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Helicopters in Irregular Warfare: Capabilities, Challenges, and Missed Opportunities

by

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Abstract

The use of helicopters in irregular warfare (IW) has a history as long as the helicopter itself. Combat and combat support roles for helicopters conducting missions as diverse as attack, insertion/extraction, supply, medical evacuation, reconnaissance, command and control, and tactical recovery of aircraft and personnel exceeded the capabilities of light fixed-wing aircraft, eventually replacing them in U.S. service. The author seeks to illustrate the use of helicopters in IW through studying historical employment during conflicts in Africa, Asia, and the Middle East. The best employment of helicopters in IW requires appreciation of the limitations of and threats to helicopters, the lack of doctrine for their employment in IW, their limited numbers (relative to demand), and the dangers of the over-use of helicopters in IW. The author proposes that highly effective tactics, techniques, and procedures (TTPs) for tactical mobility in execution have been ignored by U.S. regular forces, with the exception of the U.S. Marine Corps' Aero Scout program in Iraq (2006-2008). The successful TTPs of this program have not been captured in formal doctrine, however, and are unlikely to be repeated in future conflicts. This omission ignores the lessons of history and unnecessarily displaces risk onto ground forces.

Introduction

The myriad challenges of irregular warfare (IW) contributed greatly to the rapid experimentation, improvement, and widespread adoption of the airplane as a tool of warfare, beginning with irregular conflicts in Africa,[1] Central America, and the Caribbean. The "small wars" of the twentieth century demonstrated the diverse utility of aircraft, pressing even the humblest of machines into attack, reconnaissance, supply, medical evacuation, and information operations roles. The rapid improvement of the helicopter after World War II guaranteed it would become an indispensible asset in every conflict to come. The unique capabilities and versatility of helicopters outweigh their challenges and limitations; yet, current U.S. doctrine and practice in *Operation Iraqi Freedom* (OIF) and *Operation Enduring Freedom* (OEF) ignore several proven tactics that would take full advantage of these capabilities and further enhance the effectiveness and flexibility of allied ground forces.

The invention of the airplane was swiftly followed by its use in warfare – first in irregular warfare, such as by the French in Africa[2] and the American Army in Mexico. The uses for the airplane were initially limited only by the technology of the day and the imagination of the pilots, crew, and available maintenance support. While during World War I aircraft were limited (primarily) to artillery spotting, observation, anti-air, and rudimentary fire support missions, early irregular conflicts (or "small wars") quickly pressed ever-more capable aircraft into mapping, reconnaissance, resupply, medical evacuation, small-scale troop insertions, and close air support roles.[3] These early light aircraft quickly gave way to larger, more capable aircraft, until the jet age brought new extremes of speed and lethality, but also cost, complexity, infrastructure, and maintenance support requirements, as these aircraft were designed for the

needs of the Cold War. Light fixed-wing aircraft all but ceased to exist in U.S. military service after Vietnam.

The helicopter became a practical flying machine during World War II, but was not widely adopted by militaries until the 1950s. Very quickly, however, the previous roles of light fixed-wing aircraft, especially combat support roles, were being filled by helicopters. As the technology improved from the 1950s the helicopter became the primary support aircraft in irregular wars around the globe, demonstrating true "multi-role" capabilities. [4]

Capabilities and Versatility

One scheme for discussing the capabilities of helicopters in IW is to consider combat roles (or direct) and combat support roles (non-kinetic). Combat roles with direct influence on the enemy include attack, tactical insertion and extraction of ground forces, convoy escort, and psychological/information operations (IO).[5] Combat support roles include mobility, supply, medical/casualty evacuation, reconnaissance, command and control, and humanitarian assistance.[6]

The use of aircraft in combat roles in IW began with the French, who by 1916 were using airplanes to bomb enemy troops and villages in Morocco and Tunisia.[7] The British Royal Air Force (RAF) devised the concept of "air control" to use aircraft as an economy of force measure in Iraq in 1920; the British believed that aircraft were sufficiently coercive to control the colonies through attack and threat of attack, reducing the number of ground troops required. This concept was quickly refined with tighter integration between ground and air forces and a modicum of restraint in targeting, then exported (with mixed, but nominal results) to Palestine, Afghanistan, Transjordan, India, Aden, and the Sudan.[8] The U.S. Marines likewise employed aircraft in

combat roles during the various "Banana Wars" in Central America and the Caribbean between 1918 and 1933.[9]

As soon as helicopters were employed in IW in the 1950s, they assumed these combat roles. The first use of armed helicopters was again by the French in Africa, this time in Algeria, beginning in 1954.[10] True helicopter gunships, armed with rockets and cannons (as opposed to machine guns) appeared in 1956 with the French in Algeria, and later by the Americans in Vietnam, the Portuguese in Angola, and the Rhodesians.[11] Dedicated attack helicopters were developed quickly thereafter, and saw combat in every significant conflict that followed, including South Africa, Afghanistan, Grenada, Kuwait/Iraq, Chechnya, Israel, and Lebanon.[12]

Any fire support mission requires discretion in targeting, but doubly so in IW, when the consequences of collateral damage may negatively affect the operational and strategic levels of the conflict. The British learned this in Iraq in the 1920s, eventually modifying their procedures to issue warnings before bombing towns.[13] The U.S. Marines in the Banana Wars were very successful at minimizing collateral damage and thus avoided alienating the population.[14] Contrariwise, the Russians paid little attention to collateral damage in Chechnya.[15] The RAND Study of Counterinsurgency in Iraq (2003-2006) concluded that strike missions will be less frequent than in major combat, but still important, and that the use of force must be balanced to avoid giving the enemy a propaganda victory, and further recommends the acquisition of less-destructive ordnance to reduce collateral damage risk.[16] Current attack helicopters can carry precision-guided munitions (PGMs) with less-destructive warheads than fixed wing aircraft do, reducing the likelihood of causing unacceptable collateral damage. Additionally, helicopters and slow-moving fixed wing are considered significantly more effective at close air support in IW than fast-moving jets. The Rhodesians preferred the Cessna O-2 Lynx[17], for example, while the

Soviets in Afghanistan preferred the Mi-24 and the Su-25 over the Mig-21 due to better accuracy due to slower attack speeds and increased loiter time.[18]

The use of airplanes for innovative combat support roles likewise began with their first use in IW. The first military aircraft were observation planes (reconnaissance and artillery spotting) with the signal corps, but their utility quickly inspired other uses, including supply, medevac, and mobility. Again, the Marines in the Banana Wars, the British in Iraq, and the French and Spanish in Morocco, all sought to maximize the utility of their early airplanes by finding new roles for them.

Combat support roles adopted by helicopters include aerial medevac and convoy escort. Medevac by helicopter began with the British in Malaya in 1950,[19] where 5000 casualties were lifted over the course of the emergency.[20] This quickly became universal practice, as it was recognized (by the Portuguese and El Salvadorans, for example) that proper medical evacuation and care dramatically raised the morale of friendly troops.[21] Ground convoy escort by armed helicopters to reconnoiter routes and deter or defeat ambushes came into common practice with the Soviets in Afghanistan and Chechnya,[22] and with the U.S. in Iraq and Afghanistan.[23] The Soviets in Afghanistan developed a robust Tactical Recovery of Aircraft and Personnel (TRAP) capability in Afghanistan in the 1980s. This mission was considered so important that each flying unit maintained an aircraft on continuous alert with medical and mechanical personnel and all necessary equipment to repair or recover a downed aircraft. No doubt this impressive capability arose out of necessity, as the Soviets lost 392 helicopters during the Afghan campaign.[24]

The potential of the helicopter to serve in mobility was recognized from the beginning, and the capability was demonstrated in combat almost immediately. Despite a modest helicopter

force in Malaya that never exceeded thirty-one light and medium lift helicopters, the ability to insert troops for jungle patrols was considered the single greatest supporting contribution of airpower during the emergency.[25] The British, keen to capitalize on this newfound tactic, employed over seventy helicopters suppressing the Mau Mau rebellion in Kenya.[26] Likewise, the French lack of a significant helicopter capability in Indochina forced reliance on the primitive road system, which the Viet Minh exploited through frequent ambushes. In Algeria the French helicopter force quickly grew from one in 1954 to over 600 by 1957.[27] In particular the Boeing H-21 "Bananas" were used to great effect by the mobile Reserve Generale, an elite mix of Foreign Legion, La Coloniale troops, and native Harkis, in eliminating large insurgent groups exposed by the Commandos de Chasse during long-range interdiction patrols.[28] Helicopter use for troop mobility rose to new heights in IW throughout Africa, Vietnam, and Afghanistan during the 1960s-1980s.

The efficacy of the helicopter in rapid mobility offers the ability to "collapse the factors of time and space"[29] by allowing a limited number of troops access a greater area than would be available through ground transport only. This was one relatively valid aspect of the British "air control" program; great distances could be observed and (to a lesser extent) influenced by a smaller contingent of troops. This use of mobility can allow IW forces contact with geographically remote populations, deny or restrict use of open terrain to the enemy, [30] enhance security, and bolster the perception of legitimacy of the host-nation government.[31] The demonstration of presence and legitimacy can have a strong positive effect on the population according to LTG Thomas Metz, U.S. Army, former Commander, Multinational Corps-Iraq (MNC-I), who employed low-altitude (highly visible) aircraft during the Iraqi elections in January 2005 to maintain order.[32]

The U.S. Counterinsurgency doctrine, and most counterinsurgency theory, asserts that kinetic operations are seldom the deciding factor on the COIN battlefield, and may be ultimately counterproductive. The restrictions on the use of force may be considerable, because the consequences of use of force may be significant, but not foreseen.[33] Forces engaged in irregular warfare will be most successful through using the minimum level of force necessary. Any military capability that can be used effectively for non-lethal or humanitarian combat support missions will be of great use to the commander; the helicopter is the exemplar of this true multi-role capability.

Challenges and Requirements

The use of helicopters in irregular warfare faces at least four significant challenges that must be met to realize the full potential of the capability. These challenges are the inherent limitations of (and threats to) helicopters, the lack of doctrine on the employment of helicopters in irregular warfare, the limited number of helicopters available, relative to demand, and the risks associated with over-reliance on helicopters in IW.

The limitations of helicopters, and the threats to them, must be understood in order to best employ these assets. Limitations include the speed, range, and lifting ability in terms of passenger/cargo weight, cubic feet available internally, and the external load-bearing capability. Additionally, the environment can cause significant limitations, such as poor weather conditions, extremes in temperature, and high altitudes that reduce the power produced by the engines and the lift produced by the rotor blades. These restrictions greatly hindered the Soviet Air Assault forces in Afghanistan; troop/cargo load capacities were frequently reduced by half in the mountainous regions. This exacerbated planning for insert and extraction missions due to fuel and weight restrictions, or the necessity to increase the number of helicopters participating in the

mission, saturating available landing zones (LZs).[34] Some helicopters are more affected than others by the extremes of temperature and altitude; for example, the U.S. Marine Corps did not deploy UH-1N "Hueys" to Afghanistan after 2006 due to the decreased performance of that utility helicopter.

Threats to helicopters in the theater must also be fully assessed, understood, and mitigated to the extent possible. Due to their slower speeds and generally lower altitudes, helicopters are more susceptible to small arms fire and rockets propelled grenades (RPGs), and have limited reaction time to counter anti-aircraft missiles. During the Afghan war the Soviets lost 392 helicopters. The General Staff study attributed the losses to poor reconnaissance of enemy troops and air defense locations, poor command and staff work, insufficient preparation of replacement pilots, poor safety gear, poor performance due to excessive weight, temperatures, and altitudes, and the "exorbitantly excessive overuse of Army aviation." Helicopters proved vulnerable during insertions to enemy-occupied LZs, on extraction, and during takeoff and landings from air bases (so-called "nomadic ambushes" located near air bases and fired on aircraft from multiple directions simultaneously).[35] Helicopters also proved vulnerable in urban settings, as borne out in Somalia, Chechnya, and the Israeli-Hezbollah War of 2006, though these losses were on a much smaller scale than those suffered during the Soviet-Afghan War.[36]

The lack of doctrine on the use of airpower in IW is a significant challenge to their optimal employment. While it should be obvious that IW requires different doctrine than conventional warfare, the existing U.S. doctrine is fairly shallow on the subject. Joint doctrine stresses the various capabilities of airpower in IW (and COIN), but does not capture best practices or propose the wider, systematic changes from conventional doctrine that are necessary. Further, service doctrines on airpower in IW are "counterproductive to achieving sound C2,

unity of effort, synchronization, and integration of military activities."[37] As a result of this lack of joint doctrine, the tendency is to exercise doctrine for conventional war, especially in regards to centralized control of airpower. This may reduce the effectiveness of fixed-wing aircraft somewhat, but absolutely diminishes the effectiveness of helicopters in IW, due to the rigidity of planning and C2, effectively denying commanders tactical flexibility to employ helicopters on short notice.

The third challenge is the limited number of helicopters available. Given the capabilities they offer, the demand for helicopters will always be high. This is especially true in difficult terrain, or when facing an enemy that makes extensive use of improvised explosive devices (IEDs), making ground transportation slow, expensive, and dangerous. This has obviously been the case in both Iraq and Afghanistan. The lack of helicopters left the French more exposed to the Viet Minh in Indochina, and led the Soviets to overextend their pilots by requiring a peak of six-to-eight sorties per day, per pilot, during the Afghan War.[38] Frank Ledwidge argued that a dearth of helicopters restricted the mobility of British troops in both Iraq and Afghanistan, resulted in an inadequate air-to-ground fires capability, left British troops unable to venture far from bases due to inability to resupply by air, and left British forces without the means to seize and maintain the initiative against the enemy. Ledwidge declares that "the failure to fund adequate equipment cost many lives, but did not influence the failure of either operation," reserving some blame for the military leadership who prioritized funding of high-end jet and missile systems, and the battlefield leadership in theater.[39]

The fourth challenge of helicopters in IW is the inverse of the previous, and therefore an insidious one. The overuse of air mobility separates the mobile forces from the population. The appeal of air mobility, and the enhanced flexibility and surprise that comes with it is a great

advantage in IW, when gaining and maintaining contact with the enemy can be the greatest challenge. For U.S. Army air assault troops in Vietnam in the 1960s mobility and firepower completely replaced pacification and securing the population, to the detriment of the strategic effort.[40] The increased use of helicopter mobility in Iraq and Afghanistan, borne out of a desire to protect friendly troops by reducing their exposure to IEDs, risked the same result – separation from the population, and therefore the ability to directly influence daily events on the ground.

"Tactical Mobility in Execution" – A Missed Opportunity

A cursory study of helicopter employment in irregular warfare reveals a recurring set of tactics, techniques, and procedures (TTPs) for using helicopter borne forces against targets of opportunity or as quick reaction forces (QRFs). These TTPs include helicopter borne interdiction, counter-ambush and hammer-and-anvil, and QRF missions. These missions are distinct from raids in that they are conducted with minimal-to-no preplanning, usually by air-ground teams that have planned and rehearsed together (without a predetermined target set), and are frequently conducted from an alert status. For lack of a doctrinal term the author has elected to refer to them as "tactical mobility in execution" missions. The intent behind this term is to draw a distinction with current U.S. operations, where the mission of an air mobility sortie is the movement of troops or materiel (and generally requires several days for the Air Tasking Order (ATO) request process to source lift for the movement). With tactical mobility in execution missions, the mission of the sortie is the ground unit's mission – QRF, interdiction, counter-ambush, etc., and the helicopter simply enables or enhances the ground unit's mobility. They are also distinct from raids, where the target location is pre-planned and included in the ATO request process. With one exception, these highly-effective TTPs have not been employed by regular U.S. ground forces in OIF and OEF, and this represents a significant missed opportunity.

Helicopter borne interdiction missions interdict ground assets, using the mobility of the helicopter to reach locations otherwise inaccessible or faster than the enemy can respond by fleeing or disposing of contraband. This tactic was employed by Russian Air Assault and Special Forces (Spetsnaz) units in Afghanistan, either by inserting the interdiction force deep in the enemy's rear (with helicopter gunships and lift aircraft on standby for fire support and extraction), or by interdicting ground convoys with the troops aboard the lift helicopters, under the cover of the gunships. These operations were considered very successful, because the caravan would not be alerted by the presence of the helicopters until it was too late to flee. The operations frequently netted prisoners, and they also allowed a single ground unit to cover a very wide area, taking advantage of the helicopter's ability to collapse battle space.[41]

Counter-ambush and hammer-and-anvil attacks could be either reactive or proactive, and consisted of a larger, ground-mobile force (hammer) attacking an enemy unit, while a smaller helicopter borne unit (anvil) would be inserted to the rear to cut off the enemy's escape route. This tactic was employed by the Portuguese in Africa[42], the Rhodesians (who also sometimes used paratroopers dropped from DC-3 Dakotas)[43], and the Soviets in Afghanistan. In each case, the TTPs were judged highly successful, and offered commanders a way to maintain the initiative against an irregular enemy.

Helicopter borne QRF missions were also commonly conducted. The French in Algeria used the Reserve Generale, the Portuguese used Commandos and Marines in Africa, the Rhodesians had their "Fire Forces", and the South Africans used combined helicopter borne and armored vehicle QRFs. In each case the intent was the same – a ground unit would radio for the QRF because it had fixed or was in contact with a sizeable enemy unit. The QRF would then fly to the scene, reduce the threat with attack helicopters (and fixed wing attack aircraft, in the case

of the Portuguese and the Rhodesian Fire Force), insert the QRF, engage the enemy, the extract on the same helicopters. The key, especially in the case of the Fire Force, was the detailed planning and rehearsals between the air and ground units that took place before the missions. These were long-term relationships and units brought together on enduring missions. These QRF operations were extremely successful, and offered a concrete way to regain the initiative from the enemy.

Despite the successes of these TTPs in several conflicts, the U.S. regular forces have not emulated them, with one exception. From the summer of 2006 through 2008 the Marine Corps conducted what were termed "Aero Scout" missions. These missions were similar to ground interdiction missions performed by the Soviets in Afghanistan, and were inspired by the U.S. Army's D Troop, 1st Infantry Division, 4th Cavalry Regiment in Vietnam (as reported in the book *Low Level Hell*, by Hugh Mills). The impetus were near-daily observations by attack and utility pilots of suspicious activity that they were powerless to interrupt. Given the size of Anbar Province the Marines on the ground were usually unable to respond in a timely manner. The Aero Scout concept placed a QRF-type ground unit (initially from 1st Force Reconnaissance Company) aboard assault helicopters (initially U.S. Army UH-60s stationed at Al Asad Air Base), attached to a section of attack or utility (AH-1W/UH-1N) helicopters. The attack or utility flight lead was the overall mission commander, and targets of interest selected by him were investigated. In the case of vehicles, the attack helicopters would stop the vehicles, then the assaults would land and the infantry Marines would investigate. The unit included an interpreter, breaching and engineering capabilities, and medical support, and the ability to take several prisoners if required. The Aero Scout missions were conducted frequently but randomly, and eventually evolved to include Iraqi Army and Special Forces, as well as other U.S. helicopter

types. The Aero Scout mission relied on extensive planning and rehearsals and required extensive trust in the judgment of the mission commander. The program was generally considered successful, having captured several high value individuals (HVI) and reduced the infiltration of fighters and weapons across the Syrian and Jordanian borders. However, the program has not been captured in doctrine; as such, it would be difficult to replicate. The primary difference between Aero Scout and the other Tactical Mobility in Execution mission types is that the air mission commander, not the ground commander, was overall mission commander and selected the target sites and methods. Those who opposed the Aero Scout program generally opposed on the grounds of risk, and subsequent higher commanders added layers of control and bureaucracy, reducing the flexibility and effectiveness originally sought.

The employment of helicopters for tactical mobility in execution is a missed opportunity for U.S. forces. This is especially egregious given the sheer numbers of helicopters available to U.S. forces in theater. Standing a helicopter borne QRF is in both U.S. Army and U.S. Marine doctrine and practice; actually employing it against the enemy, however, is not. Additionally, with the exception of Aero Scout, using helicopter borne troops against templated, but unplanned, LZs is simply not done by regular forces. It seems to the author that tactical risk aversion (landing helicopters is un-surveyed zones) is the primary reason why this proven TTP has not been more widely adopted by U.S. forces. This does not represent risk mitigation, but rather risk displacement. Lacking a tactical mobility in execution capability, either the enemy escapes, or ground forces must be exposed to ground-based IEDs and ambush in order to interdict the enemy. In either case the risk to helicopter borne forces is simply displaced to ground forces at another time or place.

Conclusion

Helicopters offer ground forces a great variety of capability in irregular war. From destruction by fires, insert/extract, escort, IO, and economy of force, to mobility, intelligence, surveillance, and reconnaissance, and tactical resupply, the reach, presence, and perception of friendly and host nation forces can be greatly enhanced. The avoidance of tactical mobility in execution operations by U.S. regular forces represents a significant missed opportunity. The ability to insert squad-to-platoon size forces at any location on the battlefield, at any time, would be a significant force multiplier for the ground forces. Yet this TTP, that has proven effective in numerous IW conflicts, is simply off the table to U.S. regular forces due to tactical risk aversion. This decision is short-sighted, and accepts unnecessary risk of escape by enemy forces, increased casualties, and lost intelligence gathering to placate fears of helicopter landing mishaps in unprepared terrain. Tactical mobility in execution TTPs should be studied, standard operating procedures developed, and dedicated air-ground teams should be selected in order to refine these TTPs to maximize the tactical benefits while minimizing the risks to the helicopter borne forces.

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[1] Johnson, *Airpower and Restraint in Small Wars*, 57.
[2] Ibid., 57.
[3] Ibid., 58; McCall, *Adapting Airpower in Counterinsurgency*, 10.
[4] McCall, *Adapting Airpower in Counterinsurgency*, 12-13, 16-17; Beckett, *Modern Insurgencies and Counterinsurgencies*, 103; Cann, *Counterinsurgency in Africa*, 136.
[5] Hackett, *Aero Scout*, 14.
[6] *The U.S. Army/Marine Corps Counterinsurgency Field Manual*, 364, 366.
[7] Johnson, *Airpower and Restraint in Small Wars*, 57.
[8] McCall, *Adapting Airpower in Counterinsurgency*, 7-8.
[9] Johnson, *Airpower and Restraint in Small Wars*, 57-59.
[10] Cann, *Counterinsurgency in Africa*, 130.
[11] Ibid., 132; Moorcraft & McLaughlin, *The Rhodesian War*, 55.
[12] Beckett, *Modern Insurgencies and Counterinsurgencies*, 147; The Russian General Staff, *The Soviet Afghan War*, 313; Oliker, *Russia's Chechen Wars*, 25; Arkin, *Divining Victory*, 63.
[13] McCall, *Adapting Airpower in Counterinsurgency*, 7-8.
[14] Johnson, *Airpower and Restraint in Small Wars*, 59.
[15] Oliker, *Russia's Chechen Wars*, 56.
[16] Pirnie & O'Connell, *Counterinsurgency in Iraq*, 43, 75, 77-78.
[17] Moorcraft & McLaughlin, *The Rhodesian War*, 104.
[18] The Russian General Staff, *The Soviet Afghan War*, 313.
[19] Cann, *Counterinsurgency in Africa*, 129.

[20] Beckett, *Modern Insurgencies and Counterinsurgencies*, 103.
[21] Cann, *Counterinsurgency in Africa*, 177; *The U.S. Army/Marine Corps Counterinsurgency Field Manual*, 364.
[22] The Russian General Staff, *The Soviet Afghan War*, 207; Oliker, *Russia's Chechen Wars*, 56.
[23] McCall, *Adapting Airpower in Counterinsurgency*, 12; *The U.S. Army/Marine Corps Counterinsurgency Field Manual*, 366.
[24] The Russian General Staff, *The Soviet Afghan War*, 220-221.
[25] McCall, *Adapting Airpower in Counterinsurgency*, 10-11.
[26] Beckett, *Modern Insurgencies and Counterinsurgencies*, 127.
[27] Ibid., 115, 165.
[28] Ibid., 165; Horne, *A Savage War of Peace*, 334-335.
[29] McCall, *Adapting Airpower in Counterinsurgency*, 10.
[30] Hackett, *Aero Scout*, 14, 16.
[31] Barber, *Airpower in Counterinsurgency*, 16.
[32] McCall, *Adapting Airpower in Counterinsurgency*, 13.
[33] *The U.S. Army/Marine Corps Counterinsurgency Field Manual*, 48.
[34] The Russian General Staff, *The Soviet Afghan War*, 201,210, 217.
[35] Ibid., 211-212, 217, 221.
[36] Oliker, *Russia's Chechen Wars*, 25; Cordesman, *Lessons of the 2006 Israeli-Hezbollah War*, 112.
[37] Barber, *Airpower in Counterinsurgency*, 3.
[38] The Russian General Staff, *The Soviet Afghan War*, 221.
[39] Ledwidge, *Losing Small Wars*, 70, 78, 119.
[40] Cann, *Counterinsurgency in Africa*, 134.
[41] The Russian General Staff, *The Soviet Afghan War*, 218-219.
[42] Cann, *Counterinsurgency in Africa*, 131.
[43] Moorcraft & McLaughlin, *The Rhodesian War*, 55, 104.

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