhere in the world. The main lesson is we must increase our ability to accurately collect intelligence in a timely manner from all sources.

The performance of the special forces units was less successful than desired. The Delta force failed on two occasions to accomplish their mission. The Seal teams were more successful in their objectives, but suffered many casualties. We need to examine the missions assigned to these units to determine if their objectives were realistic in terms of the manpower available to complete the task. The inability of the commandos to secure the runway resulted in the reconfiguration of the Rangers inflight to a paradrop operation. The main lesson here is in the

value of backup plans. It was good planning that enabled the Rangers to prepare for the airdrop while airborne.

The need for a capability to conduct paratroop operations was validated again. In an age where airdrop aircraft are very vulnerable to sophisticated air defense systems, Grenada demonstrated there are still situations where a surprise airdrop will work. The force deployed must be light enough equipped to allow airdrop, yet have enough firepower available to withstand armor attacks. The Army is currently attempting to field new ultralight divisions designed to be highly mobile and capable of stopping a heavy armored division (2:4).

The AC-130 proved to be extremely effective in providing close air support for the Army during a conventional operation. They silenced about a dozen anti-aircraft batteries before serious damage could be inflicted on the airdrop C-130s. The question remains as to why there is little evidence showing effective use of the gunships by Marine units? They appeared to rely exclusively on Sea Cobras and Navy fast movers for air support. The AC-130s were also split apart from their base of operation at Grantly Field, Barbados after the first couple of days. This severely complicated the maintenance and supply problem of a critical resource. The reason for splitting up the gunships was field saturation at Grantly Field. Part of this problem could have been alleviated by ensuring only essential units are deployed. Several units worked very hard to be included in this operation even though they were not needed.

The new Army Blackhawk helicopter proved it is a battleworthy machine. Ten Blackhawks sustained battle damage during the operation and only one was destroyed. The one destroyed had been carrying extra fuel inside when hit and this contributed to its destruction. One Blackhawk was hit 45 times and still completed its mission (3:2). Nine helicopters out of 107 employed were either destroyed or heavily damaged. Several of these were lost in battle related accidents, but the fact remains helicopters are highly vulnerable to combat losses and this needs to be anticipated in the planning phase. The Blackhawk is a move in the right direction in building a better combat helicopter.

Communications were perhaps the biggest irritant in the operation. In spite of millions of dollars spent in trying to improve in this area, this operation again demonstrated we have a long way to go. There was no interoperability between Marine and Army radios. Far too many users were using the same frequency. Secure communications were virtually nonexistent (9:3). If the enemy had been able to jam the radios, communications would have been in complete disarray.

Unity of command was a problem. The problem stems from the reluctance of the individual services to allow another service command its units. In the case of Grenada, the island was split

in half with each half having its own field commander. The overall mission commander was on board the USS Guam. The result was basically two independent ground forces operating on a relatively small island (14:19). The Marines were not aware of the stiff resistance the Rangers were encountering in the Point Salines area. The command structure in this case could have been improved had there been an overall ground commander in charge of all the ground forces on Grenada. This did not present a major problem in this battle against weak opposition, but it could foreshadow problems should a larger more complicated operation be undertaken using the same command structure. One solution to this problem would be to equip and train one branch of the service entirely for this type of mission. Another would be to make sure provisions are made for the transfer of command of ground units in the field to one ground commander. This would eliminate the situation of two different ground forces operating independently with little knowledge of each other positions.

The lack of military charts caused some problems during the operation. Ground units experienced difficulty in orientating themselves and in directing supporting gunfire and airstrikes. The inadvertent airstrike on a friendly position resulting in 14 casualties has been blamed partly on this chart confusion problem (12:6-f). It was later determined three different charts were in use during the operation. Some C-141 aircrews had charts on which Point Salines Airfield wasn't even depicted. Hopefully measures have been taken to prevent problems like this from recurring again.

Airlift was adequate for this mission. The problem of night operations did disrupt the airflow of supplies into Point Salines. A highly deployable airfield lighting system could have been set up on the first day to allow C-141s to operate 24 hours a day. A larger deployment involving division strength would severely strain existing airlift resources. The Army's move towards fielding ultra-light divisions is in response to this airlift shortfall. Air Force must continue its efforts to increase its airlift capability. It would help eliminate offload bottlenecks if the airfield requirements could be reduced. Equipment and cargo must be configured for rapid onload and offload. Preallitized cargo and computer assisted load plans are certainly helping in this area.

The final lesson to be learned is all military personnel must be prepared to accomplish our primary mission of war at anytime with very little notice. Many Grenadian participants were enroute to training exercises when diverted to the real thing (25:71). We as leaders must make sure our units will be ready whenever the time comes (16:19).

Chapter Five

POWER PROJECTION

A problem for planners is how can we project aerospace power into areas of the world without friendly forward operating bases. How certain can we be of being able to use current friendly bases should a contingency break out? If diplomatic negotiations fail to secure an operating location what can we do if it is a military necessity to operate in that area? Answers to these questions have been plaguing planners for a long time. Perhaps the operation in Grenada can lead us to some possible answers.

What lessons can Grenada teach us about this power projection problem? First, the Rangers were successful in parachuting to capture an airfield. The runway was rapidly readied for subsequent landing of transport aircraft. The AC-130 proved to be extremely effective in providing close air support for the Army. The AC-130 will be is a valuable asset in providing accurate firepower in protecting a base perimeter. Although the special forces teams were not as successful in their missions as hoped, they could certainly be a valuable asset in the initial taking of an airfield. Logistical resupply of a sizable ground operating force would be a potential bottleneck. The single runway and lack of ramp space at Point Salines limited the number of aircraft that could be on the ground at one time. The problem of ramp saturation will continue to be a problem in any air intensive operation. The airfield would need to be quite large to handle the volume of aircraft required to supply the ground forces and launch tactical air sorties. Point Salines would not have been able to handle many more aircraft. No fixed wing aircraft were refueled or bedded down at Point Salines. Helicopters alone stretched the capability to refuel them. The airfield needs to be lit for night operation and capable of all weather operation. There needs to be storage capability for fuel, parts, munitions, and food. These problems can be rapidly compounded should the airfield come under attack. The friction of war could cause effective air resupply to become tenuous. Given we were able to take and hold an air field and then support combat air operations for a period of time, what happens when its time to leave? Evacuation in face of hostile actions would be very difficult. Our best fighters are relatively short range and would need numerous refuelings to provide air cover. Once their ordinance was expended it would be very difficult to rearm.

Given these problems the best answer appears to be use the Navy task force to project airpower in lieu of having forward bases. The Army and Air Force can provide excellent support in many scenarios, but to commit these forces to capturing, holding, and resupplying a base against a determined modern equipped defending force would be very difficult.

The ideal situation would involve an area near a sea coast. The Marines with Navy support are much better equipped to launch an attack and hold territory than a force totally relying on air support. I make this statement based on the problems in resupplying ground and air forces with all the items of war necessary to sustain its war fighting capability. Airlift is restricted by its ability to haul outsized cargo, ground handling restrictions at an austere off load location, the impact of adverse weather, number of aircraft available, and maintenance of these aircraft. It is my conclusion that in the foreseeable future the Navy should be the primary service responsible for acquiring territory for further operations. The Army and Air Force would be the last in and first out in most situations. The coordinated assault on Grenada certainly is an example how all the services can be employed together to provide a synergistic effect when needed. The Cubans didn't know if we would come by sea or air and therefore had to split up their forces. This uncertainty weakens defenders and complicates their problems. Is there a place where the Army/Air Force may need to capture an airfield without naval support?

What equipment do we need to invent to change this outlook? I think we would need a massive lifting body with an excess of million pound cargo capability. A huge dirigible may be a solution. It would need to have defensive weapons capable of shooting down incoming missiles or attacking aircraft. Perhaps it could launch and recover its own harrier type fighters. A tilt rotor aircraft may need to be used to fly close air support sorties from the dirigible. The result may look like the Battle Star Galactica from science fiction shows, but who is to say this can't happen fifty years from now?

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