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The Air War in El Salvador

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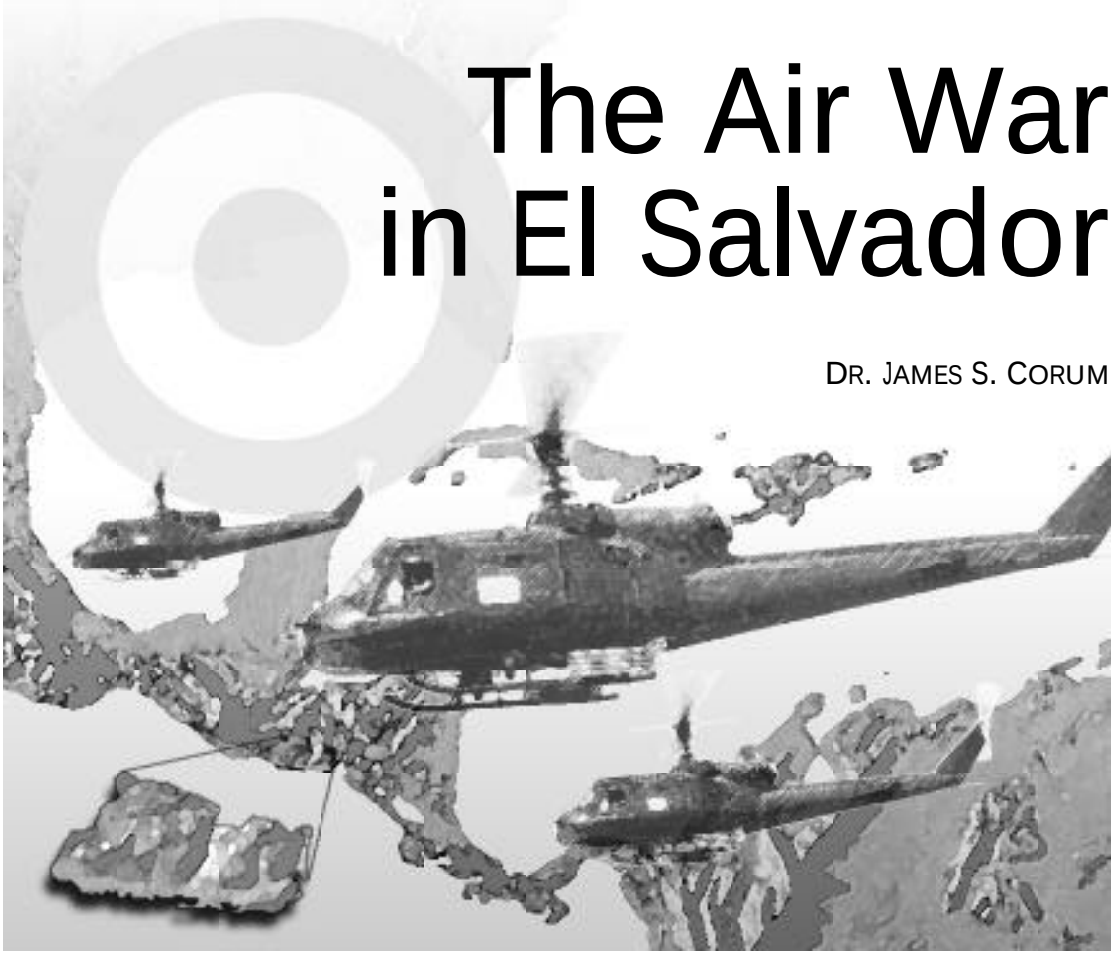

THE CIVIL WAR in El Salvador, which lasted from 1980 to 1992, was one of the largest and bloodiest insurgencies that the Western Hemisphere has seen. During the 12-year war, an estimated one hundred thousand people died—fairly horrendous losses for a country of only five million people.

The war in El Salvador saw significant involvement by the United States in the form of military and economic aid, advisors, and training. During the course of the war, the United States poured $4.5 billion of economic aid into the country and over $1 billion in military aid.[1] Almost a quarter of the US military aid was provided to the Salvadoran Air Force.[2] Some aspects of the war in El Salvador and the US involvement have been told in numerous books and publications.[3] Yet, although air power played a major role in the conflict, its story has not been dealt with in any detail. Indeed, there are no books or major journal articles specifically on the history of the Salvadoran Air Force during the war. Considering that the Salvadoran war provides us with one of the most recent examples of the use of air power in a counterinsurgency campaign, this is a significant gap in the literature about the use of airpower in modern warfare.[4]

This article is an attempt to fill some gaps in the history of the air war in El Salvador. It begins by outlining the history of the air war and then looks at some issues in greater detail, issues such as the effectiveness of the training and equipment provided to El Salvador by the United States. The doctrine and tactics of the air war also merit discussion. Was airpower used in an appropriate manner? Finally, the article outlines some of the lessons about the use of airpower in counterinsurgency that might be learned from the war.

Background of the Conflict

In 1980, El Salvador was ripe for a major insurrection. It was a small, poor, and densely populated nation long dominated by a small oligarchy and ruled by a series of military governments that had little regard for civil rights. The infant mortality rate was high, and the lack of economic opportunity had pushed hundreds of thousands of Salvadorans across the border into Honduras in a search for land and jobs. Several Marxist-oriented revolutionary groups were already organized in the country. The events of 1979 would set the conditions for an open rebellion.[5]

The successful revolution by the Sandinistas against the Somoza regime in Nicaragua in 1979 provided encouragement to revolutionary movements in Central America. If such a powerful and oppressive regime could be brought down by a poorly equipped popular movement, then the oligarchy in El Salvador could also be brought down. Furthermore, the October 1979 coup that resulted in a new military government in El Salvador left that country in chaos. The Salvadoran armed forces were divided with some officer factions favoring reforms and others violently opposed. As a result of chaos in the government and the unpopular state of the regime, guerrilla war broke out in 1980 and the major rebel factions amalgamated into one large alliance, the Marxist Farabundo Martí National Liberation Front (FMLN), which directed the insurgency. The various smaller factions, however, maintained their identity.

The rightist factions and parties in El Salvador, which included parts of the armed forces, reacted to the insurrection with a ruthless assassination program conducted by "death squads." Anyone suspected of leftist sympathies was liable to be abducted and shot. Dozens of murders by progovernment forces and militia were conducted nightly. Indeed, an estimated 10,000 people were killed in this manner in the first year of the war.[6] However, instead of suppressing the insurrection, the extreme violence by the regime pushed many more Salvadorans into open revolt. The violence escalated, and the Carter administration, in its disgust with the massive level of human rights violations, cut off US economic and military aid. By January 1991, the rebels, who by this time numbered as many as 10,000 fighters, mounted a final offensive with the intent of occupying San Salvador and overthrowing the government. Alarmed at the very real possibility of insurgent victory, the Carter administration in its last days lifted the impounded military aid and authorized new aid.[7] As distasteful as the regime was, in the US view, it was preferable to another Marxist revolutionary government in Central America. The revolution in Nicaragua had alerted the United States and the other Central American nations who all feared a "domino effect." If El Salvador fell, then revolutions might also succeed in Guatemala and Honduras, and the Carter administration did not want Central America to collapse on its watch.

The rebel offensive in El Salvador made significant gains but failed to achieve victory in early 1981. The Carter administration was followed in that month by a conservative Reagan administration that was ready to take a more active role against the expansion of communism in the hemisphere. In 1981 the Reagan administration made the commitment that it would assist El Salvador in defeating the most serious insurgency in the region.

The State of the Salvadoran Armed Forces in 1981

El Salvador had a small armed force of approximately 10,000 military personnel and seven thousand paramilitary police in 1980 when the war began. The army, the largest part of the armed forces, had approximately nine thousand soldiers organized into four small infantry brigades, an artillery battalion, and a light armor battalion.[8] The level of training was low. The training that the army did have was all for conventional war—preparation for a replay of the short war with Honduras in 1969, where the army performed creditably. There was no training or preparation for fighting a counterinsurgency campaign.

The armed forces as a whole had severe leadership problems. The officer corps was disunited after the coup of October 1979. As in most armies in Central America, advancement and selection for command were based more upon political connections and sponsors than merit. In fact, there were no merit promotions in the Salvadoran army. All promotion was by seniority. While officers had gone through a cadet school and many had attended training in US Army courses, they were not members of an especially capable officer corps. On the other hand, there was nothing even resembling a professional noncommissioned officer (NCO) corps in the Salvadoran forces. Most enlisted men were simply conscripted (or "press-ganged") young men, many of them in their mid teens. If officer training was mediocre, the training of the enlisted men was minimal. In short, it was an army that was not ready for a serious war.

In comparison with the other branches of the armed forces, the Salvadoran Air Force—the Fuerza Aerea Salvadorena (FAS)— was the most professional service arm. It was a small force of under a thousand men consisting of a small paratroop battalion, a security force, a small antiaircraft unit, and four small flying squadrons with a grand total of 67 aircraft. The main combat force of the FAS consisted of 11 Ouragan ground-attack fighters acquired from the Israelis, who had acquired them from the French in the 1950s, and four Fouga Magister trainers modified for combat (another 1950s aircraft). The combat squadrons also had four Super Mystère fighters and six Rallye counterinsurgency aircraft. The rest of the air force consisted of a transport squadron with six C-47s and four Arava transports. The training squadron consisted of a handful of T-34s, T-6s, T-41s, and four Magisters. The helicopter force amounted to one Alouette III, one FH-1100, one Lama, and ten UH-1Hs.[9]

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An AC-47 gunship of the FAS. This old platform provided the most accurate and effective close air support (CAS) of the war.

The FAS had two major air bases. The primary air base was Ilopango on the outskirts of the capital, and there was a smaller base at San Miguel in the southern part of the country. These remained the two bases of the FAS throughout the conflict. The training in the FAS was, like the army, geared for a conventional war. Unlike the army, the FAS had not done as well in the war with Honduras a decade before and had lost air superiority.[10] Since then, the only action the air force had seen was in the 1972 coup.[11] The air force had only a handful of pilots, and the pilot-training level was only fair. For a small and poor country like El Salvador, an air force is an expensive luxury. There were few funds for maintaining the obsolete aircraft of the force or for providing more than rudimentary combat training for the pilots. Things like joint training or practicing for close air support (CAS) were simply not part of the air force's repertoire.

The Rebels Hold the Initiative, 1981–83

Although the rebel "final offensive" of early 1981 failed, the 10,000 rebels of the FMLN alliance held the initiative during the first three years of the war. Large areas of El Salvador's 14 provinces were held by guerrillas.[12] The rebels were able to put significant forces into the field and fight an almost conventional war with battalion-sized columns. The insurgents were fairly well equipped and supplied with small arms (assault rifles and machine guns), as well as mortars, mines, and explosives. Some FMLN weapons were procured from Cuba and Nicaragua, but many of the rebels' weapons were captured from government troops. The rebels were, however, deficient in antiaircraft armament with only a few .50-caliber machine guns for protection against aircraft and helicopters.

Effective interdiction of supplies and arms to the rebels was not really possible. El Salvador shared a long land border with Honduras and Guatemala and was separated by only 30 miles of water from Sandinista Nicaragua at the Gulf of Fonseca. Light weapons and supplies could be brought in by land, sea, or air. The land borders were hard to seal, although the United States made a major effort in providing Honduran armed forces with aid and helicopters to help close the land border to gunrunners and rebel suppliers.[13] However, light aircraft could also bring arms and supplies into El Salvador at night from Nicaragua using small landing strips set up for crop dusters.[14] One of the FMLN leaders who later left the cause admitted the importance of the air routes from Nicaragua to El Salvador in supplying the insurgents.[15]

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The FAS headquarters and barracks at Ilopango Air Base. This was the scene of heavy ground combat during the 1981 and 1989 FMLN offensives.

The whole country became the rebel infrastructure. Large areas in the mountains along the Honduran border were rebel territory in the early 1980s. The rebels also had several other strongholds under their control including the region around Mount Guazapa—only 30 miles from the capital of San Salvador. In the rural areas and small towns, the rebels could compel the local landowners and businessmen to provide food and pay taxes to the rebel forces—or face destruction of their property and assassination. In short, the rebels were largely self-sufficient for many of their needs.

Early in the war, the tendency of the El Salvadoran armed forces (ESAF) was to conduct sweeps in company and battalion strength. These tactics worked to the benefit of the rebels, who could pick an engagement with company-strength government units and then ambush the reinforcing column. Whole companies of the army were annihilated in this manner. The rebels also specialized in night operations—which nullified the Salvadoran Air Force and the firepower advantage of the army. In the early 1980s, relatively large rebel columns could even seize and hold towns for several days.

With the war going badly for the government, Brig Gen Fred Woerner, later commander of US Southern Command, led a small group of US military specialists to El Salvador for consultations with the Salvadoran government and military leaders. The result was a national strategic plan for waging the war, which was approved by the United States and Salvadoran leadership.[16] Essentially, the US policy was to emphasize land reform, political reform in the form of honest elections, economic development, and the end of human rights abuses. Most of the US aid was to be civilian and financial aid. However, the military and economic aid to be provided to El Salvador would be dependent upon the

willingness of the Salvadoran government and armed forces to go along with the reforms. If serious progress was not made on the issue of human rights, for example, then aid would be halted or delayed until satisfactory progress occurred.

The military strategy was to dramatically increase the size of El Salvador's armed forces and train the ESAF in counterinsurgency operations. Between 1980 and 1984, the ESAF more than tripled in size from 12,000 troops to 42,000 troops.[17] The ESAF would be provided with modern weapons and equipment. Even simple equipment such as adequate field radios for the army were not available to government forces in 1980. Once the army was built up and retrained, a major portion of the counterinsurgency campaign would be carried out by specially trained "hunter" light infantry battalions. These light battalions would patrol aggressively and move quickly to keep the rebel columns under pressure.

Airpower was to have a major role in the national strategy for the El Salvadoran forces. The aircraft of the force would be modernized and increased. Training and weaponry would be improved. However, the primary emphasis was to build up a large and capable helicopter force that could lift a significant infantry force for offensive operations and also provide helicopter gunship support. This type of mobility could provide a rapid reaction force to block and pin down rebel columns that engaged the ground troops.

The United States provided a total of $48,920,000 in military equipment sales, military equipment credits, and military aid to El Salvador in 1981.[18] In 1982, the military assistance and sales program for El Salvador had grown to $82,501,000 with another $2,002,000 for the international military education and training (IMET) program (officer and NCO training).[19] The portion of aid going to the Salvadoran Air Force was significant. A steady stream of new aircraft for the FAS flowed south throughout the conflict. In just the first six months of 1982 the United States delivered four O-2A aircraft for reconnaissance, six A-37B counterinsurgency fighters, and two C-123K transports. All of these

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An MD-500 reconnaissance helicopter of the FAS. This is the gunship version at Ilopango Air Base.

aircraft had been fully modified and refurbished before being transferred. An additional $2 million worth of aerial munitions was provided for the FAS in 1982. As fast as equipment transfers were approved by the US Congress, the US Air Force would rush the aircraft and munitions to El Salvador. In June 1982, the USAF sent 12 planeloads of munitions to the FAS while still more munitions went by sea.[20]

In 1982, the IMET program emphasized improving the Salvadoran Air Force. A total of $1.4 million was spent on pilot, aircrew, and technician training of Salvadorans in the United States.[21] The whole issue of training the Salvadorans, however, was very complex. Due to strong opposition from many in the US Congress who remembered how the United States had started in Vietnam with a small group of advisors, the administration imposed upon itself a strict limit to the number of military personnel that could be assigned to the US Military Group (MilGroup) in El Salvador. Throughout the conflict, no more than 55 military personnel at any time could be assigned to the MilGroup.[22] With congressional committee acquiescence, additional US military personnel could serve for brief periods on TDY in El Salvador. Sometimes the total number of US personnel in the country reached as high as 150. However, the

nominal restriction of the MilGroup to only 55 meant that the USAF contingent in El Salvador was only five people—one Air Force section chief who acted as the senior advisor to the FAS and four Air Force maintenance officers or instructor pilots.[23] The Army also provided a few helicopter and munitions maintenance instructors to the Salvadoran Air Force, and some US contract personnel (not on the MilGroup official strength) also assisted the FAS. However, this handful of Americans was not enough to make a serious impact on the training requirements of the FAS, so FAS personnel had to be trained outside their country in the United States or at the Inter-American Air Force Academy (IAAFA) at Albrook Field in Panama.

During the period 1981–84, as the ground and air forces of El Salvador were being retrained and reequipped by the United States, the FAS put in a combat performance that can be rated as fair. As small and poorly equipped as it was in 1981, it still represented the primary mobile firepower of the government. The FAS performed well in helping to stop the January 1981 offensive. It was limited in its ability to provide effective support to the army by the lack of training in the ESAF to effectively coordinate air/ground operations.[24] The FAS was also essentially a daytime air force with a minimal ability to operate at night.

The FAS suffered a major blow in January 1982 when five Ouragans, six UH-1Bs, and three C-47s were destroyed and another five aircraft were badly damaged on the ground at Ilopango in a raid by one hundred rebel commandos. At one stroke, most of El Salvador's operational combat aircraft were knocked out of action.[25] It was a well-planned and executed operation and demonstrated the tactical superiority of the FMLN guerrillas over the soldiers at this stage of the war. While this was counted as a major victory for the rebels, it was also something of a blessing for the FAS in the long term. The worn-out Ouragans destroyed by the commandos were quickly replaced by US-provided A-37s, a far more capable and suitable aircraft for a counterinsurgency war. The O-2 reconnaissance aircraft were also provided as well as 12 UH-1H helicopters to replace the losses.[26]

The FMLN strongholds along the Honduran border and in the south of El Salvador were simply too strong in the early 1980s for the government forces to attack directly. On the other hand, the Salvadoran forces were not about to allow the rebels sanctuaries within the borders of their own country. So in 1982 and 1983 the FAS began a program of bombing the rebel-held villages in the strongly FMLN regions of Chalatenango in the north and Mount Guazapa in the center of the country. What the air action amounted to was small harassment attacks in which flights of aircraft would regularly bomb and strafe the rebel areas in a desultory fashion. If no major military progress was made, at least the rebels could be brought under some pressure.[27] Yet, the attacks seem to have made no real impact in terms of rebel morale, infrastructure, or combat capability. At the same time that the FAS began its bombing campaign—which it never actually acknowledged—the rebel forces managed to win a number of victories in the field, to destroy several army companies, and capture army weapons and ammunition.[28]

The Government Gains the Initiative, 1984–88

By 1984, the US military aid program was starting to pay off in terms of increased effectiveness of the government forces. While the rebel forces had not increased past 10,000 combatants, the Salvadoran army now outnumbered the rebels four to one. Moreover, new battalions had been formed and intensively trained by the US Army in the United States, in Honduras, and in Panama, and then returned to El Salvador. These forces were ready to use a more aggressive strategy and take the war to the rebels. The FAS had also been strengthened, had an improved level of training, and was ready to take on a larger role in airmobile operations and air support operations for the army.

Even so, 1984 started off badly for the government forces when a large rebel force managed to overrun and capture the army's 4th Brigade headquarters at El Paraiso on New Year's Eve.[29] However, the army recovered from this setback, and throughout 1984 and 1985, government forces started to gain the initiative throughout the country. Airpower in the form of the A-37 fighters, helicopter gunships, and helicopter lift played a major role in the government's success. The FAS operational tempo increased notably. There had been a total of only 227 A-37 strikes in all of 1983. In June 1984 alone, there were 74 A-37 strikes.[30] The army went on the offensive in the spring of 1984 in order to protect the national elections from disruption by the FMLN. The UH-1H gunship missions were increased by three or four times their previous rate of operations during March to May 1984.[31] During 1984, US military assistance enabled the FAS to increase its helicopter inventory from 19 at the start of the year to 46 by year's end.[32] The air attacks on the rebel strongholds surged throughout 1984 and 1985 despite strict rules of engagement issued by President Jose Napoléon Duarte in September 1984.[33]

According to former FMLN leaders, the improvement of the FAS played a major role in turning the initiative over to the government forces. The US-supplied O-2 light reconnaissance planes covered the country thoroughly. The rebels could no longer operate relatively openly in large columns. Larger formations made lucrative targets that could be easily spotted from the air and then subjected to attacks by aircraft or heliborne troops.[34] Instead, the rebel forces operated in smaller columns, which would combine for larger operations such as the attack on El Paraiso.[35] Rebel forces had to stay on the move, making it more difficult for the rebels to coordinate several columns to participate in an operation. However, the rebels learned to adapt to the increased danger of aerial attack. After the FAS was able to successfully insert company-sized reaction forces to deal with FMLN attacks, the FMLN—like the Vietcong before them—learned to spot likely helicopter landing zones and prepare them for ambush.[36]

The Salvadorans by the mid-1980s had built up a group of small, well-trained elite units. Some functioned as light infantry patrol forces that could be inserted by helicopter to search out the enemy and establish outposts deep in enemy territory. If contact with the rebels was made, the FAS could quickly transport company-sized forces to reinforce the light troops and block rebel units. The helicopter force was the only practical means of transporting troops in much of the country due to the mountainous terrain and the bad roads. With effective reconnaissance and light heliborne forces, the government could, for the first time in the war, initiate combat at places of its own choosing.[37]

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A UH-1M helicopter gunship of the FAS. These aircraft played an important role in the ground fighting during the later years of the war.

One of the US advisors rated the FAS as "particularly effective" in the government operations of 1984 and 1985.[38] One of the most important events in the air war came in late 1984–85, when the United States supplied two AC-47 gunships to the FAS and trained aircrews to operate the system.[39] The AC-47 gunship carried three .50-caliber machine guns and could loiter and provide heavy firepower for army operations. As the FAS had long operated C-47s, it was easy for the United States to train pilots and crew to operate the aircraft as a weapons platform. By all

accounts, the AC-47 soon became probably the most effective weapon in the FAS arsenal.

The tempo of aid to the FAS increased during 1984 and 1985. Five O-2A aircraft were delivered between September and November 1984. Two more O-2As and two O-2Bs along with three A-37s were prepared for delivery in early 1985 along with an additional five C-47 transports that had been modified and refurbished for the FAS at a cost of almost $1 million each.[40] However, the increased flow of aircraft to the FAS in 1984 and 1985 did not result in a rapid increase in the number of aircraft available for combat, as the attrition rate as a result of operational accidents was heavy. For example, in early 1994, an O-2A and one C-123K were lost to accidents.[41] However, the United States tried to replace aircraft as soon as they were lost. For example, a replacement C-123K was on the way from the United States within a month of the loss of the FAS C-123 transport.[42]

The United States also increased the training funds available to the FAS during 1984. In 1984, 117 FAS personnel took courses at the Inter-American Air Force Academy in Panama in contrast to 98 personnel the year before. The IMET program funded training for 118 Salvadorans in the United States in l984.[43] US military aid was also committed to building up the infrastructure of the FAS. The FAS received $16.4 million in assistance funds in 1984, some of which went to building new hangars and repair shops at the main air base at Ilopango. By the mid-1980s, Ilopango had become a well-equipped air base.[44]

Despite all the training and expense, the FAS remained hampered by the exceptionally low operational readiness rate of its aircraft. While the FAS could muster well over one hundred aircraft by 1985, only 50 percent or fewer of the aircraft were operational at any time due to severe maintenance problems and a shortage of qualified pilots.[45] The helicopter readiness rate was lower than that of airplanes. The FAS was only able to maintain a small proportion of its helicopter inventory at any one time.[46] The FAS suffered continually from a lack of competent mechanics. Part of this is a cultural disdain for maintenance found in the Central American officer corps. The pay and conditions for the enlisted mechanics in the FAS were poor, and the most talented maintenance personnel would leave to find much higher-paying civilian jobs as soon as their term of enlistment was up. An even more serious problem was the pilot shortage. The pilot officers of the FAS had to be graduates of the military academy, and, with the rapid expansion of the armed forces, there were not enough graduates to meet the needs of all the services. Even with a serious training effort by the United States, the FAS had only about half the pilots it needed. In 1987, the FAS had only 70 active pilots for 135 aircraft.[47]

With a slowly growing capacity to airlift troops by helicopter, the FAS and its airborne reaction force began to make a real impact in the war. In June 1984, an FMLN force attacked the Cerron Grande Dam, El Salvador's largest hydroelectric plant. Two companies were quickly airlifted to reinforce the small garrison at Cerron Grande. The rebel attack was successfully beaten back, albeit with heavy losses.[48] However, the FMLN also proved that it would not be easily cowed by the FAS's firepower. In October 1984, six hundred FMLN insurgents attacked an army "hunter" battalion at Watikitu. The guerrillas were attacked by aircraft that inflicted heavy casualties on the rebels. Still, the FMLN troops persisted in the attack and by afternoon, the army battalion had simply disintegrated.[49]

The wider use of helicopters in support of the ground campaigns also resulted in heavy losses for the FAS. In the October 1984 fighting, one UH-1 was shot down. In November of that year, three more UH-1s were shot down and four heavily damaged in the fighting around Suchitoto.[50] While the A-37s and the AC-47 gunships proved to be relatively safe from enemy ground fire, the small arms of the FMLN proved to be lethal against helicopters.

Throughout 1985 and 1986, ground and air operations increased, while the competence of the army in counterinsurgency warfare continued to improve. In 1985 and early 1986, the FAS aircraft and helicopters sup-

ported several large army offensives, which finally reduced some of the FMLN's major strongholds in Guazapa and Chalatenango. The population and the rebel forces in these enclaves were bombed heavily as army troops swept in and forcibly evacuated thousands of civilians in FMLN areas and resettled them in refugee camps. It was a harsh campaign, but it succeeded in depriving the FMLN units of their civilian infrastructure in what had been their most secure strongholds.[51]

One of the FMLN leaders credits the greater airmobility of the army in the mid-1980s and the willingness of some army units to move by air deep into rebel country as having caused "a very significant turn in the war."[52] However, it should also be noted that the improvement of the air force's and army's tactics and firepower was not the primary cause for the demoralization of the FMLN alliance in the mid-1980s. The rebels were just as capable as the government of making major strategic and tactical mistakes. By 1984, the infighting within the FMLN groups became severe and, in true communist fashion, was resolved by purges and executions within the ranks of the FMLN. Soon FMLN leaders were ordering the killing of rival leaders. By 1984 and 1985, the membership of the FMLN began to decline as the rebel forces saw some of their own officers abandon the FMLN cause in disgust.[53] Yet, despite the internal dissension, being outnumbered six or seven to one, and under steady pounding by army and air force firepower, the FMLN was still a formidable force by the end of 1988 and could still field approximately seven thousand combatants throughout the country.

From Stalemate to Peace, 1989–92

By 1988, the government of El Salvador could bring a tremendous superiority of military power against the rebels. The army had grown to 43,000 troops organized into six brigades. There were 20 light infantry battalions and six counterinsurgency battalions that were able to take the war to the enemy. The

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An O-2 Skymaster at Ilopango Air Base. This simple aircraft proved to be a very effective reconnaissance tool for the FAS in the war.

artillery force had been tripled since the start of the war and communications and support improved. The tiny 1980 navy of three patrol craft had been expanded to a fifteen-hundred-man force by 1988 and included a marine battalion, marine commandos, and 30 patrol craft.

The FAS had more than doubled in size since the start of the war. By 1987, The FAS was a force of twenty-five hundred with an airborne battalion, a security group, five airplane squadrons and a large helicopter force. The airplane force was organized into a fighter squadron, with eight Ouragans, a counterinsurgency squadron with 10 A-37Bs and two AC-47 gunships. A reconnaissance squadron of 11 O-2As supported the counterinsurgency squadron. The transport squadron consisted of five C-47s, one DC-6, three Aravas, and two C-123Ks. The training squadron had one T-41 and six CM-170 Magisters. The helicopter force had expanded into a force of nine Hughes 500MD attack helicopters, 14 UH-1H gunships, 38 UH-1H utility helicopters, three SA-315 Lamas, and three SA-316 Alouette IIIs, for a total of 67 helicopters.[54]

Progress in El Salvador's internal political situation had been made since the mid-1980s after free elections and the election of a moderate reformer, Duarte, as president. Human rights abuses by the armed forces had been

curbed. US aid was continuing to flow. Throughout the mid-1980s, the direct US military role had grown especially in the aviation side of the war. US Army OV-1 Mohawk reconnaissance planes of the 24th Military Intelligence Battalion stationed in Palmerola

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An A-37B fighter-bomber at Ilopango Air Base. These fairly low-tech aircraft took the place of the Salvadoran Air Force's old Ouragans and Fouga Magisters. However, due to the FAS's low level of training, the A-37s could not be counted on for accurate CAS.

Air Base in Honduras conducted regular reconnaissance flights over El Salvador.[55] The counterinsurgency campaign progressed, and the election of the right wing Arena Party government in 1989, a party that ran on a "law and order" platform, indicated that there was considerable support among the populace for the counterinsurgency campaign.

This impression of progress was spoiled on 11 November 1989, when the FMLN guerrillas launched a surprise offensive against military and civilian targets across the nation. For three weeks, the guerrillas attacked military units and government installations in San Salvador, San Miguel, Santa Ana, and other cities. The military incurred heavy losses, but the FMLN sustained heavy losses as well. The FMLN reportedly suffered 1,773 dead and 1,717 wounded by the end of the offensive on 5 December.[56] The rebels did not gain their primary objectives, but the power of the offensive as well as the surprise factor was a real shock to the government and military. The main FAS base at Ilopango was a major target of the FMLN, and the rebel forces came close to overrunning the main air base in the country. If the rebels had been successful, they could have destroyed 80 percent of the FAS. As it was, only with heavy fighting and reinforcements did the FAS manage to hold on to the base.

A further disturbing development for the air war in 1989 was the acquisition of handheld SAM-7 antiaircraft missiles by the rebels.[57] The attrition of FAS helicopters to the light weapons of the rebels had been heavy all through the war. However, until 1989, the A-37s and AC-47s had been relatively immune from the short-range ground fire of the FMLN. Now the guerrillas had a weapon that could knock down the best combat aircraft of the FAS.

The war continued into 1990, and the FMLN was still able to conduct numerous guerrilla attacks against the armed forces and economic targets despite the heavy losses of the 1989 offensive. In 1990, the FMLN forces inflicted over two thousand casualties on the Salvadoran armed forces and police, an almost 5 percent casualty rate.[58] By this time, the nation was simply exhausted by more than a decade of war. Both sides finally agreed to serious peace talks in 1990. A national cease-fire was agreed to in 1991, and peace accords were signed between the government and the FMLN in early 1992.

The war was ended by a compromise solution. The FMLN disarmed its forces and became a legal political party. Amnesty was granted to FMLN members. More than half of the army would be demobilized, and all of the paramilitary security forces—including the notorious Treasury Police, which operated under the Defense Ministry and was identified as having one of the worst human rights records—were disbanded. A new national police force was created, and former FMLN guerrillas were brought in. United Nations and Organization of American States observers remained in the country to help ensure that the disarmament was properly carried out and free and fair elections were held.[59] Some of the American commentators would com-

plain that the military strategy had failed and that the Salvadoran armed forces were never able to defeat the FMLN on the battlefield. That might be true, but in retrospect, the program of military aid to El Salvador was a genuine success for the United States. The primary objective of keeping El Salvador from becoming a communist state was realized. Moreover, El Salvador ended the war with a democratic government that remains friendly to the United States and committed to working peacefully with its neighbors. The peace accord may have been a compromise, but it has been recognized as fair by both sides and provides a solid basis for peacefully developing El Salvador—and a favorable peace is, after all, the primary objective in waging war.

Comments and Observations

The second half of this article focuses on some specific comments and observations about the air war in El Salvador. The war in El Salvador was one of the longest-lasting combat operations supported by the US military since the end of World War II. In many respects, it was a classic counterinsurgency campaign fought by the United States and El Salvador. Because of the long duration and recent nature of the operation, it is likely that the conduct of the air war in El Salvador can offer insights that are useful for US air doctrine and for executing future counterinsurgency campaigns.

A Prolonged Conflict

Most insurgencies tend to last for years. In Malaya, the British faced a 12-year-long insurgency (1948–60). In the Philippines, the United States supported the Philippine government through an eight-year campaign (1946–54). Colombia has faced an insurgency for more than 20 years. The 12-year duration of the war in El Salvador fits the typical pattern.

Mao's teachings notwithstanding, neither the insurgents nor governments that oppose them usually expect a campaign of many years' duration. The FMLN intended to win quickly in 1981. The government thought that the rebels could be crushed in a rapid campaign. General Woerner shocked the chairman of the Joint Chiefs of Staff and some members of the Reagan administration in his 1981 report when he outlined a five-year plan (the five-year time frame was used as an outline only, and Woerner was careful not to predict the length of the war) and estimated that defeating the rebels would cost $300 million in military aid. Woerner's analysis was seen as unduly pessimistic.[60] In reality, General Woerner's assessment was way off. The counterinsurgency campaign cost over $1 billion, lasted for 12 years, and still did not lead to outright military victory.

Part of the problem in conducting a counterinsurgency campaign is the long lead time in creating and training military and police forces that can effectively wage a counterinsurgency campaign. As is typical with countries that face insurgencies, El Salvador was unprepared. Even with massive US support for a small country, it took three or four years before the Salvadoran armed forces could conduct operations effectively. Air forces in particular require a long time to build infrastructure, acquire equipment, and train pilots to operate in the kind of joint operations required by counterinsurgency campaigns. It did not help that the US Army and Air Force, suffering from the effects of post-Vietnam syndrome, had largely dropped counterinsurgency operations out of the doctrine and training repertoire in the late 1970s. Despite the many Vietnam veterans in the force, the US military was not ready to train the Salvadorans in unconventional warfare. The bureaucratic requirements of the US military system also got in the way of a timely response to El Salvador's situation. The requirement that foreign pilots training with the US Air Force first take a six-month language course slowed down the pilot training program for the Salvadorans. Finally, when the shortage of helicopter pilots became truly severe, the US Army conducted a one-time effort at Fort Rucker, Alabama, to train Salva-

doran pilots with Spanish-speaking flight instructors.[61] Ideally, the FAS pilots and technicians should have been fluent in English, if only to read the technical manuals for the equipment. However, the immediate needs of the war overruled this requirement.

For various reasons, US military schools were slow to create the courses that the Salvadoran military urgently needed. For example, the US-run Inter-American Air Force Academy in Panama only initiated an advanced training course for the A-37B in 1985, three years after that model aircraft had been supplied to the FAS.[62]

Most commentators on the war in El Salvador agree that by the mid-1980s, the FAS could operate fairly effectively. However, the ability to conduct more complex joint operations came very slowly. It was not until 1986–87 that the FAS intelligence section was reorganized for the needs of the counterinsurgency operations and a special analysis center was set up at the FAS headquarters at Ilopango. The center was able to integrate reconnaissance, area intelligence investigations, aerial photography, and special intelligence into one coherent system. This had much to do with the improvement of FAS combat capabilities.[63]

In short, even if the United States had responded to the crisis in El Salvador in 1981 with massive aid coupled with the right kinds of training programs given in a timely fashion, it still would have taken the FAS two to three years to become a capable force. Supporting an air force involved in a counterinsurgency is likely to involve a long commitment by the United States.

The Effect of US Aid Restrictions

At the start of the war, human rights abuses by the Salvadoran armed forces and government were so bad and the government so mired in its traditional authoritarian culture, that the US government had no realistic choice but to use a carrot-and-stick approach in providing military and economic aid to El Salvador. The military and the government would be encouraged to reform by the offer of generous aid. If reforms were not enacted quickly enough, the aid would be withheld or delayed. Thus, the aid to El Salvador was made contingent upon a program of national land reform, fair elections, and judicial reforms.[64] This approach by the United States caused constant friction between the two governments, but, in the end, it pushed the government to make necessary reforms.

However, aid restrictions and the strong objections of many US congressmen towards aid to El Salvador's armed forces resulted in unpredictable funding in the military aid program. This, in turn, inhibited long-term planning and resulted in many inefficiencies in the military aid.[65] Fiscal year 1983 began with no congressional appropriations for El Salvador. A $25 million dollar continuing resolution was provided instead of the $60 million that the US military support program required. Without adequate funds in the ammunition account, the army and FAS cut back operations and maintained a policy of hoarding ammunition and supplies until a continuation of the aid flow was assured.[66]

In the case of a small and poor country like El Salvador, such funding disputes had a major impact upon operations and doctrine. El Salvador's leaders were encouraged to look on an expensive asset such as the air force as too valuable to risk in combat if replacements, munitions, and funds were not assured. In the first half of the war, the attitude existed that the FAS was an "insurance policy" for the government. One might not win the war with airpower, but airpower would keep one from losing. Therefore, the air force was sometimes held back as a reserve for use only in emergencies.[67] Although a practical doctrine from the view of the Salvadorans, this was not a way to conduct effective joint operations in the field or keep the rebels under constant pressure.

The most problematic restrictions on the US military aid program for El Salvador were those governing the military trainers and advisors in the country. The MilGroup throughout the war was limited to a total of only 55 advisors in order to deflect disapproval of a Congress worried about another Vietnam.

With so few advisors and trainers in the country, the US military had to create numerous expensive and inefficient workarounds to train the Salvadoran army and air force outside the country. Some troops were trained, at enormous expense, at Fort Bragg, North Carolina. A new training center had to be built in Honduras, where US Army trainers could train whole battalions of the Salvadoran army.[68] Salvadoran Air Force pilots had to do virtually all their training outside their country. However, when the pilots returned, there was virtually no infrastructure to enable them to maintain proficiency or develop advanced skills. Due to the shortage of pilots and the variety of aircraft models flown by the FAS, each pilot had to be able to fly three or four types of aircraft. As a result, the FAS pilots could not become truly proficient in any one aircraft.[69] Another serious problem was the lack of qualified instructor pilots in the FAS to oversee individual and unit training. This translated into a high accident rate and only a fair level of competence for the average FAS pilot.[70]

One very clear lesson from the war in El Salvador is the need for a far larger number of US trainers and advisors to be present in the country in order to effectively support a country at war. An advisor/instructor group sent in early to support the FAS would have been far more effective in improving the combat efficiency of the force and would have been far less expensive than all of the training workarounds that the US had to improvise to train the FAS. An early commitment of instructor pilots and maintenance instructors would have improved the operability rate of the FAS and brought it to a respectable level of combat capability in one to two years instead of the three to five years that it actually took.

The Problem of Internal Politics

The military culture of El Salvador was not only authoritarian and corrupt, it was also highly politicized. Despite training and advice from the United States, old habits were very hard to break. The internal politics of the armed forces played a large role not only in appointing officers to command, but also in the way the war was fought.

Gen Juan Rafael Bustillo, who served as the chief of the FAS from 1979 to 1989, was a competent pilot and probably one of the more capable of the senior officers in El Salvador when the war started. However, he also played a highly political role in the armed forces and used his position as air force commander to defy and even threaten the civilian government. In 1983, one of the most right wing of the army officers, Col Sigfrido Ochoa, demanded the firing of defense minister Gen José Guillermo Garcia and declared his military district to be in rebellion against the government. General Bustillo supported Ochoa and refused to fly in troops to oppose him. Eventually, a compromise was worked out that allowed Ochoa to remain but removed the defense minister.[71]

As was typical with the senior military leadership in El Salvador, the FAS under Bustillo was scarcely a meritocracy. An officer's politics and connections tended to count for more in promotions and gaining coveted assignments than competence on the battlefield. It was alleged by army officers that Bustillo often reserved the helicopter force for the air force paratroop battalion and tended to give air support to army units commanded by his friends while withholding air support from units commanded by his rivals.[72] There is also considerable evidence that US military aid funds were diverted to an FAS slush fund. In 1989, the US General Accounting Office found that the FAS had sold more than one hundred thousand dollars worth of US-supplied aviation fuel to the Nicaraguan Contras in violation of US rules.[73] For years, the FAS DC-6 that carried pilots and cargo to Howard Air Force Base, Panama, returned full of liquor and appliances which were sold on the black market.[74]

Unfortunately, in a military culture such as El Salvador's, such behavior was to be expected. It is also argued that the United States tolerated this behavior and the diversion of funds because General Bustillo allowed the Ilopango Air Base to become the hub of the US

National Security Council's supply network for the support of the anti-Sandinista rebels in Nicaragua. Some 109 clandestine flights for Contra support shuttled in and out of Ilopango.[75] In any case, Americans who become involved in supporting counterinsurgency campaigns need to be ready to face the political friction generated from within the armed forces of a third world state.

The Bombing Dilemma

The most controversial aspect of the air war in El Salvador was the bombing of civilians by the FAS. From 1981 to 1986, the FAS regularly bombed the rebel-controlled areas of the country, especially the strongholds of the Guazapa and Chalatenango regions. The bombing campaign was virtually the only means to keep the rebels under pressure in these areas until they were overrun and occupied by government troops in the campaigns of 1985 and 1986. The air attacks, carried out primarily by the A-37s, but also by helicopter gunships, were aimed at villages that supported the rebels. Civilian casualties were a consequence of the campaign. The Salvadoran forces were sometimes open about the bombing campaign. Colonel Ochoa, commander in the Chalatenango district, told the US press that he had declared a dozen free-fire zones in his area and that anything in those areas would be presumed hostile and bombed.[76]

Both the critics and supporters of the government of El Salvador provided testimony about the bombing of civilians to the US Congress that was so propagandistic as to border on the absurd. On the left, American critics testified about the brutality of the FAS. For example, the mayor of Berkeley, California, testified in 1986 that 60,000 civilians had already been killed by aerial bombardment in El Salvador—a very implausible figure.[77] On the right, Assistant Secretary of State Elliot Abrams rounded up testimony that was just as implausible. Abrams argued that there had been no indiscriminate bombing in El Salvador, despite the admissions made by Salvadoran officers.[78] Others supporting Abrams's view provided the US Congress with anecdotes about FAS pilots complaining that they were denied permission to attack rebel troop concentrations because of the fear that civilians might be caught in the cross fire.[79] It was even argued that the AC-47 gunships were used so carefully in battle that in the course of the war they never fired a short round or even accidentally hit civilians.[80] If true, this is a record for accuracy in aerial warfare that far surpasses the competence of the United States or any other major air force.

In reality, the bombing campaign was neither so brutal as the critics alleged nor as careful of civilians as the US State Department argued. The bombing campaign seems to have had no decisive results aside from harassing the insurgents and forcing the FMLN units to remain dispersed. According to witness accounts and US journalists who traveled in the rebel-held areas, the air attacks caused relatively few civilian casualties. Civilians who lived in the free-fire zones quickly adapted to being the targets of aerial bombardment. They dug bomb shelters, learned to camouflage their homes, and took cover as soon as a helicopter, an A-37, or an O-2 reconnaissance aircraft was spotted.[81] The best estimates of casualties are provided by Tutela Legal, the human rights office of the Catholic Church in El Salvador. This organization estimated that in 1985, a year of heavy combat, 371 civilians had been killed by air bombardment.[82] Since the air attacks in civilian areas were carried

out between 1981 and 1986, an estimate of approximately two thousand civilians killed by air bombardment for the course of the war is probably close.

The dilemma of a counterinsurgency campaign is that the government is bound to bomb rebel areas and inflict civilian casualties even if no decisive effect is likely to occur. The government forces cannot allow the rebels to hold sanctuaries within the country where they can rest, rearm, recruit, and stage operations unmolested. Even if the government is not in a position to clear an area by a ground offensive, it can at least apply some pressure to the guerrillas by air power. In fact, civilians in rebel strongholds have normally been subjected to bombing in modern counterinsurgency campaigns. The Philippine Air Force bombed rebel villages in the 1940s and 1950s with warplanes supplied by the United States.[83] The United States provided 40 dive-bombers to the Greek Air Force in 1949, which used them to bomb rebel strongholds during their civil war.[84] The RAF in the Malayan insurgency even used the heavy Lincoln bombers (the British equivalent of the B-29) to bomb the jungle strongholds of the insurgents.[85]

The brutal reality of insurgent and counterinsurgent warfare is that there is no such thing as a "clean" war, either on the ground or in the air. In virtually every insurgency mounted since the end of World War II, the majority of casualties have been civilians. In El Salvador, both sides conducted campaigns designed essentially to assassinate, maim, and terrorize civilians. As for an assessment of the FAS's bombing campaign of civilian areas, it probably had some effect in harassing and disrupting the rebel strongholds, but it is doubtful that these benefits of the bombing campaign were greater than the considerable propaganda benefits that the rebels gained by being portrayed as victims of a repressive government in the international media.[86]

The Operational Effectiveness of Airpower in El Salvador

COURTESY OF DR. JAMES S. CORUM

A 1940s-vintage FAS Ouragan ground attack aircraft at Ilopango Air Base. In the early years of the war, these cranky and obsolete aircraft were a mainstay of the Salvadoran Air Force.

Airpower played an important role in the Salvadoran civil war. The air force was used primarily as an army support force, and certain weapon systems proved very successful for this mission. The low-tech O-2 spotter aircraft and the AC-47 gunships were used effectively by the FAS in close support operations. The slow, easy-to-fly A-37, a modified trainer, carried a moderate bomb load and machine-gun armament. It was not a heavy weapon system, but it still gave the army a major fire power advantage in battle with the lightly armed rebels. It proved very survivable in the low-threat counterinsurgency environment.[87] The AC-47 was one of the real success stories of the war. These easy-to-operate weapons were probably about as much as the Salvadoran pilots, aircrew, and support personnel could effectively handle at the time.

Of the aircraft supplied by the United States to the FAS during the war, the most effective was probably the UH-1 helicopters used for medevac and troop lift. Even though the operability rate was low, the limited lift was essential for transport in a mountainous country with few roads. The next most useful aircraft were the O-2 light reconnaissance planes that forced the rebels to operate in smaller columns and start a move out of the rural strongholds and back to the cities. The third most useful aircraft of the war was the AC-47, the only truly accurate and reliable

COURTESY OF DR. JAMES S. CORUM

The rugged terrain of eastern El Salvador. The mountains and lack of roads in the region inhibited army movement and made the area a haven for the FMLN until helicopter-borne ground units could take the fight into the field after 1985.

CAS weapon. The A-37 fighter comes way down on the list of useful aircraft simply because it was hard to bomb accurately with it and the training levels of the FAS pilots were rarely up to where they could reliably and accurately provide close air support.[88]

Probably the most effective single air unit in the war was the five medevac helicopters of the FAS, coupled with the improved medical care for the Salvadoran army made possible through the US aid program. The availability of rapid medevac as well as good medical care cannot be underestimated as a major factor in improving the morale and fighting ability of the army. Soldiers fight much harder if they know they are likely to survive their wounds. Even though the army took more casualties due to the increased level of combat in 1985, there were fewer fatalities due to helicopter medevac operations.[89]

However, airpower in a low intensity conflict has its downside. Air forces are very expensive for small countries to man and operate. The FAS soaked up a disproportionate share of the aid and defense budget, yet its real capabilities were very limited due to the low operational rate of aircraft, the shortage of pilots, and the deficiencies in training. Certainly through most of the war, the FAS was not employed very efficiently against the enemy. An array of US Army officers who served in El Salvador, as well as a USAF-sponsored RAND study, all expressed misgivings about the large number of helicopters as well as the heavy equipment provided to the Salvadorans.[90] These military critics of our military policy argued that the Salvadoran army and air force were trying to become a mini-US Army and Air Force and were trying to substitute airpower for basic military skills—a very dangerous strategy for a poor country with few resources. The large airmobile force that the United States supplied to El Salvador was likely to make the army behave much as the United States had done in Vietnam, with the army flying over the population rather than working on the ground and operating closely with the civilian population. What was needed, it was argued, was a greater emphasis on training more ground troops and saturating the country with light infantry forces that are always patrolling and always present. If one has limited resources to allocate, the counterinsurgency experience of the last 50 years would tend to support a policy of greater numbers of ground troops and a pervasive presence over a smaller army with more technology.

Of course, the US military is not alone in preferring high-tech solutions. The FAS, which could barely operate and maintain the A-37s, AC-47s, and UH-1Hs it was equipped with, requested that the United States provide F-5 fighters and AH-1 Cobra gunships.[91] So enamored was the Salvadoran army with the airmobility concept that its leaders insisted on buying the much more expensive air-transportable 105 mm howitzers from the United States instead of the very capable—and much cheaper—heavier and older model. It was probably a blessing for the Salvadoran forces that their plans for a relatively high-tech, airmobile force never came to fruition. By the mid-1980s, they hoped to have a helicopter force large enough to airlift at least a battalion anywhere in the country. However, the low operational rate and the pilot shortage ensured that the high command never could deploy more than a company or two at

a time. Like it or not, the Salvadoran army had to learn to be an infantry force.

There are more than a few lessons to be learned about the role of an air force and the employment of airpower in a low intensity conflict from the war in El Salvador. As a case study, it is excellent in that most of the operational and political problems that one is ever likely to face in supporting a nation in a counterinsurgency campaign are all found in El Salvador. The 12-year US experience shows how airpower can be used well—and used badly. While the contribution of the Salvadoran Air Force to that war was significant, the final analysis indicates that counterinsurgencies still do not lend themselves to a predominately airpower solution. □

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