

AirLand Reversal

By Benjamin S. Lambeth



Airpower has eclipsed land power as the primary means of destroying enemy forces.

USMC photo by Gunnery Sgt. Shannon Arledge

Here: A dust storm bears down on a military compound in Iraq in 2005. Right: Lt. Gen. Charles Horner (c), then CENTCOM's air component commander, takes notes during Operation Desert Storm.

Since the Cold War's end, the classic roles of airpower and land power have changed places in major combat against modern mechanized opponents. In this role reversal, ground forces have come to do most of the shaping and fixing of enemy forces, while airpower now does most of the actual killing.

Operation Desert Storm in 1991 showcased, for the first time, this departure from past practice between air- and ground-delivered firepower. During the Battle of Khafji in January of that year, coalition air assets singlehandedly shredded two advancing Iraqi armored columns through precision night standoff attacks.

This role shift repeated itself with even greater effectiveness in 2003 during the three-week major combat phase of Operation Iraqi Freedom that ended Iraqi dictator Saddam Hussein's rule.

Modern airpower's achievements in these two high-intensity wars demonstrated that precision air attacks now offer the promise of being the swing factor for victory in an ever-widening variety of theater war scenarios. The primary role of US land power may now be increasingly to secure a win against organized enemy forces rather than to achieve it.

In organizing their response to Hussein's forceful seizure of Kuwait in 1990, the leaders of US Central Command aimed to destroy as many of Iraq's armored forces from the air as possible before launching any land invasion to drive out the occupying enemy troops. It remained unclear, however, how effective allied airpower would be under this approach until they actually executed the air campaign.

Three factors came together to enable allied airpower to draw down Iraqi forces to a point where allied ground troops could advance in confidence that they would be engaging a badly degraded opponent once the ground offensive began. First, allied aircraft were able to operate at will in the medium-altitude environment,

unmolested by Iraqi radar guided surface-to-air missiles or fighters, thanks to an earlier US air defense suppression campaign.

Second, the introduction of the E-8C JSTARS aircraft permitted allied air planners to see and identify fixed and moving objects on the battlefield clearly enough to make informed force commitment decisions and to execute lethal attacks day or night. Third, allied planners discovered during the campaign's initial preparation phase that aircraft equipped with infrared sensors and armed with laser guided bombs could find and destroy dug-in enemy tanks one by one in large numbers at night.

Airpower Over Khafji

As the air war's successes continued to mount over time, Hussein made a desperate attempt at an asymmetric response on the ground, evidently hoping to draw allied forces into a slugfest that would result in high numbers of US casualties and sway American opinion against the war.

Twelve days into the fighting, on Jan. 29, 1991, he launched an attack from southeastern Kuwait toward Saudi Arabia aimed at the abandoned coastal town of Khafji. Soon thereafter, allied sensors detected a second wave of Iraqi columns forming up in Kuwait to reinforce those that had initially attacked.

Upon learning of the Iraqi troop activity, CENTCOM's air component commander, Lt. Gen. Charles A. Horner, saw an opportunity to engage the Iraqi column before it made contact with allied ground forces. By diverting coalition aircraft from their original taskings, he committed more than 140 airplanes against the advancing column, which consisted of battalion-sized units from two armored divisions.

The ensuing air attacks continued throughout the night and well into the next day before the battle was over. The Iraqi forces never had a chance to mass and attack: After the dust settled, coalition



DOD photo

airpower had completely debilitated the advancing Iraqi column, forcing the survivors into retreat.

In all, 357 tanks, 147 armored personnel carriers, and 89 mobile artillery pieces were destroyed in the air attacks, along with additional items of equipment in Republican Guard units farther north.

An Iraqi who had fought in the earlier Iran-Iraq War later remarked that his brigade had sustained more punishment from allied airpower in 30 minutes at Khafji than in eight years of fighting against Iran.

Not long after the showdown at Khafji, F-111Fs equipped with Pave Tack infrared targeting pods attacked enemy armor in the Kuwaiti theater, using 500-pound GBU-12 laser guided bombs. Because this tactic was reminiscent of taking potshots at tin cans with air rifles, F-111 aircrews dubbed it “tank plinking.”

The impact of this new tactic on classic ground force survival assumptions was profound. Many Iraqi crews simply abandoned their tanks once it became clear the tanks could turn into LGB magnets at any moment—without warning. By some accounts, it allowed for a peak kill rate well into the hundreds per night, and allied air success remained in that range for several nights in a row.

In previous wars, such targets would have been relatively unthreatened by air attack.

Given the unprecedented effectiveness of allied airpower in counterland operations, there was almost never any need for true close air support in Desert Storm. Even Marine Corps aviation, whose principal purpose is to support embattled marines on the ground, had little occasion or opportunity to fulfill that once-classic function.

Although some 70 percent of all marine combat sorties flown in Desert Storm were logged as CAS missions, subsequent analysis indicated that only 14 percent of those were flown inside the fire support coordination line, the boundary established by the ground commander to coordinate friendly fire. An even smaller number went against enemy targets in anything like close proximity to friendly forces.

For more than a month, allied airpower relentlessly decimated Iraq’s fielded ground troops. Airpower allowed advancing allied ground units to complete a virtually bloodless liberation of Kuwait in a mere 100-hour rout of Iraq’s occupying forces. The aerial assault continued in conjunction with allied ground units during the campaign’s final four days. All told, there were only 148 fatalities among US service personnel as a direct result of enemy action during the entire five-week conflict.

Desert Storm represented an unprecedented airpower achievement. The Iraqis knew a fight was coming, but allied airpower pummeled them to the point that they were surrendering en masse, even by waving white flags to remotely piloted aircraft.

How It Might Have Been

On balance, the precision air attacks that JSTARS and other systems made possible during Desert Storm put hostile armies on notice that they could no longer expect a night sanctuary or any place to hide. They also served notice that any attempt to move, day or night, would equally ensure a swift and lethal aerial attack. In doing so, the events at Khafji and afterward presaged a new role for airpower in saving friendly lives by substituting precision air attacks for ground forces within reach of enemy fire.

In the subsequent case of NATO’s air war for Kosovo in 1999, the absence of allied ground combat units showed once again, this time by default, how land forces can help airpower to deliver to its fullest potential.

Viewed in hindsight, NATO’s decision to undertake Operation Allied Force without an accompanying ground threat let the troops of Serbia’s 3rd Army elude allied airpower, by and large, by dispersing and hiding rather than bunching up in defensive anticipation of a land invasion.

Had Serbia believed that it faced an imminent NATO ground invasion of Kosovo, or had there been even a credible threat of invasion, Serbia would have been forced to concentrate and maneuver its troops in ways that would have made it easier for NATO to find, attack, and destroy them from the air.

As for the oft-noted concern over the prospect of sustaining an unbearable level of friendly casualties had NATO opted to back up its air war with a ground element, there most likely would have been no need actually to commit NATO troops to battle in the end. The mere deployment of NATO ground troops along the Albanian and Macedonian borders would have made their Serbian counterparts more easily targetable by allied airpower. It also might have helped to deter, or at least lessen, the ethnic cleansing of Kosovar Albanians by giving Serbian troops something more serious to worry about. In both cases, there may have been a quicker end to the war.

Back in Iraq

As in Desert Storm more than a decade before, a similar reversal in roles between allied air and land forces occurred during the major combat phase of Iraqi Freedom that began on March 20, 2003, and lasted into mid-April.

DoD photo



CENTCOM’s strategy from the start was to disable as many enemy ground forces as possible from the air before sending allied troops into direct contact with them in a pitched battle for Baghdad.

Airpower performed especially effectively in fighting south of Baghdad near Najaf that was reminiscent of 1991’s Battle of Khafji. Remotely piloted aircraft and JSTARS platforms detected a formation of Iraqi tanks and other vehicles moving into position to attack US ground forces. A well-aimed barrage of satellite-aided 1,000-pound GBU-31 Joint Direct Attack Munitions delivered by allied aircraft destroyed some 30 of

US Army photo





Amn. Jerry Herron (l) and SrA. Jason Chaffin prepare to load the cannon of an A-10 with 30 mm armor piercing ammunition at Aviano AB, Italy, in 1999 prior to an Operation Allied Force mission.

the armored vehicles and broke up the remainder of the formation before it could get underway.

By the end of the campaign's fifth day, a heavy sandstorm slowed the northward pace of allied ground units substantially once they had advanced beyond Najaf and begun to encounter increased resistance. The sandstorm effectively grounded Army and Marine Corps attack helicopters, rendering coalition fixed wing aircraft the only platforms that could deliver air support to allied ground troops who were sometimes surrounded by the enemy in close proximity.

In Desert Storm, allied air attacks focused increasingly on tank plinking. This time the

mission presented a greater targeting challenge. The Iraqis, having learned from the Serb experience in Kosovo, did not array their tanks in battle formation, but instead dispersed them under trees and in the farming villages of the Euphrates River valley. Once directly threatened by advancing allied ground troops, however, those tanks were forced to move into more concentrated defensive positions, thereby rendering them more vulnerable to air attack.

As Iraqi tank columns sought to move under what their commanders wrongly presumed would be the protective cover of the sandstorm, allied air strikes disabled a convoy of several hundred armored

vehicles believed to be ferrying troops of the Medina Division toward forward elements of the Army's 3rd Infantry Division encamped near Karbala, about 50 miles south of Baghdad. As the Air Force Chief of Staff at the time, Gen. John P. Jumper, later put it, "We killed a lot of those guys, that equipment, during the sandstorm when those people assumed that because they couldn't see 10 feet in front of their face, neither could we."

In the end, coalition ground troops made it to Baghdad and toppled Hussein's regime from a standing start in Kuwait in just 21 days. The effect of allied air operations was to facilitate the quickest possible capture of Baghdad without any major head-to-head battles between allied and Iraqi ground forces.

In fulfilling its assigned roster of combat tasks, allied airpower did not just "support" CENTCOM's land component by "softening up" enemy troop concentrations. More often than not, it conducted wholesale destruction of Iraqi ground forces prior to and independently of allied ground action.

Thanks largely to the sustained contribution by fixed wing air assets, only about a dozen Iraqi tanks opposed the 3rd ID during the final battle for Baghdad. Abrams tanks quickly put them out of action in the only traditional tank-on-tank encounter of the entire war.

In clear testimony to this indispensable enabling performance by CENTCOM's air component in the counterland war, a post-campaign assessment noted how "captured senior Iraqi general staff officers reported that the fighting effectiveness of the Republican Guard divisions had been largely destroyed by air strikes." Essentially bearing out this observation, Col. William Grimsley, commander of the 1st Brigade of the 3rd ID, recalled: "We never really found any cohesive unit of any brigade, of any Republican Guard division."

AirLand Warfare's New Face

Iraqi soldiers interrogated by their US captors during and after the campaign admitted their morale quickly collapsed once their armored vehicles began exploding all around them in the midst of the blinding three-day sandstorm. In most cases,



An Iraqi T-72 Main Battle Tank, destroyed by Allied airpower, slumps aside a road leading to Al Iskandariyah, Iraq, during Operation Iraqi Freedom.



A1C Brian Adkins secures a GBU-38 Joint Direct Attack Munition to an MJ-40 bomb lift truck operated by SrA. Adam Weaver in Southwest Asia in 2009. The JDAM is then loaded onto a B-1B for a sortie.

JSTARS crews detected and fixed the locations of those vehicles through the weather and were able to cue pilots in strike aircraft to confirm the locations and types of enemy vehicles and then to attack and destroy them on a major scale.

As with Desert Storm, Iraqi Freedom showed how aerial counterland attacks have increasingly begun to move doctrinally beyond solely the classic supporting roles of close air support and air interdiction. These attack missions have evolved into destroying the enemy's army independently of the ground commander's scheme of maneuver.

The reversal of roles between US and allied air and land forces in major combat reflects a newly emergent fact that fixed wing airpower, at long last, has become more effective than its ground counterparts in creating the conditions needed for rapid success on the ground.

This pattern of force employment has entailed a fundamental departure from the more familiar apportionment of roles in earlier cases of air-land warfare, in which air forces did the fixing of enemy troop concentrations with indirect fire and ground forces did most of the subsequent killing by means of organic direct fire.

In the most telling testimony to this change, throughout the three weeks of major combat in Iraqi Freedom, the Army's V Corps launched only two deep-attack attempts with AH-64 Apache attack helicopters. The first attack came close to ending in disaster, and the second achieved only modest success. Similarly, Army artillery units expended only 414 of their longest-range battlefield tactical missiles, primarily because of the wide-area destructive effects of those weapons and their prospects of causing unacceptable collateral damage.

In sharp contrast, coalition forces in the same three weeks generated more than 20,000 strike sorties enabled by a force of 735 fighters and 51 heavy bombers. In all, those aircraft accurately struck more than 15,000 target aimpoints in direct and effective support of the allied land offensive.

This evolution of joint warfare has not been simply a matter of the notional "hammer" of friendly airpower smashing enemy forces against the "anvil" of friendly ground power. Rather, as RAND's David E. Johnson explained in his study published in 2006, "Learning Large Lessons," it has entailed "a case of ground power flushing the enemy, allowing airpower to maul his forces, with ground power finishing the fight against the remnants and controlling the ground dimension in the aftermath of combat."

In light of this recent experience, it's fair to say that evolved

airpower has fundamentally changed the way the United States and its closest partners might best fight future large-scale engagements. That's because airpower now has the ability to carry out functions that ground force elements traditionally performed at greater cost and risk—and with less efficiency.

Most notable in this regard is modern airpower's now well-demonstrated ability to neutralize an enemy's army while incurring a minimum of friendly casualties and to establish the conditions for achieving strategic goals almost from the outset of fighting. Reduced to basics, modern airpower now allows friendly ground commanders both freedom from attack and freedom to attack, something fundamentally new in the last two decades.

This reality has been repeatedly affirmed by America's combat experiences in both Iraq and Afghanistan since 2003. It in no way vitiates the enduring truth that only well-armed ground forces can consolidate a joint force victory should an enemy refuse to yield in the face of withering air attacks.

Yet a quantum breakthrough has occurred in modern airpower's effectiveness when compared to the leverage of more traditional ground forces. That breakthrough has been a direct consequence of US asymmetric advantages in battlespace awareness and standoff precision strike capability. They now allow America's leaders, when necessary, to project US power without simultaneously projecting US vulnerabilities.

These unique advantages warrant preserving despite the past decade's predominance of low-intensity conflict, since they continue to disincline any nation from challenging the US and its allies with major conventional ground action, anywhere in the world. ■

Benjamin S. Lambeth is a senior fellow with the Center for Strategic and Budgetary Assessments, a position he assumed in 2011 following a 37-year career at the RAND Corp., where he remains an adjunct senior research associate. He is the author of The Unseen War: Allied Air Power and the Takedown of Saddam Hussein (Naval Institute Press, 2013). Lambeth's most recent article for Air Force Magazine was "Air War at the Top of the World" in September 2012.