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Learning Large Lessons

The Evolving Roles of
Ground Power and Air Power
in the Post–Cold War Era

David E. Johnson

Prepared for the United States Air Force

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Cover photo: Several of the generals who developed and employed the air-ground cooperation system for the U.S. 12th Army Group during World War II in Western Europe at Fort Ehrenbreitstein, Koblenz, Germany on April 6, 1945. From left to right: Lieutenant General George S. Patton, Jr., 3d Army; Major General Otto Paul “Opie” Weyland, XIX Tactical Air Command; General Omar N. Bradley, 12th Army Group; Major General Hoyt S. Vandenberg, Ninth Air Force; Lieutenant General Courtney H. Hodges, First Army; and Major General Elwood R. “Pete” Quesada, IX Tactical Air Command. U.S. Army photograph, collection of the Dwight D. Eisenhower Presidential Library and Museum, courtesy of the U.S. National Park Service.

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Summary

The roles of ground and air power have shifted in U.S. post–Cold War warfighting operations. However, the two services largely responsible for promulgating the relevant doctrines, creating effective organizations, and procuring equipment for the changing battlefield in the domains of land and air—the U.S. Army and the U.S. Air Force—do not appear to be fully incorporating the lessons of post–Cold War operations. Thus, the joint warfighting potential of comprehensive ground-air integration is not being fully realized. Indeed, the Army and the Air Force (and the other services) have tended to view the conflicts of the post–Cold War period through their specific institutional prisms.

Additionally, all the U.S. military services have focused the vast majority of their attention on warfighting, to the exclusion of other types of military operations that are increasingly central to achieving national security objectives. These mind-sets must change if the U.S. armed forces are to provide the capabilities most needed to protect and advance national interests in the future.

Principal Conclusions

At the warfighting level of military operations, air power has proven to be capable of performing a mission—deep strike operations—that the Army has long believed the Air Force either could not or would not reliably perform. Army doctrine envisions deep operations as a key element in its corps-level campaigns at the operational level of war. However, the two systems the Army has for striking deep—the AH-64

Apache helicopter and the Army Tactical Missile System (ATACMS)—have not shown themselves to be as effective as fixed-wing aircraft in conducting deep operations. Consequently, by seeking to control operations in large areas of operation beyond the frontline battlefield, the Army limits the effectiveness and responsiveness of more capable air power weapons in the prosecution of the overall joint campaign. (See pp. 157–174.)

The effective combination of ground and air power in an integrated theater campaign is not a service issue; it is a joint warfighting issue. At present, however, joint doctrine mainly defers to service doctrine. If, however, air power can largely supplant ground power in deep operations, the implications for both joint doctrine and service capabilities are significant. Although the subject is beyond the scope of this study, the capability of fixed-wing aircraft raises questions about the roles of the attack helicopter on the battlefield and the control, and possibly the utility, of ATACMS in deep operations. (See pp. 191–200.)

Despite the warfighting prowess of the U.S. military, its forces have been less effective across the full range of military operations.¹ This realm is largely and intrinsically ground centric. It is also the strategic realm in which post-warfighting victory is secured for the nation. Given the effectiveness of air power in deep operations, perhaps the time has come to assess whether the Army's structure should be substantially altered to bolster its effectiveness in this all-important realm. Resources for this redesign should come in part from existing or envisioned deep operations capabilities—from across the services—that air power can provide more effectively. (See pp. 200–207.)

Although the period since the end of the Cold War has witnessed a significant number of MOOTW, the “war” dimension of the range of military operations is where the Army and the Air Force have generally focused their institutional efforts, which are reflected in their doctrines, organizations, and equipment. Consequently, this study analyzed the

¹ See U.S. Joint Chiefs of Staff, JP 3-0, *Joint Operations*, 2006, p. iii, which discontinues the “use of the term and acronym ‘military operations other than war (MOOTW).’” This study retains the term in all but the final chapter, because it was the organizing doctrinal construct for the range of military operations for the conflicts described in this study.

following post–Cold War conflicts: Iraq (1991), Bosnia (1995), Kosovo (1999), Afghanistan (2001), and Iraq (2003). The analysis was limited to identifying the responses of the ground-centric and the air-centric communities to what happened in these wars and, where appropriate, a more integrated assessment of these wars. Table S.1 depicts the results of the case analysis.

Findings About the Relative Warfighting Roles of Ground and Air Power

Individually and in toto, these cases suggest that a shift has occurred in the relative warfighting roles of ground and air power. This shift was most apparent in Operation Iraqi Freedom (OIF). Several conclusions emerge from the assessment of that war:

- The strategic and operational levels of warfighting against large conventional enemy forces were dominated by flexible, all-weather, precision-strike air power, enabled by intelligence, surveillance, and reconnaissance (ISR). (See pp. 111–116 and 123–128.)
- The tactical level of war and the exploitation of the operational effects of air power were the primary domains of ground power. Despite significant increases in ISR-enabled situational awareness at the strategic and operational levels, uncertainty at the tactical and close combat levels of war endures. (See pp. 116–117.)
- Successful major combat operations did not necessarily achieve a strategic political end state or conflict resolution. A protracted postwar U.S. presence in military support to stability, security, transition, and reconstruction (SSTR) is the norm. (See pp. 200–207.)
- The Army and the Air Force experience the greatest interservice tension over the relative roles of ground and air power in warfighting. This tension largely results from how joint doctrine designates and defines areas of operation (AOs) and how the Army views deep operations. Generally, AOs are expansive to support an aggressive surface scheme of maneuver and to enable the maxi-

Table S.1
Case Assessment Results

Case	Ground Centric	Air Centric	Integrated	End State
Iraq, 1991	Ground campaign decisive after air softened Iraqi forces.	Air power set the conditions for overwhelming success—all but won the war.	Air campaign significantly weakened an incompetent opponent who was defeated by ground power.	Containment and sanctions for 10+ years; OIF
Bosnia	Croat-Muslim ground offensive principally responsible for Serb concessions.	Decisive and precise air power forced Serb concessions.	Combination of ground threat and air attack and low stakes for Serbs resulted in concessions; rapidity yields false expectations about Serb will to resist.	MOOTW
Kosovo	Threat of a ground invasion caused Milosevic to yield; center of gravity Serb Forces in Kosovo; a minor view held that KLA influenced decision.	Air power forced Milosevic to yield after stepping up modest initial campaign; center of gravity “downtown”—what Milosevic valued; attacking forces in Kosovo a waste of bombs.	Air attack against infrastructure targets changed the political dynamic. This use of air power, coupled with diplomatic isolation (Russians) and NATO unity, caused Milosevic to yield. Ground threat a future consideration and may have influenced to a lesser degree.	MOOTW

Table S.1—Continued

Case	Ground Centric	Air Centric	Integrated	End State
Afghanistan	Anti-Taliban Afghan ground forces, enabled by air power, overcame Taliban and al Qaeda. CAS not responsive during Operation Anaconda, when U.S. ground forces necessary to root out remnants.	Air power decisive in giving Anti-Taliban Afghans the edge. Also key in Operation Anaconda in protecting U.S. ground forces.	Air power decisive in giving Afghans the edge, but U.S. ground forces needed to do the searches and rooting out that surrogate Afghan forces did not want to do. Air power critical in Operation Anaconda.	MOOTW
Iraq, 2003	“Shock and awe” did not obviate the need for ground combat; “boots on the ground” were needed to destroy Saddam’s regime and occupy Iraq. Nevertheless, air power was a key enabler in achieving these objectives.	Air power set the conditions for rapid success on the ground, despite being in a supporting role. However, control of the FSCL by ground commanders limited air power’s contribution in the “deep battle” (as defined by the Army and Marine Corps).	Air power precluded effective positioning and employment of Iraqi ground forces even in bad weather or darkness, often shattering units before they could close with coalition ground forces. This not only reduced the costs, risks, and duration of the coalition campaign to remove Saddam’s regime but largely left coalition ground units to mop up the remnants of shattered enemy formations in close battle where friction persisted unabated.	MOOTW

imum use of the organic capabilities of the surface components. The Army's doctrine tends to retain control over a large AO so that a corps can control and shape the battlespace for its fight and employ its organic assets (ATACMS and attack helicopters) to the limits of their capability. Not surprisingly, Army operational commanders want to control the resources used in their AOs. This is accomplished by establishing fire support coordination measures—for example, the fire support coordination line (FSCL) within the corps or combined/joint force land component commander AOs that are permissive for Army systems but restrictive for the systems of other components. Using air power short of the FSCL can be inefficient because of coordination requirements. (See pp. 140–141.)

In reality, despite improved joint “interdependence,” U.S. military operations remain an amalgamation of component operations, designed for optimal employment of organic capabilities (See pp. 140–145).

If these conclusions are correct, the question that logically follows is: How are they influencing joint, Army, and Air Force concepts and doctrine? The record of joint, Army, and Air Force “learning” in this area is mixed, essentially for three reasons:

- Joint doctrine defers to surface components in the establishment of AOs. (See p. 141.)
- The Army's retention of control of large AOs in support of its preferred warfighting role—offensive operations at the operational level—constrains the potential effectiveness of joint fires across the theater of operations. (See pp. 192–193.)
- The Air Force's continued push of its decades-long quest for equality (some would say preeminence) creates tension between it and the other services, most notably with the Army. (See pp. 189–191.)

Nevertheless, the effectiveness of air power at the operational level of war is clear. Also clear is that the United States must prepare for potentially sterner tests than it has faced since the end of the Cold War. It is also obvious that U.S. military transformation plans and programs to meet the challenges of the future must reflect the reality that U.S. air forces have repeatedly demonstrated the ability to dominate adversaries at the operational level of warfighting and the fact that Army deep attack systems—in the current inventory or that planned for the future—are not adequate to the task of shaping the large ground AOs called for in Army doctrine. Consequently, the task of shaping the theater—strategically and operationally—should be an air component function, and joint and service doctrines and programs should change accordingly. However, a clear transformation challenge for the United States remains: to ensure that air power can operate effectively against future, first-class opponents, who will undoubtedly pose significantly more formidable challenges to its employment than has been the case in the post-Cold War conflicts discussed in this study.

Evolving joint operating concepts for major combat operations should adapt themselves to this reality. Absent significant reform, however, the joint system will continue to produce concepts that are an amalgamation of service doctrines and capabilities, rather than demanding that the services develop capabilities specifically designed to support joint doctrine.² Therefore, the final warfighting recommendation of this study is that joint doctrine—and the processes by which it is derived and promulgated—must be overhauled. As it stands now, joint doctrine frequently reflects a consensus view rather than a truly integrated joint perspective. Service doctrines and capabilities—even if redundant or conflicting—are often accommodated. (See pp. 197–200.)

A signal example of this reality is the FSCL, as employed by the Army in both Gulf wars, which is permissive to ground component

² An alternative perspective views interservice rivalry as a positive force. See Stephen Peter Rosen, “Service Redundancy: Waste or Hidden Capability?” *Joint Force Quarterly*, Summer 1993. Rosen argues, “The defense establishment should not turn a blind eye to the warp in which creative competition among the services can encourage the development of new capabilities in even a period of fiscal constraint.”

commanders (and established by the land component commander) but restrictive to the employment of air power. The FSCL, however, is merely symptomatic of the Army's desire to control a large battlespace to execute its operational doctrine. This limits the employment and effectiveness of fixed-wing air power—which is more effective than organic Army systems for deep operations—in operations short of the FSCL but forward of the range of divisional indirect fire systems. An essential first step in reforming joint doctrine is to eliminate the principle that joint doctrine must defer to that of the services. At present, guidance to joint commanders is that “JFCs [joint force commanders] should allow Service tactical and operational assets and groupings to function generally as they were designed.”³ Rather, the guidance should stipulate that the services should organize and equip themselves in ways that provide the JFC capabilities and organizations that best realize the theaterwide campaign plan by providing integrated fire and maneuver. A lesser but still critical step would be to withhold to the JFC the authority to establish all fire support coordinating measures that could affect the theater campaign plan. These measures would begin the process of building a new American warfighting construct that is truly joint and not a collection of service perspectives.

Thus, in the future, the principal roles of the Army (and the Marine Corps) in joint theater warfighting would be to employ its overwhelming tactical dominance to

- force enemy reaction at the operational and strategic levels by forcing concentration or movement, thus making him vulnerable to air attack (see p. 193)
- close with and finish enemy tactical remnants, exploit success, and seize and hold ground (see p. 194)
- deal with the post-conflict security environment until the desired end state is reached (see p. 194)

³ U.S. Joint Chiefs of Staff, JP 3-31, *Command and Control for Joint Land Operations*, 2004, p. III-2.

Air power roles should be to

- shape the theater at the operational and strategic levels (see p. 194)
- provide close air support (CAS); intelligence, surveillance, and reconnaissance (ISR); and lift to support ground combat operations (see p. 194)
- provide CAS, ISR, and lift for ground force operations to secure and stabilize the theater (see p. 194).

Again, accepting and implementing these doctrinal changes will be particularly difficult for the Army, given its focus on operational-level warfighting.

The ongoing interservice relationships discussed in this study have deep cultural and institutional origins. The fact that these “service ways of doing things” have persisted for the nearly two decades since the passage of Goldwater-Nichols Department of Defense Reorganization Act of 1986 shows the deep-rooted nature of service cultures and bureaucracies. It would seem self-evident that service doctrines should be subordinated to the central idea that *the supported commander is the joint force commander* and that the components exist to support his warfight and efforts to resolve conflict.

Clearly, the issues identified in this study demand joint solutions. Fortunately, processes are in place within the Department of Defense (DoD) to implement the necessary reforms. The Joint Staff and the U.S. Joint Forces Command have the authorities to promulgate joint doctrine and to experiment with new operational concepts, and they should exercise them more rigorously. Regarding enhanced cooperation and integration between the Army and the Air Force specifically, a historical example worthy of emulation is the period between 1973 and 1990. During these years, the Army–Air Force peacetime partnership, although perhaps anomalous in the context of their overall historical relationship, was as strong as it has ever been, as the two services worked together to defend NATO. Nevertheless, any meaningful change to service warfighting doctrines and organizations will likely be met with strong service resistance. One should recall that

the last significant attempt at sweeping joint reform—Goldwater-Nichols—was bitterly resisted by the services as an infringement of their prerogatives.

Recommendations for Reforms Beyond Warfighting

However, another issue looms large in American security affairs. What has emerged in the American way of war is an unmatched capacity to conduct operations and win battles. This capacity is reflected in the 2004 *National Military Strategy*, which

directs a force sized to defend the homeland, deter forward in and from four regions, and conduct two, overlapping ‘swift defeat’ campaigns. Even when committed to a limited number of lesser contingencies, the force must be able to ‘win decisively’ in one of the two campaigns.⁴

Winning decisively in a military campaign is a warfighting, operational capability. Unfortunately, it is not a recipe for strategic victory, as evidenced by the fact that U.S. forces remain in Kosovo, Afghanistan, and Iraq with no end in sight. In the words of Antulio Echevarria, “the new American way of war . . . appears geared to fight wars as if they were battles and, thus, confuses the winning of campaigns or small-scale actions with the winning of war.”⁵ Echevarria recommends that American “political and military leaders must habituate themselves to thinking more thoroughly about how to turn combat successes into favorable strategic outcomes.”⁶ Thus, the supreme irony of this study’s assessment of the relative relationship of American air and ground power is tied to this reality: In a world where the United States is the sole remaining superpower, its operational prowess and immense

⁴ U.S. Joint Chiefs of Staff, *National Military Strategy of the United States: A Strategy for Today; A Vision for Tomorrow*, 2004, p. 18.

⁵ Antulio Echevarria II, *Toward an American Way of War*, Carlisle Barracks, Pa.: Strategic Studies Institute, U.S. Army War College, 2004, p. vi.

⁶ Echevarria (2004), p. vii.

technological advantages do not necessarily guarantee an outcome that is favorable to U.S. strategic interests. As events in Kosovo, Afghanistan, and Iraq have shown, substantial and often specialized investments, particularly in ground forces, are required to turn warfighting successes into the desired strategic political end states and the realization of national policy objectives.

Improving service capabilities to translate successful warfighting operations into the achievement of national goals will be at least as difficult as addressing competing service warfighting perspectives. However, within DoD there is an emerging sense that in the future the United States will require capabilities beyond those optimized for warfighting.

The Army will be the service expected to provide these new capabilities. To its credit, the Army is energetically adapting to the situations in which it now finds itself. It is creating more combat brigades and more specialized units (e.g., civil affairs and military police). Furthermore, tactics, techniques, and procedures are being developed and implemented to respond to the tactical lessons the Army in the field is learning. Nevertheless, a review of the Army's concepts for the future reveals a remarkable consistency in the belief that well-trained combat forces can perform any task.

Warfighting is at the core of the Army's culture. In the three decades since the end of the Vietnam War, the Army has become the world's preeminent conventional ground force. Nevertheless, its doctrine, training, organizational, materiel, and leader development efforts have remained focused almost exclusively on warfighting combat operations, based on the enduring belief that its principal responsibility is to fight and win America's wars and that other operations can be dealt with by an Army prepared for warfighting. This results in a dominant cultural belief that effective combat units can adapt to any challenge across the range of military operations.

Although the other services share the Army's focus on warfighting, the Army will be expected—as it always has been—to take the lead in dealing with non-warfighting missions. Nevertheless, given the Army's long history of focusing on conventional conflict, it will likely be difficult for the Army to enact the reforms needed to improve its

capabilities across the range of military operations. (See pp. 151–157 and 179–181.)

Therefore, the final conclusion of this study is that many of the lessons learned about the relative roles of air and ground power since the end of the Cold War have been interpreted within service frameworks. Much work remains to attain a true American joint warfighting system, including objectively assessing the “lessons.” Even more work is needed to adapt American warfighting prowess to capabilities to achieve strategic national objectives. Reform will be difficult, but these reforms must proceed apace to ensure that the United States has the capacity to deal with the strategic realities of the twenty-first century.