



As seen from back seat of Fighter Squadron 41 F-14A Tomcat aircraft, pilot brings aircraft in for arrested landing on flight deck of USS *Theodore Roosevelt* during Operation *Desert Storm* (DOD/Parsons)

The Advent of Jointness During the Gulf War

A 25-Year Retrospective

By Christopher G. Marquis, Denton Dye, and Ross S. Kinkead

Major Christopher G. Marquis, USAF, is an Instructor in the Joint Warfighting Department at the Air Command and Staff College. Lieutenant Colonel Denton Dye, USA, is a Member of the Interoperability and Standardization Team at North Atlantic Treaty Organization Headquarters, Supreme Allied Command Transformation. Major Ross S. Kinkead, USA, is a Member of the Directorate for Intelligence at the Joint Intelligence Center, U.S. European Command, following his most recent assignment as the Executive Assistant to the Director for Intelligence, Joint Staff J2.

It has been three decades since the passage of the Goldwater-Nichols Department of Defense Reorganization Act of 1986, a piece of legislation that changed how the Department of Defense (DOD) functions and how the military conducts operations. By adopting the concept now known as “jointness,” it restricted the Services to an administrative and organizational role as force providers, while combatant commanders held operational authority with a chain of command leading directly to the Secretary of Defense and the President.¹ The intent of the legislation could be compared to that of the Constitution supplanting the Articles of Confederation, which drew the relatively independent states into a more closely centralized political body.

Less than 5 years after its passage, Goldwater-Nichols encountered its first big test when Saddam Hussein’s forces invaded Kuwait in August 1990. In response, a U.S.-led coalition reacted

with a buildup of forces in Saudi Arabia and an offensive that drove the Iraqis out of Kuwait—the Gulf War. Its success seemed a vindication for Goldwater-Nichols specifically and joint operations more generally. General H. Norman Schwarzkopf, USA, the commander in chief of U.S. Central Command, answered to Secretary of Defense Richard Cheney through the Chairman of the Joint Chiefs of Staff, General Colin Powell. Lieutenant General Charles Horner, USAF, who held the newly established position of Joint Forces Air Component Commander (JFACC), was in control of the air war.

With the hindsight of a quarter-century since the conflict, the verdict on jointness in the Gulf War is now more nuanced. In part, this is due to the fact that the U.S. military failed to replicate the spectacular success of Operation *Desert Storm* in subsequent engagements.² Also, the Services had not all embraced jointness without reservations. The Marine Corps seemed the most skeptical of the benefits of jointness, and their limited interoperability with other Services during the Gulf War appeared to reinforce their doubts.

Jointness clearly was not the decisive factor in the coalition victory in the Gulf War, although it was likely a positive contributing factor. The superiority of the coalition forces over Iraqi forces was so comprehensive that it alone was sufficient to achieve the mission objectives. The coalition was better equipped, better trained, and better led than the Iraqis. The coalition benefited from widespread international support, especially regional support, and focused objectives. Moreover, jointness was not fully realized during the operation. In some cases, it was improperly applied. U.S. forces are much closer to realizing the full possibilities of jointness today, after several years of major combat operations and counterinsurgencies in the Middle East. The concept of globally integrated operations, introduced by then-Chairman of the Joint Chiefs of Staff General Martin Dempsey in 2012, may further help in the development of jointness as a continuous state of military operations.

This article examines the concerns Goldwater-Nichols was meant to address and demonstrates that the United States and its coalition partners would have achieved victory in the Gulf War even without the legislation. What follows is an explanation of the historic context leading to Goldwater-Nichols, its application in Operation *Just Cause* (1989), and an abridged overview of Operations *Desert Shield* and *Desert Storm*. The balance of the article deals with the varying opinions of jointness in the Gulf War. It provides an analysis summarizing the ideas of the authors and delivers recommendations to military leadership. Above all, jointness must be continually developed in order to maintain its effectiveness.

Operations Eagle Claw and Urgent Fury

On November 4, 1979, militant followers of the Ayatollah Ruhollah Khomeini overran the U.S. Embassy in Tehran, taking 66 American citizens hostage. When diplomatic negotiations proved fruitless, DOD planned a raid to liberate the hostages with a joint task force (JTF) comprised of personnel from four of the military Services. In April 1980, the JTF attempted its rescue operation, codenamed *Eagle Claw*. The result was a complete disaster, culminating in a fatal collision between a U.S. helicopter and supporting C-130. No hostages were rescued, and eight members of the JTF were killed. Additional losses included aircraft, equipment, and secret documents.³

In May 1980, a special commission chartered by the Joint Chiefs of Staff examined the operation's failure. The review's chairman, Admiral J.L. Holloway III, USN (Ret.), identified the "major issues" that ultimately led to the operation's demise.⁴ These included separate training between the units prior to the mission, a muddled command and control hierarchy, and problems with equipment interoperability.⁵ Congress failed to act decisively on the findings of the Holloway Commission, but events in the Caribbean a few years later would further the argument for legislative reform.

On October 14, 1983, rivalry within the Marxist People's Revolutionary Government of Grenada resulted in a militant coup and the execution of the country's leader, Prime Minister Maurice Bishop. The resulting chaos threatened the safety of more than 650 American medical students on the island.⁶ This led to the U.S. launch of Operation *Urgent Fury* on October 25. The deployed force for this mission consisted largely of a joint Army and Marine ground force, supported by special operations, naval, and air assets. The mission resulted in the successful rescue of 720 U.S. and foreign citizens and the restoration of popular government on the island at a cost of 135 U.S. casualties.⁷

Although generally viewed as a success by military leaders, *Urgent Fury* was marred by many of the same issues that plagued *Eagle Claw*. There were failures of communication and equipment shortfalls, as Army units were unable to coordinate air support with naval assets. Assault plans were not coordinated between Services prior to combat operations, leaving units largely unaware of what adjacent unit objectives were and how they fit into the overall scheme of maneuver. These shortcomings resulted in fratricide and the inadvertent bombing of noncombatants.⁸ The complications suffered in Iran and Grenada eventually led Congress to pass Goldwater-Nichols, triggering the largest reorganization since the formation of DOD in 1947.⁹

Passage of Goldwater-Nichols

The year prior to *Urgent Fury*, Chairman of the Joint Chiefs of Staff General David C. Jones told the House Armed Services Committee, "The system is broken. I have tried to reform it from the inside, but I cannot. Congress is going to have to mandate necessary reforms."¹⁰ He stressed the need for "an organization which will allow us to develop the proper strategy, necessary planning, and the full warfighting capability."¹¹ To accomplish these goals, Congress sought the following changes:

- clarifying the military chain of command from operational com-

manders through the Secretary of Defense to the President

- giving Service chiefs responsibility for training and equipping forces, while making clear that they were not in the chain of command for military operations
- elevating the Chairman of the Joint Chiefs of Staff relative to other Service chiefs by making him the principal military advisor to the President, creating a Vice Chairman position, and specifying that the Joint Staff worked for the Chairman
- requiring military personnel entering strategic leadership roles to have experience working with their counterparts from other Services (so-called joint credit)
- creating mechanisms for military Services to collaborate when developing capability requirements and acquisition programs, and reducing redundant procurement programs through the establishment of the Office of the Under Secretary of Defense for Acquisition.¹²

These reforms met with staunch resistance from within the Pentagon. However, by late 1986, the experiences of *Eagle Claw* and *Urgent Fury* had shifted political opinion decisively toward the need for legislation. Congress voted overwhelmingly for Goldwater-Nichols, with only four Members of both houses voting in opposition.¹³

Operation Just Cause

Congress would not have to wait long before its reorganization efforts were put to the test. In 1989, tensions in Panama began to rise as the actions of General Manuel Noriega's government became increasingly provocative. The situation reached a boiling point on December 15, when Panama's National Assembly declared a state of war with the United States and a Marine lieutenant was killed by Noriega's forces at a roadblock in Panama City.¹⁴ As a result, President George H.W. Bush activated a contingency plan to secure American interests in Panama and remove Noriega from power.¹⁵

The operation, codenamed *Just Cause*, began on December 20 and would be the largest military undertaking since Vietnam. The campaign comprised a joint force of over 20,000 personnel and 300 aircraft deployed from both the United States and Panama to strike 27 different locations simultaneously.¹⁶ The results from the operation in Panama appeared to be generally positive. The military accomplished its objectives within a few days.¹⁷ Clear lines of authority and command were established early through a JTF headquarters.¹⁸ The Joint Staff kept policymakers informed and provided latitude for lower headquarters. Joint rehearsals and appropriate training by the Services were also credited with the success.¹⁹

It appeared that Goldwater-Nichols had passed its initial test. However, the *Just Cause* operation was short lived and small scale. Operations lasted only a few days, and only about 4 percent of the participating U.S. troops would be deployed in the Gulf War, so few concrete lessons were drawn from it. There would be a much greater challenge the following summer, when Iraqi forces marched into the small nation of Kuwait.

Operations Desert Shield and Desert Storm

In the early morning hours of August 2, 1990, three Iraqi divisions crossed the border into Kuwait. The small Kuwaiti army and navy provided courageous but futile resistance against the superior invading force. Kuwait's ruler, Sheikh Jaber al-Ahmad al-Sabah, fled to Saudi Arabia. By August 4, Iraqi troops had completed their conquest and were lining up on the Saudi-Kuwaiti border.²⁰

Most officials in the U.S. Government were surprised by Iraq's action. Although Iraqi officials had made threatening charges against Kuwait in the months leading up to the invasion, U.S. officials had assumed it was merely a bluff.²¹ Having realized this assumption was a mistake, President Bush decided to act and made his determination clear to his administration and the public.²² American and British leaders began to gather an international coalition with the United

Nations' backing to oppose Saddam's forces. On August 6, King Fahd of Saudi Arabia consented to allow coalition troops to deploy into his nation.²³

Eighteen nations provided ground forces to the effort. The United States alone deployed 500,000 troops and 2,000 tanks, with the British in second place, providing 35,000 troops and 210 tanks.²⁴ On paper, the Iraqi military was a formidable opponent. Its army consisted of about one million troops. Coalition analysts estimated that 43 Iraqi divisions, including 12 armor, were in the Kuwaiti theater of operations, although only 4 of these divisions were from the elite Republican Guard.²⁵ Even though the coalition held the airpower advantage with a maximum strength of 1,820 combat aircraft,²⁶ the Iraqi air force appeared ready to challenge air superiority with about 750 combat aircraft, the sixth largest air force in the world, and a vast air defense system.²⁷

General Schwarzkopf used his authority to organize forces as he saw fit. He made the decision to organize air components under one functional command. He then named Lieutenant General Horner, commander of U.S. Central Air Force, as the JFACC "to provide centralized planning, decentralized execution, and the integration of both service and allied air capabilities."²⁸ In contrast, he did not appoint a separate Joint Force Land Component Commander.

Operation *Desert Storm*, also known as the Gulf War, began at 1:30 a.m. on January 17, when U.S. Navy ships in the Persian Gulf and Red Sea launched Tomahawk cruise missiles toward Baghdad. Throughout Iraq on that first night, coalition helicopters and fixed-wing aircraft struck key targets to cripple air defenses and disable communications.²⁹ Tomahawks and F-117s scored a number of hits in Baghdad, shutting down the electrical system and knocking out CNN's live telecast.³⁰

The Iraqi air force and air defenses proved no match for the sudden onslaught. Coalition forces achieved air superiority within a week, forcing Iraqi pilots to attempt to hide their planes, place them next to residential buildings



Airman, front, of 68th Aeromedical Evacuation Squadron (AES), Norton Air Force Base, Airman, right, of 118th AES, Tennessee Air National Guard, and Airman, left, of 137th AES receive mission briefing during Operation *Desert Storm* (U.S. Air Force/Kimberly Yearean)

or landmarks, or fly them to Iran for protection.³¹ Moreover, Iraqi responses were disjointed and ineffective. They launched Scud missiles at Saudi Arabia to cause terror and at Israel to draw it into the conflict and thus wreck the coalition, but these efforts ultimately failed.³² Similarly, a desperate Iraqi assault at Khafji in late January was repulsed.³³

The coalition launched its ground offensive at 3:00 a.m. on February 24 with a three-pronged attack. In the east, the 1st Marine Expeditionary Force advanced into southeast Kuwait, supported by the multinational Joint Forces Command-East.³⁴ In the west, XVIII Corps, including the 101st Airborne Division and 24th Infantry Division, along with the French Daguet 6th Light Armored Division, maneuvered north before swinging east toward Highway 8, to the rear of Iraqi forces in Kuwait.³⁵ In the center, U.S. VII Corps and the British 1st Armored Division drove into Iraq near

the Kuwaiti border, engaging a mechanized infantry division and armored division of Saddam's elite Republican Guard.³⁶ All the attacks succeeded spectacularly, and by February 26, Kuwaiti forces were able to march into Kuwait City as part of an army of liberation.³⁷ The Iraqi forces had been reduced to a disorganized mob attempting to retreat back to their homeland. The next day, the coalition declared a ceasefire. Kuwait was liberated. The Gulf War was won.³⁸

Positive Reactions to Jointness in Desert Storm

Many viewed the overwhelming success of the Gulf War as a vindication of Goldwater-Nichols and a clear sign of the benefits of joint warfighting. Harry G. Summers, in *On Strategy II*, stated that the legislation was “long overdue” and credited it with attaining unity of effort in the operation.³⁹ Robert H. Scales, in *Certain Victory*, wrote of how

Desert Storm “raised the execution of joint warfare to an unprecedented level of competence.”⁴⁰

James Locher, a former staffer on the Senate Committee on Armed Services, observed the widespread approval of the operational chain of command established by the legislation. He considered the recognition of its success to be “universal.” According to Locher, William Perry, Secretary of Defense in the Bill Clinton administration, remarked to the committee, “All commentaries and after-action reports on [*Desert Shield/Desert Storm*] attribute the success of the operation to the fundamental structural changes in the chain of command brought about by Goldwater-Nichols.”⁴¹

Katherine Boo, writing for the *Washington Monthly*, proclaimed that the effects of Goldwater-Nichols were “gloriously apparent” in the Gulf War victory.⁴² She placed upon the Services much of the blame for the then-recent

chain of military disasters, such as the helicopter crash during Operation *Eagle Claw*, the Beirut Marine barracks bombing, and the friendly fire incidents during Operation *Urgent Fury*.⁴³ “By elevating international safety over service politics,” Boo wrote, “Congress helped the military win the Gulf War—a fact crucial to recognize now, not for the sake of praising Congress, but for the cause of broader military reform.”⁴⁴ By her reasoning, Goldwater-Nichols was an antidote for the follies of the Services’ control of operations.

Other Factors in the Gulf War Victory

To many observers, however, the legislation was a minor factor in the coalition victory. Dominic Caraccilo, writing for *Army Magazine* in 2015, made no mention of jointness in his article and instead credited the success of the mission to the fact that the goals were “well-defined, resourced, and limited to driving the Iraqis out of Kuwait and defending the Kingdom of Saudi Arabia.”⁴⁵ Richard Weitz of the Institute for Foreign Policy Analysis noted the Gulf War was “over-determined” and that “so many factors favored an allied victory” that a change in any single factor, jointness presumably included, would not have affected the ultimate result.⁴⁶

Don D. Chipman, a retired military professor from the faculty at Air University’s Squadron Officer College, acknowledged the positive effect of joint doctrine on the success of the Gulf War but compiled it with other elements, including the use of modern technology such as precision-guided munitions and stealth technology, training, and strong leadership, particularly in the person of General Schwarzkopf. “Yet, even with all of these factors,” Chipman observed, “ultimately the final victory depended on the proper application of airpower.”⁴⁷

General Fred Franks, who commanded VII Corps during *Desert Storm*, and his co-author Gregory Fontenot concluded in a recent article in *Army Magazine* that the key to the victory in the Gulf War lay with improved leadership

development, along with a “revolution” in training and doctrine from the 1970s.⁴⁸ As these opinions make clear, the changes brought about by Goldwater-Nichols were not universally recognized as the key to victory in *Desert Storm*.

Skeptical Reactions to the Impact of Jointness

Some researchers went even further, arguing that *Desert Storm* was actually a poor example of jointness. Michael R. Gordon and Bernard E. Trainor, in *The Generals’ War*, addressed this point:

*The campaign was “joint” more in name than in fact. Each service fought its own war, concentrating on its own piece of the conflict with a single-minded intensity, and the commanders in Washington and Riyadh failed to fully harmonize the war plans. In this sense, the Gulf War shows that there is much to be done if the American armed forces are to operate in a truly coordinated and integrated manner.*⁴⁹

Weitz, writing in 2004, largely agreed with this opinion. He elaborated on how the Services, in the lead-up to *Desert Storm*, each focused on its own war plans, rather than collaborating jointly. The Special Planning Group, working on the air plan, was known as the “Black Hole.” The ground campaign was devised by the “Jedi Knights,” many of whom were Army graduates of the U.S. Army School of Advanced Military Studies. The Marines seemed to lack easy access to either group and were left to generate their own plan.⁵⁰

Even Katherine Boo conceded the imperfect application of jointness in the Gulf War, documenting the important detail that Navy communication systems were not able to receive messages over secure modems from Riyadh. This necessitated the physical transfer of the air tasking order to the Navy Service component commander aboard his aircraft carrier in the Persian Gulf or Red Sea each day.⁵¹

Mackubin T. Owens, writing in 1996, made a key point when he noted that “there have been several operations in the Goldwater-Nichols era that match earlier

operations inefficiency for inefficiency. Aspects of both Somalia and Bosnia come to mind.”⁵² The failure to replicate the overwhelming success of *Desert Storm* suggests that jointness is not by itself a decisive factor. If it were, we might expect every operation to turn out with a similar degree of success.

Furthermore, even if the Services recognized the Gulf War as a “joint” victory, they took different lessons from the conflict and emerged with different opinions of jointness. Some viewed it as a zero-sum game, with one Service benefiting at another’s expense. Bruce Watson and his team exemplified this idea in *Military Lessons from the Gulf War*, when they declared the Air Force “prevailed,” while the Marines afloat were “reduced to posing a threat that was never realized.”⁵³

Jointness and Airpower

For many, the Gulf War was a vindication not of joint warfare, but of the strategic use of airpower. Within the Air Force, the Gulf War was seen as the culmination of many of the previously unfulfilled promises of airpower advocates. For those who shared this perspective, the success of the operation would usher in an era in which the air domain would be the most prominent.

Price T. Bingham, then an Air Force lieutenant colonel, expressed an opinion widely held within that Service when he wrote, “Campaign success now depends on superiority in the air more than it does on surface superiority.”⁵⁴ According to Bingham, existing joint doctrine was outdated and needed to be brought into alignment with Air Force doctrine.⁵⁵

Perhaps of all the Services, the Air Force most favorably embraced the potential of joint operations. Air Force doctrine defines the *Airmen’s Perspective* as including a belief in the centralized control of airpower by Airmen.⁵⁶ Since 1947, fixed-wing air assets had been distributed between the Air Force, Navy, and Marines. The innovation of the position of JFACC, used in *Desert Storm* under the control of Lieutenant General Horner, at long last brought many of these assets under the tactical control of one Airman.



Air-to-air view of two U.S. Air Force F-15C Eagle fighter aircraft of 33rd Tactical Fighter Wing, Eglin Air Force Base, and Royal Saudi air force F-5E Tiger II fighter aircraft during mission in support of Operation *Desert Storm* (U.S. Air Force/Chris Putman)

However, this championing of both airpower and jointness was not necessarily shared by the other Services. According to Weitz, Navy aviators believed the joint air campaign limited their involvement. Both the Navy and Marine Corps were skeptical of the doctrinal legitimacy of the JFACC concept.⁵⁷ The communication systems aboard Navy aircraft were incompatible with the secure systems of the Airborne Warning and Control System, which limited the Navy's ability to conduct missions over Kuwait and Iraq.⁵⁸ There were plenty of disputes between Army and Air Force personnel regarding target selection. The mutual distrust manifested itself with the Army disputing many of the claimed strikes and damage assessments of the Air Force pilots.⁵⁹

Perhaps the most serious disagreements were between the Air Force and Marines. The Marines, distrustful of the joint air tasking cycle process that selected targets and assigned sorties, admittedly gamed the system by offering

late changes to the air tasking order and listing preferred targets as secondary in the hope of increasing the likelihood for approval.⁶⁰

It should come as no surprise that the Marines were the most reluctant to buy into the joint warfighting concept. The Marines had, and retain, a reputation for independence and self-sufficiency in land and air operations. Their symbiotic relationship with the Navy was in place centuries before Goldwater-Nichols. They were thus less likely to embrace a concept that would potentially disrupt this composition. As a case in point, special conditions regarding the deployment of Marine air assets have been incorporated into joint doctrine.⁶¹

Jointness for the Long Term

This article is not a criticism of the idea of jointness. The current nature of war, in both tempo and scope, and the limited resources now available for national defense make jointness impera-

tive and inevitable. The point is that the Services must see jointness as a normal state of operations, not a special condition to be used only during wartime. Also, jointness is not a cure-all for the multitude of problems that emerge in the conduct of war. In fact, the learning curve of the Services operating together can create its own short-term problems. The ultimate benefit of achieving unity of effort necessitates the Services work through these challenges.

Jointness requires continuous interoperability among the Services. The idea that the U.S. military would fight as a joint team, then separate into its Service corners in peacetime, mutes the long-term benefits of joint operations. Now that our military has waged major combat and counterinsurgency operations for 15 years in Afghanistan and Iraq, it is adopting a more realistic, workable method of operating jointly.

In 2014, William Odom and Christopher Hayes stated, "Today the



Oil wells burn out of control after set ablaze by retreating Iraqi forces during Operation *Desert Storm* (DOD)

separate military Services that make up America's Armed Forces work together more often than at any time in the Nation's history. Their success over the last decade of war has cemented the power of 'jointness' in accomplishing military objectives.⁶² It is only through time, and continuous operations, that a truly joint force can take form. Fittingly, "perseverance" is a joint principle of war.⁶³

General Martin Dempsey offered a viable solution to these issues with the introduction of globally integrated operations in the *Capstone Concept for Joint Operations* in September 2012. The idea was to require "a globally postured Joint Force to quickly combine capabilities with itself and mission partners across domains, echelons, geographic boundaries, and organizational affiliations."⁶⁴ Among the implications of globally integrated operations are a professional military education focus on mission command and jointness. General

Dempsey's goal was for the Services to become "pervasively interoperable," with the result being that Servicemembers throughout the military would see themselves as part of a joint force.⁶⁵

D.H. McCauley of the Joint Forces Staff College concurred with General Dempsey's advocacy of globally integrated operations. The dynamic nature of the modern international environment demanded a change in force posture:

Given the Chairman's new operating concept of globally integrated operations, the military will transform from a conventionally focused and capital-intensive (for example, costly weapons systems such as the F-35) force to one oriented on small, adaptable, globally deployable units that require well-trained, experienced counterinsurgency forces and military police.⁶⁶

Although it took over two decades to recognize, if jointness is going to

work properly, it must be a continuous state, not merely a temporary condition for the Services to participate in during contingencies. While *Desert Storm* obscured its impact on mission success, 15 years of continuous joint operations have provided a more sober perspective. Globally integrated operations are a practical attempt to apply jointness to modern warfare.

Conclusion

Jointness was not the decisive factor in the coalition's victory over Saddam Hussein's Iraqi forces in the Gulf War. There were several factors to the victory, including superior technology, leadership, international support, plentiful resources, and limited objectives. It is more accurate to say jointness was a positive contributing factor.

Goldwater-Nichols was an attempt to correct the failings of coordination and synchronization between the Services

and to allow the combatant commanders to conduct operations as they best saw fit without undue interference from multiple commands. Its simplification of the operational chain of command is perhaps its most highly valued and enduring contribution. It is less clear how well it accomplished its other goals by the time of the Gulf War. The Service chiefs had to tolerate their new role as advisors subordinate to the Chairman of the Joint Chiefs of Staff, and the Services had to accept their restriction to administrative and organization functions, but inter-Service rivalry persisted. It appeared that the Services saw jointness as a wartime condition, while peacetime would remain Service-centered. The problem with this notion was that the Services would have to learn to be joint again each time a new conflict arose.

It was not until the continuous joint operations of the war on terror compelled the Services to work together on a regular basis that the concept of jointness started to become fully realized. General Dempsey's concept of globally integrated operations is poised to continue this development, so that future military leaders will think of jointness as second nature to their operations. It is recommended that military officers at all levels study and recognize both the benefits and the challenges of jointness. It is only through persistent synchronization and collaboration that the Services can fully realize the possibilities of joint operations and build appropriate coordinating mechanisms and practices organically. JFQ

Notes

¹ Doctrinally described as "cross-Service combination wherein the capability of the joint force is understood to be synergistic, with the sum greater than its parts." See Joint Publication (JP) 1, *Doctrine for the Armed Forces of the United States* (Washington, DC: The Joint Staff, 2013), ix.

² Mackubin T. Owens, Jr., "Goldwater-Nichols: A Ten-Year Retrospective," *Marine Corps Gazette* 80 (1996), 52–53.

³ Kathleen J. McInnis, *Goldwater-Nichols at 30: Defense Reform and Issues for Congress*, R44474 (Washington, DC: Congressional Research Service, June 2, 2016), 3.

⁴ James L. Holloway, *Rescue Mission Report* (Washington, DC: Joint Chiefs of Staff, 1980), 56.

⁵ McInnis, 3.

⁶ Sharon Tosi Lacey, "Grenada 1983: Small Island, Big Lessons: A Three-day Cold War Clash in the Caribbean Had Far-Reaching Impacts on American Joint Operation," *Military History* (2013), 46–48.

⁷ Ronald H. Cole, "Grenada, Panama, and Haiti: Joint Operational Reform," *Joint Force Quarterly* 20 (Autumn–Winter 1998/1999), 59.

⁸ Lacey, 52.

⁹ *Ibid.*, 53.

¹⁰ James R. Locher III, "Has It Worked?" *Naval War College Review* 54, no. 4 (2001), 101.

¹¹ McInnis, 6.

¹² *Ibid.*, 8.

¹³ Katherine Boo, "How Congress Won the War in the Gulf," *Washington Monthly* 23, no. 10 (October 1991), 35.

¹⁴ Richard Fournier, "A Just Cause in Panama," *Veterans of Foreign Wars Magazine* 1 (2015), 23.

¹⁵ James H. Embrey, "Operation Just Cause: Concepts for Shaping Future Rapid Decisive Operations," in *Transformation Concepts for National Security in the 21st Century*, ed. Williamson Murray (Carlisle Barracks, PA: Strategic Studies Institute, 2002), 202.

¹⁶ *Ibid.*, 198, 205.

¹⁷ *Ibid.*, 223.

¹⁸ *Ibid.*, 236.

¹⁹ *Ibid.*, 234.

²⁰ Bruce W. Watson et al., *Military Lessons of the Gulf War* (London: Greenhill Books, 1993), 15.

²¹ Michael R. Gordon and Bernard E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf* (Boston: Little, Brown and Company, 1995), 14.

²² *Ibid.*, 49.

²³ *Ibid.*, 52.

²⁴ Watson, 81.

²⁵ *Ibid.*, 246.

²⁶ *Ibid.*, 226.

²⁷ *Ibid.*, 69.

²⁸ Damian J. McMarthy and Susan A. Medlin, "Two Hats for the Joint Force Commander?" *Joint Force Quarterly* 25 (Summer 2000), 91.

²⁹ Gordon and Trainor, 209–210.

³⁰ *Ibid.*, 216.

³¹ Watson, 70.

³² *Ibid.*, 180–181.

³³ Gordon and Trainor, 285–286.

³⁴ Watson, 96–98.

³⁵ *Ibid.*, 99, 111.

³⁶ *Ibid.*, 101–102, 111–113.

³⁷ *Ibid.*, 110.

³⁸ *Ibid.*, 116–118.

³⁹ Harry G. Summers, Jr., *On Strategy II: A Critical Analysis of the Gulf War* (New York: Dell Publishing, 1992), 241.

⁴⁰ Robert H. Scales, Jr., *Certain Victory* (Washington, DC: Office of the Chief of Staff of the United States Army, 1993), 370.

⁴¹ James R. Locher III, "Taking Stock of Goldwater-Nichols," *Joint Force Quarterly* 34 (July 2003), 36–37, brackets in source document.

⁴² Boo, 32.

⁴³ *Ibid.*, 33–35.

⁴⁴ *Ibid.*, 33.

⁴⁵ Dominic J. Caraccilo, "Desert War Taught Lessons in How Superpower Uses Force," *Army Magazine* 65, no. 7 (2015), 45.

⁴⁶ Richard Weitz, "Jointness and Desert Storm: A Retrospective," *Defense and Security Analysis* 20, no. 2 (2004), 133.

⁴⁷ Don D. Chipman, "Desert Storm and the Triumph of Joint Warfare Planning," *Air Power History* 52, no. 1 (2005), 54.

⁴⁸ Fred Franks and Gregory Fontenot, "Decisive U.S. Response Was Both End of an Era, Birth of a New One," *Army Magazine* 65, no. 7 (2015), 43.

⁴⁹ Gordon and Trainor, xiv.

⁵⁰ Weitz, 146.

⁵¹ Boo, 36.

⁵² Owens, 52–53.

⁵³ Watson, 218.

⁵⁴ Price T. Bingham, "Air Power in Desert Storm and the Need for Doctrinal Change," *Airpower Journal* 5, no. 4 (1991), 33.

⁵⁵ *Ibid.*

⁵⁶ LeMay Center for Doctrine, "Airmen's Perspective," available at <<https://doctrine.af.mil/download.jsp?filename=V1-D24-Airmans-Perspective.pdf>>.

⁵⁷ Weitz, 136–137.

⁵⁸ *Ibid.*, 141.

⁵⁹ *Ibid.*, 137.

⁶⁰ *Ibid.*, 139.

⁶¹ JP 1, IV-4.

⁶² William O. Odom and Christopher D. Hayes, "Cross-Domain Synergy: Advancing Jointness," *Joint Force Quarterly* 73 (2nd Quarter 2014), 123.

⁶³ JP 3-0, *Joint Operations* (Washington, DC: The Joint Staff, 2011), A-4.

⁶⁴ Martin E. Dempsey, *Capstone Concept for Joint Operations (CCJO): Joint Force 2020* (Washington, DC: The Joint Staff, 2012), 4.

⁶⁵ *Ibid.*, 8–10.

⁶⁶ D.H. McCauley, "Globally Integrated Operations: A Reflection of Environmental Complexity," *Joint Force Quarterly* 71 (4th Quarter 2013), 66.