Operation Iraqi Freedom, Future Combat Systems, and the Modular Force: Reconsidering Brigade-centrism in Large-scale Combat Operations

A Monograph

by

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This paper aims to add context to the discussion surrounding how the Army will fight its next large-scale combat operation. The interrelated lessons of Operation Iraqi Freedom, the Modular Force, and Future Combat Systems (FCS) provide insights for the design of the future force. Transforming the Army while engaged in the Global War on Terror, without a clear future warfighting concept, led the army to a technology-driven organizational solution, the FCS. With modularity came the concept of brigade- centrism, a significant departure from the division-centric Army of the 20th Century. The technology of FCS intended to create brigades that fought like divisions and might have led to a novel warfighting concept. The Army accepted risk in this organizational model with the assumption that its brigades would be re-organized through the fielding of Future Combat Systems. Because that assumption was false, the army must re-examine brigade centrism as it develops its future operating concept.

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the US Army Command and General Staff College or any other government agency. (References to this study should include the foregoing statement.)

Abstract

Operation Iraqi Freedom, Future Combat Systems, and the Modular Force: Reconsidering Brigade-centrism in Large-scale Combat Operations, by MAJ Drew A. Robinson, 71 pages.

This paper aims to add context to the discussion surrounding how the Army will fight its next large-scale combat operation. The interrelated lessons of Operation Iraqi Freedom, the Modular Force, and Future Combat Systems (FCS) provide insights for the design of the future force. Transforming the Army while engaged in the Global War on Terror, without a clear future warfighting concept, led the army to a technology-driven organizational solution, the FCS. With modularity came the concept of brigade-centrism, a significant departure from the division-centric Army of the 20th Century. The technology of FCS intended to create brigades that fought like divisions and might have led to a novel warfighting concept. The Army accepted risk in this organizational model with the assumption that its brigades would be re-organized through the fielding of Future Combat Systems. Because that assumption was false, the army must re-examine brigade-centrism as it develops its future operating concept.

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Abbreviations

AAR	After Action Report
AB	Airborne
ABCT	Armored Brigade Combat Team
ACR	Armored Cavalry Regiment
ADP	Army Doctrine Publication
AHR	Attack Helicopter Regiment
AO	Area of Operations
AOE	Army of Excellence
AR	Armor
ARFOR	Army Force(s)
ARFORGEN	Army Force Generation
ARTY	Artillery
ASG	Area Support Group
ATK	Attack
ATP	Army Techniques Publication
AVN	Aviation
BCT	Brigade Combat Team
BDE	Brigade
BEB	Brigade Engineer Battalion
BN	Battalion
CAV	Cavalry
CENTCOM	Central Command
CFLCC	Coalition Forces Land Component Command
CGSC	Command and General Staff College
CJSOTF	Combined Joint Special Operations Task Force

CJSOTF-N	Combined Joint Task Force North
CP	Command Post
DA	Department of the Army
DIV	Division
DoD	Department of Defense
EN	Engineer
FA	Field Artillery
FCS	Future Combat System
FM	Field Manual
HQ	Headquarters
IBCT	Infantry Brigade Combat Team
ID	Infantry Division
IN	Infantry
MI	Military Intelligence
MP	Military Police
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
JP	Joint Publication
JRSOI	Joint Reception Staging Onward-movement and Integration
JSOTF	Joint Special Operations Task Force
LSCO	Large-scale Combat Operations
MEB*	Marine Expeditionary Brigade or Maneuver Enhancement Brigade
MEF	Marine Expeditionary Force
MDO	Multi-Domain Operations
MTOE	Modified Table of Organization and Equipment
OBJ	Objective

RFF	Request for Forces
RSTA	Reconnaissance Surveillance and Target Acquisition
SAMS	School of Advanced Military Studies
SBCT	Stryker Brigade Combat Team
SECDEF	Secretary of Defense
TF	Task Force
TP	TRADOC Pamphlet
TPFDD	Time Phased Force Deployment Data
TRADOC	Training and Doctrine Command
UEx	Unit of Employment-x (replaced division level headquarters)
UEy	Unit of Employment-y (replaced corps level headquarters)
US	United States
WMD	Weapons of Mass Destruction

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Introduction

Today's problems come from yesterday's "solutions."

—Peter M. Senge, *The Fifth Discipline.*

The US Army cannot fight and win a Large-Scale Combat Operation (LSCO) against a great power competitor without fundamentally changing its unit of action concept. The establishment of the modular force traded increased efficiency in deployment for decreased efficacy in maneuver warfare. This was a pragmatic, risk-based, decision made in an environment with no great power competition. Modularity, and the significant change from a division-centric army to the brigade-centric army, made practical sense in 2003. However, this organizational change was intended to be temporary. The new modular force would be deliberately reorganized around the fielding of the Future Combat System (FCS) in the early 2010's. Modularity, plus FCS capabilities, would enable a "leap ahead" as brigades would possess firepower and mission command capabilities on par with, or even exceeding, its current divisions.[1] Instead, the Army only got half of what it wanted, modularity without modernization. Leaders and planners must understand this fact about the current Army – that it is organized to sustain unit rotations in support of counterinsurgencies, not to win at LSCO.

After the collapse of the Soviet Union and victory in the 1991 Persian Gulf War, the US Army sought to organize itself to meet the operational challenges of the post-Cold War world. The emerging reality was that the United States no longer required an army capable of fighting a massive land war in Europe or large, expensive, forward deployed forces. The prevailing thought was that a soon-to-be mainly US-based army needed to be flexible, scalable, and rapidly deployable.[2] The new force design aimed to exploit the technological prowess so visibly

[1] William M. Donnelly, "Transforming an Army at War: Designing the Modular Force 1991–2005" (Washington, DC: United States Army Center for Military History, 2007), 6-7.

[2] William M. Donnelly, "Transforming an Army at War," 7.

demonstrated in Operation Desert Storm. These novel forces would improve upon the Army's doctrine of AirLand Battle with the emerging concept of Network-Centric Warfare. Information systems, lighter vehicles, and precision firepower would enable the Army to seek decisive outcomes in less time with fewer personnel. The Army developed the capability to operationalize these concepts from 1993 until a crisis provided the impetus to enact change.[3] However, following the US invasion of Iraq in 2003, the Army found itself in a situation that its emerging warfighting concept aimed to avoid. The Army did not have enough divisions to fight two multi-year counterinsurgencies at the same time.

To avoid strategic culmination, the number of deployable combat brigades needed to increase dramatically in a short amount of time. Defense officials spent much of the 1990's calling for a shift to a smaller, lighter force. Sensing the opportunity to solve both problems with one solution, the Army Chief of Staff, General Peter J. Schoomaker, ordered the transition from highly specialized functional brigades to modular Brigade Combat Teams (BCTs).[4] This 'modular force' would consist of units of action at the brigade level (BCTs), and units of employment (*UEx* and *UEy)* at echelons above brigade. Units of employment were envisioned as scalable headquarters that would blend the roles formerly held by divisions, corps, and field armies into just two echelons.[5] The rest of the Army's forces would organize around standardized brigades as either modular functional brigades (e.g., fires, medical, aviation) or modular multifunctional brigades (e.g., maneuver enhancement brigades).

The constraints of the time meant that four BCTs had to be formed from each existing division without any addition of new soldiers or equipment. This course of action transformed

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[3] Joel Rayburn, Frank K. Sobchak, and Army War College (U.S.), eds., *The U.S. Army in the Iraq War*, *vol. I*, II vols. (Carlisle, PA: Strategic Studies Institute: U.S. Army War College Press, 2019), 281-283.

[4] Ibid., 371-374.

[5] William M. Donnelly, "Transforming an Army at War," 14-17.

divisions from maneuver units, into large headquarters with no organic forces beyond their headquarters battalion and command posts. The risk that the Army would not be optimized for a large land war with this formation was acknowledged and was to be mitigated by the fielding of the Future Combat System (FCS).[6] FCS was the high-tech family of systems that would enable BCTs to fight as a network-centric force. BCTs would be able to see themselves and the enemy in real time. Improved armored vehicles, artillery, aviation, and mission command would enable units to disperse, remain undetected, and strike at unprecedented ranges with lethal precision. Due to the combination of program cost overruns, the cost of the Afghanistan and Iraq wars, the impacts of sequestration, and the 2008 financial crisis, FCS was not fully fielded.[7] Since their first fielding in 2005, the Army's BCTs evolved in response to the Afghanistan and Iraq wars with some additions in forces and upgrades to primary weapon systems.[8]

The US Army has yet to fight a Large-Scale Combat Operation (LSCO) using its unit of employment headquarters equipped with brigade units of action. The last instance of multiple US corps maneuvering in combat was during Operation Iraqi Freedom I (OIF I). Army formations in OIF I utilized the Army of Excellence MTOE, which used the division as the primary tactical formation. Additionally, the Army had a wide variety of echelons-above-brigade units to tailor its Corps or Field Armies.[9]

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[6] William M. Donnelly, "Transforming an Army at War," 7, 45.

[7] Christopher G. Pernin, Elliot Axelband, Jeffrey A. Drezner, Brian Barber Dille, John IV Gordon, Bruce Held, K. Scott McMahon, et al., "Lessons from the Army's Future Combat Systems Program" (Santa Monica, CA: RAND, December 5, 2012), 1-2, 21-32.

[8] US Department of the Army, Field Manual 3-96, *Brigade Combat Team* (Washington DC: Government Publishing Office, October 2015). Chapter 1 provides an overview of the three types of Brigade Combat Teams: Infantry, Stryker, and Armored. The Infantry Brigade Combat Team can be augmented with additional equipment and specially-trained personnel to serve as mountain, airborne, or air assault infantry. See Appendices 5-7 for standard modular brigade task organization charts.

[9] William M. Donnelly, "Transforming an Army at War," 12, 13, 16. Modified Tables of Organization and Equipment (MTOE) are the Army's blueprints for manning and equipping units.

The transition to modularity came with significant tradeoffs. Highly specialized units and personnel were broken into smaller groups to provide minimal capabilities to the BCTs, or were moved out of the division structure to free manpower. Divisions lost their support commands, reconnaissance squadrons, artillery brigades, engineer brigades, intelligence battalions, military police battalions, and other specialized capabilities. Current divisions do not have the same capacity that was required in the US Army's last instance of LSCO. Curiously, despite the major change in its organization, US doctrine for echelons above brigade in offensive and defensive operations is little changed from 2003.[10] Without the leap ahead of FCS capabilities, could the current US force conduct LSCO without fundamentally reorganizing its units of action?

Literature Review

Numerous books and reports attest to the US Army's experience in the Iraq War. Many of these are composed of first-hand accounts from battlefield interviews and the hundreds of embedded journalists who accompanied the US-led coalition into Iraq. Pulitzer Prize winning author and historian Rick Atkinson's *In the Company of Soldiers: A Chronicle of Combat* follows the 101st Airborne Division (101AB). Atkinson was given unprecedented access to the division commander, then Major General David Petraeus, and provides an over-the-shoulder perspective to some of the key moments in OIF I.[11] The journalist and two-time Pulitzer Prize-winning author, Thomas E. Ricks, *Fiasco: The American Military Adventure in Iraq* offers a comprehensive, if somewhat judgmental, perspective on the decision-making process that led the

[10] US Department of the Army, Field Manual 3-94 *Theater Army, Corps, and Division Operations* (Washington DC: Government Publishing Office, April 2014), 1-1, 1-3.

[11] Rick Atkinson, *In the Company of Soldiers: A Chronicle of Combat* (New York: Henry Holt, 2005).

United States to war with Iraq.[12] These sources are useful for a general understanding of the major events and actors in OIF I.

John D. Caldwell's, *Anatomy of Victory: Why the United States Triumphed in World War II, Fought to a Stalemate in Korea, Lost in Vietnam, and Failed in Iraq* was influential in shaping a broader view of the timeline and strategic effects of the Iraq War. Caldwell, a Vietnam Veteran and forty-year member of the defense and aerospace industries, examines why the Army failed to attain victory in Iraq. In doing so, he looks at the wars in Iraq as one super-conflict composed of sequential, but distinct, sub-wars.[13] Caldwell synthesizes the strategic themes of the entire conflict and lends insight into the urgency for the Army's implementation of modularity, despite its force's exemplary battlefield performance.

The Department of Defense published several excellent, in-depth reports covering the entire conflict and is still in the process of refining its histories of this war. *On Point: The United States Army in Operation Iraqi Freedom* from the Operation Iraqi Freedom Study group at Fort Leavenworth, *The US Army in the Iraq War, Vol. I* from the Strategic Studies Institute, and *Operation Iraqi Freedom: Decisive War, Elusive Peace* from the RAND Institute were invaluable

[12] Thomas E. Ricks, *Fiasco: The American Military Adventure in Iraq* (New York: Penguin Books, 2007).

[13] John D. Caldwell, *Anatomy of Victory: Why the United States Triumphed in World War II, fought to a Stalemate in Korea, Lost in Vietnam, and Failed in Iraq* (Lanham, Maryland: Rowman & Littlefield, 2019), 316-318. Caldwell divides this period as follows: Iraq War I, the Persian Gulf War (Operations Desert Shield and Desert Storm) took place from 1990-1991. Iraq War II, the Thirteen-Year Air Conflict, lasted from 1991-2003. This period included: the no-fly-zone enforcement Operations of Northern and Southern Watch, Operation Desert Fox, and Operation Southern Focus. Iraq War III, the Invasion of Iraq, took place in 2003 and is referred to in most other sources as Operation Iraqi Freedom I (OIF I). Iraq War IV, the Insurgency and the Surge, lasted from late 2003 through the withdrawal of US forces in 2011. This war included OIF II – XII and Operation New Dawn, the transfer of authority to Iraq's newly established government. Iraq War V, the rise of ISIS, started in 2014 and arguably continues beyond the limits of Caldwell's publishing date of 2019.

in providing in depth narrative and facts about the strategic and operational issues.[14] These three sources provide a narrative and timeline of key events, people, units, and actions. The Joint Center for Operational Analysis's *Iraqi Perspectives Report* provided insight into why the Iraqi Army fought the way it did and provided greater context to the otherwise dominant US Army narrative.[15] Primary source documents from the National Security Archive support these sources and are included for depth and accuracy.

For perspective on the tactical fight, the 3rd Infantry Division's After-Action Report (AAR) proved a useful source for what the division learned in this environment. Like most US Army AARs, it contains an Issue-Discussion-Recommendation format. However, at two-hundred-eighty-one pages, it offers a trove of insight across all the elements of combat power. To provide context and narrative to the AAR, former Time Magazine reporter Jim Lacey's *Takedown: The 3rd Infantry Division's Twenty-One Day Assault on Baghdad* offers first-hand interviews from soldiers on the actual terrain and shows the ferocity of large-scale combat from the human dimension.[16] Lacey's book pulls from AAR video interviews taken as part of the division's lessons learned program during the war. These interviews were filmed within days of the action, often on the terrain where it happened. Lacey also uses interviews from the Iraqi perspectives report and offers an operational dialogue between the division and V Corps and its adversary's reaction. The reader gains a sense of the shock delivered by US forces against the Iraqis and the desperate state of the Iraqi Army in 2003.

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[14] Rayburn et al., *The U.S. Army in the Iraq War*, *vol. I*, II vols. (Carlisle, PA: Strategic Studies Institute: U.S. Army War College Press, 2019); Gregory Fontenot, E.J. Degen, and David Tohn, *On Point: The United States Army in Operation Iraqi Freedom*, Operation Iraqi Freedom Study Group (Fort Leavenworth, KS: Combat Studies Institute Press, 2004); Walt L. Perry et al., eds., *Operation Iraqi Freedom: Decisive War, Elusive Peace* (Santa Monica, CA: RAND, 2015).

[15] Kevin M. Woods and Joint Center for Operational Analysis (U.S.), eds., *Iraqi Perspectives Project: A View of Operation Iraqi Freedom from Saddam's Senior Leadership* (Norfolk, Va.: United States Joint Forces Command, Joint Center for Operational Analysis, 2006).

[16] Jim Lacey, *Takedown: The 3rd Infantry Division's Twenty-One Day Assault on Baghdad* (Annapolis, MD: Naval Institute Press, 2007).

The discussion on modularity and force transformation drew heavily from the Center for Military History's "Transforming an Army at War" by William Donnelly, whose monograph provides insight behind force design decisions, driven by the operational requirements of the Army in the initial days of the Iraqi insurgency.[17] Further information on the Future Combat System (FCS) drew upon government-funded reports, primarily the RAND report "Lessons from the Army's Future Combat Systems."[18] According to Donnelly, a major portion of the modularity concept was the intended change in the Army's warfighting organization. Specifically, modularity sought the elimination of Field Armies in favor of more capable Army Service Component Commands, and scalable units of employment (*UEx*, *UEy*), while changing the unit of action from the division to the brigade. Major Jeffery Hannon's 2005 School of Advanced Military Studies (SAMS) monograph filled in much of the context missing from the unit of employment concept from FCS and how it related to Net-Centric Warfare.[19]

Further appreciation for Army force modernization history for the brigade and division was enabled by Christopher Kennedy's Strategy Research Report, "The U.S. Army Division: The Continuous Evolution to Remain Relevant" and John J. McGrath's, *The Brigade: A History, Its Organization and Employment in the US Army*.[20] For further understanding, numerous SAMS monographs provided detail for specific issues within force transformation and BCT capability.[21]

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[17] William M. Donnelly, "Transforming an Army at War."

[18] Christopher G. Pernin et al., "Lessons from the Army's Future Combat Systems Program."

[19] Christopher Kennedy, "The U.S. Army Division: The Continuous Evolution to Remain Relevant" (Strategy Research Report, Carlisle, PA, US Army War College, 2013).

[20] John J. McGrath, *The Brigade: A History, Its Organization and Employment in the US Army* (Fort Leavenworth, KS: Combat Studies Institute Press, 2003).

[21] Kenneth J. Burgess, "Organizing for Irregular Warfare: Implications for the Brigade Combat Team" (Monterey, CA: US Naval Post Graduate School, 2007); Noah Emory-Morris, "Guessing Right for the next War: Streamlining, Pooling, and Right-Timing Force Design Decisions for an Environment of Uncertainty" (Ft Leavenworth, KS, US Army Command and General Staff College: School of Advanced Military Studies, 2017); Timothy Frambles, "Form Follows Function: Sixty Years of Army Force Generation and Structure" (Ft Leavenworth, KS, US Army Command and General Staff College: School of Advanced Military Studies, 2010); Reed Markham, "Fighting a US Army Division" (Ft Leavenworth, KS, US Army Command and General Staff College: School of Advanced Military Studies, 2018).

Current US Army doctrine provided the framework to compare the modular force with the Army's future operating concept, *Multi-Domain Operations*. The research focused on FM 3-0 *Operations,* FM 3-94 *Theater Army, Corps, and Division Operations,* FM 3-96 *The Brigade Combat Team,* and TP 535-3-1 *Multi-Domain Operations*.[22]

The literature points to a disagreement between how the Army is organized and how it thinks it will fight. Two key pieces highlight this disagreement. First, the Army successfully changed to a brigade-centric force but did not sufficiently enable those brigades to operate within the *UEx* construct. This is explained by the absence of the FCS in the RAND report. Second, the Multi-Domain Operations (MDO) concept for LSCO conveys, without explicitly stating, that the division will be the unit of action in future conflicts. While the introduction of FM-3-94 states that the Army switched to a brigade-based force, it espouses methods and responsibilities that vary little from the division-centric Army.[23]

Methodology

This paper consists of three sections. Section I is a review of Operation Iraqi Freedom I, with a focus on V Corps and the 3rd Infantry Division (3ID). Section II is a detailed discussion of modularity, the Future Combat Systems program, and the Army Future Operating Concept, *The Army in Multi-Domain Operations.* Section III describes how the design of the modular force creates a disconnect between army organization and doctrine. The paper concludes with a concise summary and recommendations.

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[22] US Department of the Army. Field Manual 3-0 with Change 1, *Operations* (Washington, DC: Government Publishing Office, October 2017); US Department of the Army. Field Manual 3-94, Theater Army, Corps, and Division Operations (Washington, DC: Government Publishing Office, April 2014); US Department of the Army. Field Manual 3-96, Brigade Combat Team (Washington, DC: Government Publishing Office, October 2015); US Department of the Army. TRADOC Pamphlet 525-3-1, *The U.S. Army in Multi-Domain Operations 2028*, (Washington, DC: Government Publishing Office, December 2018).

[23] US Army, FM 3-94, 1-1, 1-2.

Section I examines OIF I as a case study as it is the most recent instance of a US Army corps as a maneuver force, employing multiple divisions, while facing an enemy nation-state. Further, it is the genesis of the manpower crisis that spurred the transition to the modular force. The case study is limited to V Corps and its assigned divisions. The Special Operations Task Forces and I Marine Expeditionary Force (I MEF) were equally responsible for the overall effectiveness of the Coalition Forces Land Component Command (CFLCC). Their actions are noted where appropriate, but are beyond the scope of this monograph. The fighting experienced by V Corps and 3ID was brutal. It stressed every warfighting function and covered over 600 miles of desert, farmland, and urban sprawl. Despite Iraq's weakened state, the US-led coalition faced a mix of conventional and irregular forces, nearly 350,000 strong.[24]

Section II discusses the background and context of why the Army chose to transition to modularity in 2004. Four factors drove this decision. First, Joint Reception Staging Onward-movement and Integration (JRSOI) for OIF I exposed sustainment and transportation inefficiencies.[25] Second, the dominant viewpoint in the post-Cold War era was that major land wars were unlikely.[26] Third, the force generation crisis caused by the Global War on Terror meant that the Army would deplete its available forces by 2005 with no units available for contingencies.[27] Fourth, emerging technologies would fundamentally change the way the army fought. The soon-to-be fielded FCS program would enable brigade sized elements to fight with the same lethality of current divisions. Importantly, this section highlights how and why Army

[24] Walt L. Perry et al., eds., *Operation Iraqi Freedom: Decisive War, Elusive Peace* (Santa Monica, CA: RAND, 2015), 183-184. Iraq had twenty-four divisions, 2,200 Tanks, and 4,000 artillery pieces, roughly fifty percent of its combat power from the 1990-1991 Persian Gulf War.

[25] 3rd Infantry Division Command and Staff, *3rd Infantry Division (Mechanized) After Action Report, Operation Iraqi Freedom* (Ft. Stewart, GA: United States Army, 2003), 45-50.

[26] Stuart E. Johnson and National Defense Research Institute, eds., *A Review of the Army's Modular Force Structure* (Santa Monica, CA: RAND, 2011), 37-39.

[27] William M. Donnelly, "Transforming an Army at War," 17, 19, 79.

leaders believed FCS and the concept of Network-Centric Warfare would be a "leap ahead" in warfighting capability.[28]

Section III examines the gap between the Army's doctrine and its organization. It highlights issues with ground reconnaissance, mobility, and the division headquarters that were second order effects of the design process used to create the modular force. It offers recommendations as to what actions the Army should consider when addressing the disconnect between the force as envisioned, and the force in being. It ends with a concise summary of the main points in support of the research question.

Section I: Operation Iraqi Freedom

War Planning and Preparation

OIF I was the US-led invasion of Iraq to overthrow Saddam Hussein's Ba'athist regime in the spring of 2003. However, the story of this campaign begins at the end of Operation Desert Storm.[29] The entire thirty-year span of conflict between the United States and Iraq is better understood when seen as one long conflict.[30] Beginning with the defense and liberation of Kuwait in 1991, the United States remained militarily engaged with Iraq right up until the first shots of OIF I. Politically, the Iraq war was fought to remove Saddam Hussein from power. This action was justified by Iraq's alleged pursuit of weapons of mass destruction (WMD), its support of terrorism as a state policy, violations of UN resolutions, and dubious linkages to the 9/11 terrorist attacks. The United States, emboldened by public outrage from 9/11, forsook the

[28] Christopher G. Pernin et al., "Lessons from the Army's Future Combat Systems Program," 18.

[29] Rayburn et al., *The U.S. Army in the Iraq War, Vol. I*., 11-12.

[30] John D. Caldwell, *Anatomy of Victory,* 317-318. Caldwell links these sequential conflicts within a historical, cultural, and strategic context for the US and Iraq.

extensive process used to build the international coalition for Desert Storm. Instead, the US sought a 'coalition of the willing' and hastened the road to war.[31]

For his part, Saddam Hussein did not believe that the US would attempt to remove his regime. A major factor in this misplaced self-assurance was that Western powers believed Iraq possessed a robust WMD capability. According to the Joint Center for Operational Analysis' Iraqi Perspective Report, Saddam intentionally exaggerated his WMD programs and capabilities to sell this point. Iraq's effective information operation, coupled with a history of employing chemical weapons against its enemies and dissidents, proved compelling to the US administration. However, evidence found after the invasion showed that Iraq only had a limited chemical weapons stockpile, no working nuclear program, and some biological weapons in small quantity.[32] This did not mean Saddam could not have employed these weapons against the coalition, but it did not amount to the imminent threat that Secretary of State Colin Powell portrayed to the United States Congress as a casus belli.[33]

The assumed WMD threat was a key planning factor and furthered the need for surprise and tempo in the campaign. Then Secretary of Defense (SECDEF) Donald Rumsfeld sought to use a small force, enabled with information, special operations forces, and Joint fires to 'shock and awe' the Iraqi Regime into disintegration.[34] The coalition would overwhelm Iraqi defenses and decision making at the outset of the campaign, with a significant counter-WMD effort. The SECDEF's envisioned Army Force (ARFOR) was far below what planners at the Coalition Forces Land Component Command (CFLCC) and V Corps thought were minimally necessary.

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[31] Fontenot, Degen, and Tohn, *On Point: The United States Army in Operation Iraqi Freedom*. 35-38. The 9/11 attacks and the Afghanistan War were major influences on the Iraq War decision-making process.

[32] Charles Duelfer, "Comprehensive Report of the Special Advisor to the Director of Central Intelligence on Iraq's Weapons of Mass Destruction, Executive Summary" (Central Intelligence Agency, September 30, 2003). 1-3.

[33] Thomas E. Ricks, *Fiasco,* 90-93.

[34] Rayburn et al., *The U.S. Army in the Iraq War*, *Vol. I.*, 39-40.

Army planners and leaders at every echelon were concerned with the risk of winning the war and losing the peace.[35] With hindsight, it is difficult to understand how leaders could accept the flawed assumptions that led to the chaos of 2004.

To understand how OIF's early stages succeeded with so few land forces, it is important to understand that Iraq never recovered from its losses in the 1991 Persian Gulf War (see Table 1). Iraq's military withered under years of (postwar) economic sanctions, United Nations (UN) sanctioned embargoes, and its air defenses were under constant pressure from the US no-fly zones in the north and south of the country.[36] Conversely, the US strategic position in the region strengthened over this same period. US forces maintained many of the bases and access agreements it used to build its forces for Desert Storm, including prepositioned stocks and an armored brigade in Kuwait. Further, United States Central Command (CENTCOM), the geographic combatant command responsible for Iraq, conducted continuous special operations in support of the Kurds and enforced UN exclusion zones in the north and south of the country with operations Northern and Southern Watch.[37]

[35] Caldwell. *Anatomy of a Victory*, 354-355. Post-war security requirements were not a surprise; Ricks, Thomas E. *Fiasco,* 73-84. Ricks details the force ratio planning and disagreements between the Bush Administration and commanders and planners on the Joint and USCENTCOM staffs.

[36] Perry et al., *Operation Iraqi Freedom: Decisive War, Elusive Peace,* 216-220; Grant, Rebecca. "War of 9/11: How the World Conflict Transformed America's Air and Space Weapon," Special Report (Alexandria Virginia: Association of the United States Air Force, 2005), 23-26. The cumulative effect of years of US intervention against command and control and air defense nodes contributed to the rapid collapse of Iraq in 2003.

[37] Perry et al., *Operation Iraqi Freedom: Decisive War, Elusive Peace,* 34, 35. Chapter three discusses this period in detail.

Table 1. Comparison of Iraqi Military Capability Before Desert Storm and Iraqi Freedom

The Drop in Iraqi Military Capability, 1990–2002

Equipment	1990 Inventory	2002 Inventory	Percent of 1990 Total
Tanks	5,600	2,600	47
Artillery	3,700	2,300	60
APCs	7,500	3,000	40
Ground forces	995,000[a]	350,000[b]	35
Fighter aircraft	360	180	50
Bombers	16	6	40

SOURCE: International Institute for Strategic Studies, *The Military Balance 1990–1991* and *2002–2003*, London, UK, 1990 and 2002.

[a] Includes 480,000 reservists.

[b] Includes 100,000 reservists.

Source: Walt L. Perry et al., eds., *Operation Iraqi Freedom: Decisive War, Elusive Peace* (Santa Monica, CA: RAND, 2015). Table 6.1. Screenshot taken from Microsoft Word. Original data adapted from International Institute for Strategic Studies, *The Military Balance: 2002/2003* (Oxford: Oxford University Press, 2002); International Institute for Strategic Studies, *The Military Balance, 1990-1991* (London: The Institute, 1990).

Saddam Hussein directed the Iraqi High Command to defend Baghdad against a two-front advance, from the north and south, while establishing a series of defensive rings around Baghdad. This plan ignored the best military advice of the few generals who were bold enough to offer it.[38] Saddam envisioned providing coalition forces with a long fight to Baghdad where his best units would defeat the coalition with the help of specially trained irregular units (see Figure 1). Saddam's perception of recent US Military operations was that the American people would not tolerate heavy casualties. To emphasize this, Iraqi senior officers were required to read Mark Bowden's book, *Blackhawk Down.* Saddam believed that irregular forces and swarming attacks could overwhelm US Soldiers, just like the Somalis had done to Task Force Ranger in

[38] Jim Lacey, *Takedown,* 105-107. Iraqi Lieutenant General Hamandi, the Republican Guard Area Commander responsible for the southern approaches to Baghdad advocated repeatedly to destroy the Euphrates River bridges along 3ID's axis of advance. LTG Hamandi also advocated for unified command of Army, Republican Guard, Al-Quds, and Fedayeen Saddam in his area. He was ignored. For more on this see Kevin M. Woods and Joint Center for Operational Analysis (U.S.), eds., *Iraqi Perspectives Project: A View of Operation Iraqi Freedom from Saddam's Senior Leadership.*

Mogadishu.[39] Saddam directed the expansion and repurposing of his non-conventional organizations the Al Quds Force, Fedayeen Saddam, and local Baathist political militias. These

[39] Kevin M. Woods and Joint Center for Operational Analysis (U.S.), eds., *Iraqi Perspectives Project: A View of Operation Iraqi Freedom from Saddam's Senior Leadership,* 26-30; Mark Bowden, *Black Hawk Down*, Corgi ed. (London: Corgi Books, 2000).

forces were a significant threat throughout OIF I and provided the foundation that the 2004-2009 insurgency was built upon.[40]

Figure 1. The Red Plan. Gregory Fontenot, E.J. Degen, and David Tohn, *On Point: The United States Army in Operation Iraqi Freedom*, Operation Iraqi Freedom Study Group (Fort Leavenworth, KS: Combat Studies Institute Press, 2004), Figure 46.

[40] Fontenot, Degen, and Tohn, *On Point*, 100-101.

After several planning iterations, the President approved CENTCOM plan 1003V.[41] This plan called for large air, special operations, and maritime components while limiting the conventional ground forces. Two corps would attack from south to north along the Tigris and Euphrates Rivers from their staging areas in Kuwait to Baghdad. The US Army V Corps, the main effort, was assigned on the western avenue of approach while the I Marine Expeditionary Force (I MEF) attacked on the eastern avenue of approach and one division fixed Iraqi forces north of Baghdad. These attacks were enabled by shaping operations to the west and north by substantial Joint Special Operations Task Forces (JSOTF). 1003V called for the steady inflow of combat power and aimed to achieve surprise through 'shock and awe.' This concept reduced the mission risk from using a small land force by Joint fires, special operations, and tempo.[42]

CENTCOM 1003V was a four-phase operation. Phase I, *Preparation,* began with Presidential authorization (N-Day) and ended with the start of the Air Campaign (A-Day). Phase II, *Shape the Battlespace,* began on A-Day and ended with the start of the ground assault (G-Day). A key component of Phase II was the now famous 'shock and awe' effects-based operation. Phase III, *Decisive Offensive Operations,* began on G-Day and ended once the Ba'ath Regime was removed from power and major combat operations ended. Phase IV, *Post Hostilities,* nominally began once Phase III ended. However, as *The US Army in the Iraq War* states, *"*certain

[41] Ricks, *Fiasco*, 68-84, 97. The plan for OIF underwent dozens of changes with a long running disagreement between senior Defense Department officials and Army leadership. The Secretary of Defense, Donald Rumsfeld, wanted a minimal force and continued to push for cuts to forces throughout the planning and execution of OIF I. These force reductions were detrimental to CFLCC stability operations. For more on this see Gordon, Michael R., and Bernard E. Trainor, *Cobra II: The inside Story of the Invasion and Occupation of Iraq*, 1st ed. (New York: Pantheon Books, 2006).

[42] Perry et al., *Operation Iraqi Freedom: Decisive War, Elusive Peace,* 33-41.

areas of Iraq were simultaneously in Phase III and IV, a rolling transition between phases."[43] This phasing construct got even more convoluted when the President elected to start G-Day on A-Day. This decision, based on the opportunity to 'decapitate" the regime with a strike at Dora Farms, meant that Phase II and III were occurring simultaneously as well as elements of Phase IV.[44] Despite several different planning iterations and general misgivings about risk to mission, the execution of the hybrid CFLCC plan was thus: straddle the Euphrates with two corps and race toward Baghdad.

A chief concern under the CENTCOM hybrid option was the constraint on the land component to build the combat power necessary to win while fighting, a risky proposition that ran contrary to how the US Army prefers to fight. Starting in late 2002 additional materiel, Army prepositioned stocks, and units began arriving in theater.[45] Under the guise of additional training exercises, CENTCOM moved patriot batteries into theater and expanded its logistic infrastructure while special forces infiltrated into western Iraq, and the 3rd Infantry Division assembled in Kuwait.[46] These forces deployed using the established Joint doctrinal process known as the Time-Phased Force and Deployment Document (TPFDD), which is purpose built for each operational plan. These documents establish transportation requirements, reserve component mobilization

[43] Rayburn et al., *US Army in the Iraq War, Vol I*, 57-61; Fontenot, Degen, and Tohn, *On Point: The United States Army in Operation Iraqi Freedom*, 86; If the reader is confused by this phasing construct it is because it is. US Department of the Army, Army Doctrine Publication 5-0, *The Operations Process* (Washington DC: Government Publishing Office, July 2019), 2-19, 2-25. Chapter two, Planning, states that effective transitions are enabled by clearly defining actions that end phases and start subsequent ones. An operation should never have three concurrent phases.

[44] Fontenot, Degen, and Tohn, *On Point*, 93-94. US Forces nearly killed Saddam and most of his cabinet at a war planning meeting on the outskirts of Baghdad at a place called Dora Farms. This act of war caused CENTCOM planners to shift the ground attack two days sooner to keep the element of surprise. The result was that there were very few shaping sorties in the south to prepare for the CFLCC breakout from Kuwait to its initial objectives.

[45] Ibid., 31. Operation Intrinsic Action unutilized a brigade set of Army Pre-positioned Stocks (APS) to conduct training and engagement with the Armies of Kuwait and Saudi-Arabia.

[46] Ibid., 62-63.

requirements, and logistic support minimums and help to synchronize the entire JRSOI process inside a theater and across the Joint Force.[47]

In December 2002, the SECDEF directed a change from the Time-Phased Force and Deployment List (TPFDL) that was purpose built for 1003V and replaced it with a Request for Forces (RFF) model. This change meant that purpose-built force packages were now arriving piecemeal without their basic equipment, sustainment forces, and ammunition loads.[48] CENTCOM now had to validate each unit within the force package, subject to approval (or disapproval) from the Secretary of Defense. According to popular journalist and commentator Thomas Ricks, this was in reaction to what Donald Rumsfeld viewed as risk aversion by the Army. The SECDEF wanted a small quick war and viewed every additional unit deployed as an obstacle to the withdrawal plan.[49]

Under RFF, the I MEF and V Corps commanders had to request every unit not already in theater, despite the reality that many un-requested units' equipment was already in route or in theater. This not only caused friction for the inbound units, mainly the 3rd Armored Cavalry Regiment (3ACR) and the 101st Airborne Division (101AB), but also frustrated V Corps sustainment for the rest of the operation. On the macro level, the TPFDD's deliberate build of sustainment capacity was now out of balance with combat forces. On the micro level, cargo

[47] US Department of Defense, Joint Staff, Joint Publication (JP) 3-35, *Deployment and Redeployment Operations* (Washington, DC: Government Publishing Office, 2018), II-4, II-10, V-10.

[48] Rayburn et al., *The US Army in the Iraq War, Vol I,* 40. TPFDD development is a detailed planning process. Every piece of equipment is vetted and assigned a movement platform, which is then outfitted with its required operating load. The army divisional structure was not responsive to these in-route changes, manifests were built to maximize deck space and airframes. Replacing a truck company with an infantry unit for example, nearly always meant that only the equipment was replaced, and the infantry unit would arrive without its specially tailored basic load. The 3ID AAR catalogues the second order effects of this process.

[49] Ricks, *Fiasco,* 120-123.

intended for units not in the theater was misplaced for months.[50] This problem was particularly detrimental for class IIIp and class IX sustainment shortfalls during phase III.[51]

A key example of these issues is captured by journalist Rick Atkinson while observing 101AB complete its offload in Kuwait. The sand in the operating environment rapidly destroyed helicopter rotor blades. Maintainers applied special tape or spray paint to the leading edge of the blades to prevent pitting and holes, thus ensuring aircraft remained flight worthy. Only a few hours operating with exposed blade surfaces can reduce the helicopters' efficiency and lead to irreversible damage to the aircraft. These twenty million-dollar systems relied upon three-dollar cans of paint to keep them in the fight. The 101AB deployed with 13,000 cans of spray paint and thousands of feet of tape to protect helicopter rotor blades. During JRSOI, amongst the division's 400-plus shipping containers, only the unit's spray paint was found. Fortunately, this was enough to get them to Baghdad. This is but one small example of why disruptions and misplacement of small items caused so much chaos in the supply system.[52]

The ad hoc deployment of units into theater is seen in the Order of Battle for OIF.[53] These jigsaw-puzzle like formations often arrived without critical repair systems, sustainment, or transportation which resided in their parent organizations' sustainment brigades. The force flow was further muddled when 4th Infantry Division (4ID) was diverted to Kuwait. Initially 4ID was assigned to attack from the northern border with Turkey and converge on Baghdad with I MEF and V Corps. When Turkey denied port access and overflight for the invasion force, CENTCOM kept 4ID afloat as a diversion and allocated the 173rd Airborne Brigade to reinforce Joint Special

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[50] Rayburn et al., *US Army in the Iraq War*, *Vol I*., 62-64.

[51] 3rd Infantry Division, "3rd Infantry Division (Mechanized) After Action Report," 8, 48, 176. Class IIIp is packaged petroleum products like transmission fluid, which are specific to certain weapon and vehicle systems. Class IX are repair parts for vehicles and weapons, and like class IIIp, are specified by each weapon or vehicle and needed in different quantities, depending on what type of unit is supported.

[52] Rick Atkinson, *In the Company of Soldiers,* 50, 53-56.

[53] Fontenot, Degen, and Tohn, *On Point,* 441-495. These Pages list the CFLCC order of battle by unit. See Tables 1-3 for a visual depiction created by the author.

Operations Task Force North (JSOTF-North). Eventually, 4ID disembarked in Kuwait and assumed battle space in Phase IV but had minimal impact beyond a psychological effect during Phase III.[54] This shift caused cascading effects for units in JRSOI, particularly 2nd ACR and 3rd ACR, which only had portions of their units disembarked before pausing to allow 4ID to disembark. Ultimately, the success of V Corps did not depend upon these units, but their late arrival would have significant effects on the ability of the already undersized CFLCC to secure Iraq.

V Corps, Twenty-one days of LSCO

On the first day of the ground operation (G-Day), V Corps had two and a half divisions of combat power, its corps artillery, and an attack aviation regiment with additional sustainment enablers. The 3rd Infantry Division (3ID) led the V Corps attack towards its first two objectives. This operation began with a breach of the formidable anti-tank obstacle on the Kuwait-Iraq border. Executed at night, the division not only had to synchronize its own forces but was also tasked with passing Marine and UK forces to speed the assault on Basra. This was a well-rehearsed and effectively executed division combined arms breach and subsequent corps-level Forward Passage of Lines (FPOL).[55] See Appendix 4 for operational graphic and timeline.

Following the breach, 3ID moved northwest along two axes. Along the first axis the division cavalry squadron, 3rd Squadron, 7th Cavalry (3/7CAV) and 2nd Brigade, 3rd Infantry Division (2/3ID) attacked toward As Samawah (OBJ Chatham). Along the second axis, 3rd Brigade, 3rd Infantry Division (3/3ID) led 1st Brigade, 3rd Infantry Division (1/3ID) to isolate An Nasiriya (OBJ Liberty), seize Tallil airbase (OBJ Firebird), and retain a major intersection on

[54] Rayburn et al., *US Army in the Iraq War, Vol I*., 60. Concerning employment of 4ID after Turkey denied passage to US Forces: V Corps Commander GEN Wallace's recommendation to GEN McKiernan, the CFLCC Commander, was to, "Plug them in wherever we can plug them in."

[55] Jim Lacey, *Takedown,* 16-17.

Highway 8 (OBJ Clay).[56] These attacks were key in shaping the approach for the CFLCC to Baghdad as they provided space to pull forward sustainment, bought time for I MEF to secure the southern oil fields, and isolated enemy forces adjacent to the V Corps Main Sustainment Routes (MSRs). Initial predictions of the Iraqis greeting the Americans as liberators proved false. The 3ID initially met slight resistance, once units moved into urban areas, they were met by mixes of special purpose forces and conventional Iraqi army units. 3/7 CAV's movement into OBJ Chatham to secure bridges in the city evolved into a full-scale urban fight.[57] As the division's reconnaissance, 3/7 CAV was tasked with securing routes through the city and to determine Iraqi force posture and intentions in Am Samawah.[58] Captain Kara Bates, a Kiowa scout helicopter pilot and Commander of E Troop, 3/7 CAV sums up the character of the urban fighting between Am Samawah and Baghdad, by stating,

> The Fedayeen were using civilians to protect themselves, and we quickly understood that our enemy did not look like soldiers. They were dressed like civilians, and they intermingled with civilians, especially women and children. We had to adjust to that. Multiple times we saw the enemy actually holding a person in front of them as they shot at C Troop. Another thing we saw constantly was civilians waving white flags, acting like they were going to surrender. But when they got close to any of our positions, someone behind them would pull out an AK-47 and start shooting. We saw this in every area of the city…The armed guys would engage from behind the guys still waving white flags.[59]

Upon seizing its initial objectives and handing over control of Highway 1 to the Marines, V Corps moved its air assault division into the fight. The 101AB used its two aviation brigades to

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[56] Nathan Jennings, "Reconsidering Division Cavalry Squadrons" (Fort Leavenworth, KS, US Army Command and General Staff College: School of Advanced Military Studies, 2017), 13. Cavalry Squadrons are given historical names. 3/7CAV is the organic cavalry squadron for 3ID. It had three Troops equipped with M1 Abrams tanks and M2A3 Bradley Fighting Vehicles, two companies of Kiowa Warrior helicopters, a headquarters company, and was augmented with one self-propelled field artillery battery and additional fuel capacity.

[57] Fontenot, Degen, and Tohn, On Point, 129-131, 133-134.

[58] Jim Lacey, *Takedown,* 47.

[59] Ibid., 47-50. Lacey describes how commanders at all echelons were surprised by the Iraqi Army's use of unconventional forces and tactics. For more on this see Woods, Kevin M., and Joint Center for Operational Analysis (U.S.), eds. *Iraqi Perspectives Project: A View of Operation Iraqi Freedom from Saddam's Senior Leadership*. (Norfolk, Va.: United States Joint Forces Command, Joint Center for Operational Analysis, 2006).

establish a series of forward arming and refueling points along the V Corps avenue of approach. This action enabled V Corps to utilize the 11th Attack Helicopter Regiment and the attack helicopter battalions of the 101AB to launch deep attacks against Iraqi armored brigades. Additionally, the light infantry brigades moved to secure the lines of communication and eliminate bypassed urban areas.[60] Conceptually, 3ID could speed north, eliminating major enemy forces while the light forces mopped up behind them and secured the ever-lengthening lines of communication. Throughout this campaign, V CORPs shaped the fight for 3ID with close air support, long range fires, and massed aviation attacks while synchronizing its efforts with I MEF.

The Army's history of OIF, *On Point*, refers to this stage of the campaign as "The March Up-country" in homage to the Greek warrior and historian Xenophon.[61] Four major CFLCC actions happened during this phase of the attack and one major environmental challenge: the launch of deep attacks using army aviation, the airborne insertion of the 173rd Airborne Brigade into Northern Iraq, operations to secure LOCs in the V Corps support area, the battle to isolate Najaf, and a major sand storm (shemal) which nearly halted all operations for 48 hours.[62] The highly publicized insertion of the 173rd Airborne helped regain the initiative in the northern area of operations that was lost by the denial of passage for 4ID through Turkey. This operation doubled as a tactical demonstration, which fixed Iraqi divisions north of Baghdad from repositioning against V Corps and I MEF.[63] While not assigned to V Corps, this action shows

[60] Fontenot, Degen, and Tohn, *On Point,* 143-144.

[61] Ibid., 141. Xenophon's Anabasis is the author's memoir of a Greek military expedition to help Prince Cyrus capture Babylon from his brother Artaxerxes in 401BCE. Ironically, that campaign ended in tragedy with Cyrus dead and Xenophon making his fame using his cunning to lead the surviving Greeks back home from the war. For more see, Xenophon, *The March Up Country: A Translation of Xenophon's Anabasis*, Translated by W. H. D. Rouse, (Ann Arbor, MI: University of Michigan Press, 1957).

[62] Ibid., 145. These were just the major actions. Numerous additional Joint, conventional, special operations, and sustaining efforts were happening during this time as well. For example, the personnel recovery operation of PFC Jessica Lynch and six other soldiers happened in this period.

[63] Ibid., 222-225. The 173rd Airborne Brigade's insertion was as much a psychological operation as a tactical one, demonstrating the potential value of airborne brigades in LSCO.

how the CFLCC, as the ARFOR, supported the main effort (V CORPS) by leveraging Joint and Special Operations Forces (SOF) capabilities.

The fight for Najaf (OBJ Rams) surprised many planners in V Corps as the number of irregular fighters surpassed the size of the conventional forces on the battlefield. The initial plan was for one brigade from 3ID to seize one bridge over the Euphrates as a feint, forcing the Iraqis to consider the encirclement of the 5th Republican Guards Division between the Marines on their left and 3ID on their right. Eventually, V Corps had to commit two brigades to contain Iraqi irregular elements launching attacks from the city onto its lines of communication. This fighting lasted for three days from 25-27 March before 3ID handed off the objective to 101AB who continued the fight into the city until 30 March.[64] This coincided with the shemal, which grounded aircraft and made dismounted maneuver nearly impossible. The standstill in operational tempo allowed V Corps to establish Logistical Support Area (LSA) Bushmaster to the west of Najaf, which enabled the next phase of the operation to begin as soon as weather conditions improved.[65]

From Najaf, the route to Baghdad had just one obstacle, the Karbala Gap. The gap refers to an eighteen-mile-wide by thirty-mile-deep strip of land between Lake Razazza and the Euphrates River. In the center of the gap sits the ancient holy city of Karbala, a mid-size city of 600,000 people, surrounded by canals and aquaculture.[66] Once beyond the city and its canals, there is open desert for twenty miles until one final crossing of the Euphrates River brings an attacker to the outskirts of Baghdad. This is the most constricted approach to Baghdad from the south, which is exactly why V Corps chose it. As shown in (post war) interviews with senior Iraqi commanders, Saddam was convinced the Americans would avoid Karbala and ordered his units

[64] Fontenot, Degen, and Tohn, *On Point,* 160-162.

[65] Jim Lacey, *Takedown*, 111, 118-120.

[66] Rayburn et al., *US Army in the Iraq War, Vol I.,* 52, 92, 97. Fish farms constructed in grid patterns of mud embankments are common in central Iraq.

to reposition against the expected attack between the Tigris and Euphrates. This costly movement of large formations exposed Iraqi units to the coalition fires complex and significantly aided V Corps' deep attacks.[67]

V Corps intended to set conditions to breach the gap with deep strikes by its attack aviation, fixed wing close air support (CAS), and long-range fires in order to maintain tempo with its armored brigades.[68] V Corps' attack consisted of four major overlapping events: setting conditions to attack through the Karbala Gap which included securing routes through Karbala City and one Euphrates River crossing (OBJ Murray); the attack through the Karbala Gap (OBJ Chargers) to secure a key bridge crossing (OBJ Peach); seizing two key intersections controlling ground traffic into southern Baghdad (OBJ Saints), and passing 1st brigade through OBJ Saints to seize Baghdad International Airport (OBJ Lions).[69] This entire period took 11 days from March 26, 2003 – 5 April 2003. Aside from these terrain-based objectives, V Corps sought to destroy the Medina Division of the Iraqi Republican Guard before advancing to Baghdad. The overarching goal for all these operations was to complement the Joint objective of regime collapse by psychologically and physically isolating the center of power in Baghdad, enabling the convergence of V Corps, I MEF, and Combined Joint Task Force North CJTF-N (originally including 4ID) to seize the capital.[70]

The fighting through Karbala typifies the entire OIF I campaign, which was intensely violent and right at the edge of what the allocated force could accomplish in terms of human endurance and sustainment. Attacking at night proved to be treacherous through the canals and

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[67] Kevin M. Woods, *Iraqi Perspectives Project,* x*,* 12, 15, 16. Saddam was so convinced by the Coalition deception plan, and his own distorted world view, that he ordered units away from Karbala as part of his war plan.

[68] Rayburn et al., *US Army in the Iraq War, Vol I.,* 90-91. The 11th Attack Helicopter Regiment's (AHR) deep attack against the Medina Division was defeated by rudimentary but effective coordinated air defense. The 11th suffered damage to 29 of 31 AH-64s.

[69] Fontenot, Degen, and Tohn, *On Point*, 244-245.

[70] Ibid., 246.

fish farms. Armored units were stuck in the mire. Iraqi irregulars fought with fanatic intensity but had little chance against Bradley Fighting Vehicles and M1 Abrams Tanks. Mostly, Iraqi conventional units were committed piecemeal and, at Saddam's insistence, failed to destroy the bridges over the Euphrates (OBJ Peach) on the far side of the Gap.[71]

An exception to this pattern was the 14th Brigade of the Medina Republican Guard Division at OBJ Peach. The 14th was a well-equipped and trained unit, and was set in its defensive position along the Euphrates for thirty-six hours before the attack. The Iraqis considered this brigade to be among the best of its forces. Regardless, TF 3-69 AR of 1st Brigade, 3ID destroyed the brigade in a matter of hours. A commander from the Medina Division, when asked if there was anything they could have done to slow the American drive, said "The American soldiers are very disciplined. They fight like robots and engage and kill everything on the battlefield. The Americans did not even seem to react to our defensive plans. They simply fought their way through anything that stood in their path."[72] This same result happened to the Iraqi 10th Armored Brigade the following day, 2 April, when it counterattacked to regain OBJ Peach. In a span of 24 hours 1/3ID destroyed two of Iraq's best brigades.

With OBJ Peach secured, the maneuver space to southern Baghdad was open. Intense fighting on 3-4 April placed V Corps in control of the major access points on the south and west of the city including OBJ Lions (Baghdad International Airport). Iraqi conventional resistance started melting away as the truth on the ground became evident that Saddam no longer controlled most of the country. Instead of the mass unit surrenders seen during Desert Storm, many Iraqis

[71] Jim Lacey, *Takedown,* 140-141.

[72] Ibid., 142-143.

simply took off their uniforms and went home.[73] Most fighting that happened in Baghdad after 9 April was from the remaining Republican Guard elements, Syrian foreign fighters, and the Fedayeen Saddam.[74]

Throughout the attack to Baghdad, 3ID used armored raids to gain intelligence and weaken enemy forces in the urban centers. Soldiers started referring to these as "Thunder Runs." The most famous of these were done by COL David Perkins 2nd Brigade, 3rd Infantry Division, and are referred to in posterity by US Army historians as Thunder Run I (5 April) and Thunder Run II (7 April). These raids were high risk, high reward operations that helped the coalition assess the level of resistance and counter the Iraqi narrative that no US troops were in Baghdad.[75] CPT David Hibner, an engineer company detachment commander assigned to TF1-64AR on Thunder Run I recalled,

> The enemy was everywhere. They fired from trenches and bunkers…windows and buildings, and from rooftops…the sounds of the battle increased as the Task Force moved into the enemy's kill zones. Our tanks were shooting targets inside buildings and laying down an incredible suppressive fire…the Bradleys [SIC] fired their 25MM guns with a fearsome effect as the enemy presented himself…all along the sides of the road twisted and mangled bodies of the enemy were piling up…mortar tubes and anti-aircraft guns lined the sides of the road with their operators lying dead beside them…I was amazed at the pure tenacity with which these soldiers fought. They didn't fight smart or with any obvious tactics. They just threw themselves at us and most died in the process. It was as if they had accepted that they were going to die that day and were determined to take as many of us with them as they could.[76]

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[73] Rayburn et al., *US Army in the Iraq War, Vol I.,* 318; Lacey, *Takedown,* 199. This was a widespread breakdown of Iraqi command as units and individuals realized the futility of continuing to fight against the clearly superior coalition. In some cases, Iraqi units killed commanders attempting to flee but continued to fight, while in others, entire units abandoned weapons and uniforms. Some of these deserters would continue the fight in the years ahead.

[74] Rayburn et al., *US Army in the Iraq War, Vol I.,* 173, 185-187. Syrian and other foreign fighters integrated with Fedayeen Saddam units in Baghdad. The fighters who survived formed the initial networks that fed the early stages of the insurgency in the following years.

[75] Ibid., 101.

[76] Jim Lacey, *Takedown,* 209-210. CPT Hibner's full account is a visceral telling of modern combat.

Thunder Run II evolved from a raid into an attack-to-seize the presidential compound in central Baghdad. Using what he later ensconced in doctrine as mission command or disciplined disobedience, then-COL Perkins decided to remain in the city despite the 3ID Commander, MG Buford Blount's direction not to do so. COL Perkins knew that the V Corps Commander, GEN William Wallace wanted to put an end to the fighting as soon as practicable. COL Perkins knew that publicly holding the presidential compound would achieve that end. The events in Baghdad from 4-9 April are somewhat incoherent as commanders at all echelons, in the manner of COL Perkins, acted on their own initiative. The resulting unordered, but mutually beneficial actions, overwhelmed the remaining pockets of Iraqi resistance.[77]

On 6 April, 3/3ID began its assault to seize OBJ Titans, a series of bridges and intersections crossing the Euphrates River, which enabled control of western Baghdad. The fight for Titans was some of the most intense urban warfare experienced by the US Army since World War II. The motto of 3/3ID commander Colonel Daniel Allyn, "Prep with steel, lead with lead, count the dead" sums up much of the action of these two days.[78] Captain Stu James, an armored company team commander in 3/3ID, provides an account of the fighting within OBJ Titans and the initiative displayed by American commanders.

> …The Iraqis continued to counter-attack, mostly from the south, they definitely wanted that terrain back [Tigris River Bridge, OBJ Rommel]. They had some FRG-7s back there along with at least forty trucks with air defense systems mounted on them, which were causing the A-10's [USAF attack planes] some problems there. Eventually, I ordered an attack to the south for about five kilometers, which destroyed the truck-mounted air defense guns and cleared the area for the CAS guys…at one point there was so much RPG fire coming at us that I had to call on 1-10 FA to shoot final protective fires. That effectively destroyed them…we did not receive RPG fire for about three to four hours.[79]

3/3ID's attacks, in conjunction with 2/3ID's Thunder Runs culminated on 8 April when the 1st Marine Division linked up with Colonel David Perkins and 2nd Brigade at the presidential

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[77] Jim Lacey, *Takedown*, 232-239. The author's after action interview with COL Perkins details his intent, and how 2/3ID and its subordinate units planned Thunder Run II.

[78] Ibid., 220-228. The 3/3ID was in direct fire contact for sixty hours.

[79] Ibid., 225. CPT James' full account is found on pages 223-225.

compound in Baghdad. This tactical action signified the end of the large-scale maneuver phase of OIF and began an uneasy transition to stability, without the resources to do so.

Over the following months and years, levels of violence at times surpassed even the bloodiest days of the invasion. Yet, even in the second battles of Najaf (2007) and Fallujah (2004) there was never more than a division engaged and no maneuver above the brigade level.[80] The overly optimistic assessments of Iraqi sentiments toward liberation from the Department of Defense proved to be false. The shallow planning and scant resourcing for a lengthy occupation and eventual transition to Iraqi governance were exacerbated by a series of contentious decisions by the Coalition Provisional Authority. The decision to dissolve the Iraqi Army and bar former Ba'ath party members from serving in the new government robbed the country of the expertise required to run it, and immediately resulted in the coalition being the sole provider of security and essential services. These factors lead to an enduring commitment of forces that the Army could not sustain.[81]

Lessons of OIF I

OIF I provides important lessons about how the Army might fight future Large Scale Combat Operations. However, it also has some characteristics that the Army will likely not encounter again. The Iraqi Army was a broken and dysfunctional force. While still proud, it was no longer capable of what it achieved in the invasion of Kuwait in 1990.[82] Additionally, the US Joint Force did not have to fight its way into the theater, as it was already based and operating

[80] Donald P. Wright and Timothy R. Reese, *The United States Army in Operation Iraqi Freedom, May 2003-January 2005: On Point II: Transition to the New Campaign* (Fort Leavenworth, KS: Combat Studies Institute Press, 2008) 346-351. Operation Phantom Fury (November 7 – December 23, 2004), also called the Second Battle of Fallujah or "Al Fajr" (New Dawn) in Arabic, was the largest coalition action after the 2003 invasion, through the end of the war in 2010. It involved 18,000 US and Iraqi Forces against an estimated 4,500 insurgents.

[81] Thomas E. Ricks, *Fiasco*, 161-166, 168-172. Ricks catalogues the CPA and CENTCOM disagreement and dysfunction with grim wit.

[82] Kevin M. Woods, *Iraqi Perspectives Project*, 39-55.

along three of Iraq's borders. Finally, the US Air Force (USAF) held air supremacy over two thirds of Iraq and was able to disintegrate its air defense network for six months before the ground invasion with Operation Southern Focus.[83]

Yet, as of this writing, the last time the US Army maneuvered a corps in combat was 9 April 2003, during OIF I. As part of the Third Army led, CFLCC, V Corps fought its two available divisions against two Iraqi Corps. Coupled with the I Marine Expeditionary Force, Third Army had two corps equivalent units with approximately five divisions worth of available combat power, and additional divisions to be phased in as the campaign progressed. This intentionally small invasion force, traveled 600 miles, defeated twenty-four Iraqi divisions, and subdued numerous irregular forces in only twenty-one days.[84]

What OIF I can teach modern tactical and operational planners is that the tasks required to maneuver large forces have fundamentally not changed. The effort and capability required to sustain large formations under duress requires well trained teams in robust organizations and processes. OIF I is as a reminder that the physical, moral, and mental challenges of war are as relevant now as they were to Cyrus and Xenophon. Operational and strategic planners should take note that the minimum force required to win the battle may not be the minimum force required to win the peace.[85]

During OIF I, V CORPS conducted the full range of combat operations. Its brigades and divisions attacked, feinted, defended, counter-attacked, secured lines of communication, regenerated combat power, reconnoitered, integrated organic and Joint fires, conducted air and missile defense, searched for WMDs, coordinated with Special Operations Forces, coordinated shifts of division and corps boundaries, crossed wet gaps, breached obstacles, sustained

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[83] Rebecca Grant, "War of 9/11," 23-26.

[84] Fontenot, Degen, and Tohn, *On Point,* 241-244.

[85] Thomas E. Ricks, *Fiasco,* 72.

themselves, and continued planning for future operations while maneuvering against three enemy corps' worth of conventional and irregular forces. They relied heavily upon engineer battalions, cavalry squadrons, military police companies, artillery battalions, and routinely changed task organization within battalions and brigades.[86] Excepting Desert Storm, OIF I is the largest US Army maneuver campaign since the Korean War.[87] Desert Storm, while comparable in intensity and lopsidedness of outcome, was five times shorter at one-hundred hours of ground maneuver versus five-hundred hours for OIF I.

Operation Iraqi Freedom I was an enormously successful tactical campaign, a masterful application of Joint Forces, and a poor example of aligning political ends with military action. The US-led coalition was able to seize Baghdad in only twenty-one days but lacked a coordinated plan with appropriate resources to establish control of the country. The highly enabled CFLCC enjoyed air superiority, information dominance, sea control, and was superior in training and equipment across all the war fighting functions, in every domain.[88] Iraq, by contrast, was a tyrannical regime that spent nearly as much attention ensuring its own forces were not positioned for a coup, as they were to defend the country from outside attack.[89] Removing Saddam's Ba'ath Party created a societal collapse that the coalition was not positioned to restore. Indeed, some of the CENTCOM planners were alarmed that the plan aimed to dislocate all the societal control mechanisms in Iraq, but did little to mitigate those effects in Phase IV.[90]

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[86] Fontenot, Degen, and Tohn, *On Point,* 241-244, 397-399.

[87] John D. Caldwell, *Anatomy of a Victory*, 251-255. The battle of the Ia Drang Valley is typical of large-scale combat operations in Vietnam. The terrain, security situation, and diplomatic factors prevented the coordinated maneuver of US units above the division level.

[88] Perry et al., *Operation Iraqi Freedom: Decisive War, Elusive Peace.* This report outlines each of these factors in separate chapters.

[89] Kevin M. Woods, *Iraqi Perspectives Project*, 39-55.

[90] Thomas E. Ricks, *Fiasco*, 109-111.

The now infamous picture of President George W. Bush on the USS Abraham Lincoln was a moment of celebration for the end of Phase III. President Bush was derided for declaring the end of major combat operations in a war, which in hindsight, was just beginning. However, major combat operations (Phase III) were, per CENTCOM 1003V, over.[91] While this paper will not delve into the politics of how Iraq turned into the quagmire it became, the President's declaration that major combat operations were over was the catalyst for the organizational change the Army undertook to sustain what became known as the Long War.[92] Unable to execute Secretary Donald Rumsfeld's vision of a quick transition to Iraqi governance, the Army found itself sustaining not only Iraq and Afghanistan, but also its commitments in Bosnia, Kosovo, Sinai, and the Philippines.[93] Fortunately, the Army had a running start on this problem as well.

Section II: The Modular Force

Designing the Modular Force

Prior to 2005, the Army evaluated its relative strength in terms of its combined arms divisions. Its training, manning, and equipping processes, as well as its warfighting doctrine and deployment systems, were centered on the division as the baseline formation. There were many valid reasons for this, the most important of which was that the division had proven itself to be a robust and effective combat organization. The divisions that fought in OIF I were refined by lessons learned from two world wars and optimized to fight against Soviet forces in Europe. Yet, the Soviet threat was gone, the world was changing, and the SECDEF and others of like mind

[91] Ibid., 145-146.

[92] Christopher G. Pernin, ed., *Unfolding the Future of the Long War: Motivations, Prospects, and Implications for the U.S. Army* (Santa Monica, CA: RAND, 2008), 5. Pernin defines the Long War as an evolution of the idea of the "War on Terror." RAND typifies the Long War as the execution of US Policy against the convergence of failed states, extreme ideologies, and those who use terror to pursue political aims.

[93] John D. Caldwell, *Anatomy of a Victory*, 347-349.

sought a formation that could deploy faster, sustain itself more efficiently, and be more flexible for an uncertain future.[94] Even before Secretary Rumsfeld's tenure, Army Chief of Staff, General Dennis Reimer, and then TRADOC Commander, Major General Robert Scales initiated the Army After Next (AAN) project to anticipate the future battlefield. AAN anticipated Secretary Rumsfeld's vision, and was the genesis for the Future Combat System, but did not significantly impact the formations fighting in OIF I.[95]

The Army that invaded Iraq in 2003 was built on the template known as the Army of Excellence (AOE). The AOE evolved from the aftermath of the Vietnam War to defeat a Soviet-styled army using the AirLand Battle Concept. The AOE was composed of light and heavy combined arms divisions which could be augmented by separate brigades of infantry, armor, or armored cavalry. It had numerous different types of combat, combat support, and combat service support organizations for each type of division and corps.[96] AOE divisions and corps were intended to be self-contained entities. Army plans avoided splitting forces below the division and, wherever possible, kept organic formations together. When necessary, the Army used separate

[94] William M. Donnelly, "Transforming an Army at War," 19, 23-24. Secretary of Defense Rumsfeld, as a former naval officer, was an advocate of Network-centric Warfare (NCW). Rumsfeld's Undersecretary of Defense for Force Transformation, US Navy Vice Admiral (ret.) Arthur K. Cebrowski, was influential in establishing major defense programs based upon NCW, including the littoral combat ship and tactical satellites. For more on this see Arthur K. Cebrowski and John H. Garstka, "Network-Centric Warfare - Its Origin and Future" (*Proceedings* 124/1/1,139 January 1, 1998); and Adam Bernstein, "Adm. Arthur Cebrowski Dies" (*Washington Post*, November 15, 2005).

[95] Dan Gouré, "Creating the Army After Next, Again | RealClearDefense," last modified August 16, 2019, accessed March 16, 2021, https://www.realcleardefense.com/articles/2019/08/16/creating_the_army_after_next_again_114670-full.html. From 1997-2003 Army After Next explored technologies and concepts to enable "3rd dimensional warfare." Its outputs were later incorporated into the FCS program.

[96] John L. Romjue, "The Army of Excellence: The Development of the 1980's Army" (United States Training and Doctrine Command, 1993), 50-51, Appendix A. As seen in OIF I, AOE brigade composition varied by echelon and division type. As but one example, the Army had seven unique aviation brigade organizations, with even more variation at the battalion level.

combat brigades or support elements from the active or reserve force to bolster capabilities in a contingency. [97]

Structurally, the divisions in OIF I were nearly identical to the US divisions that fought in Operation Desert Storm. They were nearly the same size, consisted of the same brigade and battalion components, and used the same major weapons platforms. [98] The notable distinction of the OIF I division was that it had more robust digital communications platforms and some significant upgrades to its weapons platforms, such as the javelin anti-tank missile, the upgraded M1A2 SEP1 main battle tank, and the Force XXI Battle Command Brigade and Below (FBCB2) system. [99]

Moving beyond the threats of the Cold War, the US Army believed it would need a smaller, more deployable force structure for an unpredictable future operating environment. It started three efforts to reinvent itself for this new environment: new force structure from its modularity initiative, new weapons from the Future Combat System (FCS), and new doctrine that would be developed at the technology matured. The Army spent the remainder of the 1990's in research and development toward these ends, while it fought low intensity military operations other than war in places like Somalia, Haiti, Kosovo, and Bosnia. [100]

The 9/11 terrorist attacks interrupted the Army's redesign process as the country reset its national security policy to address terrorism and the states that sponsor it. By 2004, the Army was

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[97] US Department of the Army, Field Manual 100-5, *Operations*, (Washington DC: Government Publishing Office, June 1993), 2-21.

[98] John L. Romjue, "The Army of Excellence," Appendix A.

[99] Perry et al., *Operation Iraqi Freedom: Decisive War, Elusive Peace*, 383-387. Army modernization, particularly its digital and space enabled systems, were byproducts of the Defense Department's push toward network centric operations. For greater context, see Jeffery Hannon, "Network Centric Warfare and Its Effect on Unit of Employmentx (UEx) Use of Mission Command," (US Army Command and General Staff College, School of Advanced Military Studies, 2005).

[100] For more on Military Operations Other than War, see US Department of Defense, Joint Staff, Joint Publication (JP) 3-07, *Joint Doctrine for Military Operations Other Than War* (Washington, DC: Government Publishing Office, 16 June 1995).

committed beyond what its divisional structure could support. FCS, while still seen as a funding priority, ended up taking a backseat to the demands of the Global War on Terror. The search for a doctrine to replace AirLand Battle lost its relevance as the focus went to the pressing need for counterinsurgency and stability operations doctrine. It was in this chaotic environment that the Chief of Staff of the Army, General Peter J. Schoomaker, directed the transition of the Army to the Modular force.[101]

In 2004, 3ID and 101AB, by fate of being the first complete divisions to return from OIF I, were the first units eligible to undergo the transformation process. These divisions provided the template that the rest of the Army followed; 3ID for the Armored Brigade Combat Team (ABCT) and 101AB for the Infantry Brigade Combat Team (IBCT).[102] These divisions worked with Task Force Modularity, the Headquarters Department of the Army-level effort to test, validate, and eventually implement the modular concept across the Active Army, Army Reserve, and National Guard. Task Force Modularity created and tested several modular brigade designs through a series of combat simulations and eventually arrived at the decision to create four units of action and one unit of employment from each division.[103]

Army historian William Donnelly describes that GEN Schoomaker understood that there were unavoidable risks in the transformation process. Modularity without FCS fielding would have to be an incremental process and completed over many years, as opposed to a full overhaul of the Active Army. As new FCS capabilities matured, they would be phased into the existing BCTs as opposed to a comprehensive overhaul of the BCT MTOE.[104] Even so, the Army had to

[101] William M. Donnelly, "Transforming an Army at War," 19-25.

[102] US Department of the Army, Field Manual Interim 3-0.1, *The Modular Force* (Washington, DC: Government Publishing Office, January 2008), vii, 1-13. The Stryker Brigade Combat Teams were designed as modular formations from their inception. The Army eventually developed three modular units of action: light (IBCT), medium (SBCT), and heavy (ABCT).

[103] William M. Donnelly, "Transforming an Army at War," 63-73.

[104] Ibid., 19.

redesign the operational force while fighting in two theaters without the benefit of substantial growth in manpower.

Since all active divisions were in various stages of deployment and redeployment, GEN Schoomaker directed BCT transformation to happen entirely within the existing AOE division structure. This constraint provided predictability for the transformation process, saved time by reducing movement of personnel and equipment between installations, and put the responsibility for transformation under a single two-star commander. However, GEN Schoomaker also required Task Force Modularity to ensure that modular BCTs had equal or greater capability than their AOE brigade predecessors.[105]

By limiting the transformation exclusively within the division structure, significant options were excluded from consideration. TF Modularity could not recapitalize personnel and equipment from the separate combined arms brigades to bolster the maneuver battalions. Further, they could not utilize corps assets or consider forces from the National Guard, Army Reserve, or equipment from Army Prepositioned Stocks (APS). This also meant that TF Modularity was compelled to consider using *everything* in the division to equip the BCTs.[106]

After rigorous simulation exercises, GEN Schoomaker's dual constraints led TF Modularity to recommend a two-maneuver battalion unit of action. This number allowed the army to build four BCTs per division, resulting in enough BCTs to sustain the Army's commitments. Each modular unit of action, later called BCTs, were initially assigned two maneuver battalions, a two-battery field artillery battalion, a special troops battalion, and a sustainment battalion. However, the two-maneuver-unit BCT designs did not meet GEN Schoomaker's minimum capability requirement. The simulations showed that modular units of

[105] Stuart E. Johnson and National Defense Research Institute, eds., *A Review of the Army's Modular Force Structure*, 16-26.

[106] William M. Donnelly, "Transforming an Army at War," 25, 40-41

action with only two maneuver units lacked flexibility, resilience, firepower, and were too predictable. To counter this and meet the minimum standard, TF Modularity placed numerous "enablers" within the BCT designs.[107]

The "enabler" concept was an innovative way to provide greater capability to the unit of action. Enablers utilized for the IBCT and ABCT included military intelligence companies, larger brigade staffs, engineer companies, weapons companies within the IBCT maneuver battalions, and the addition of the new Reconnaissance, Surveillance, and Target Acquisition (RSTA) Battalion.[108] However, permanently assigning these capabilities to the BCT came at the expense of retaining greater capacity at the division level. A military intelligence battalion can do more than four individual companies. An Engineer Battalion can conduct operations that separate engineer companies cannot.[109] The smaller, highly "enabled" RSTAs lacked the mass and firepower to do the security and offensive tasks that 3-7 CAV accomplished during OIF I.[110]

Building four BCTs consumed the entire division task organization. This left only the division headquarters battalion and the remnants of the signal battalion to form the *UEx.* It was not a requirement at the time for the *UEx* to be self-mobile. This led to headquarters that were unable to maneuver in the field with the BCTs as the division's headquarters grew three times in

[107] Ibid., 43-44.

[108] William M. Donnelly, "Transforming an Army at War," 44, Chart 2.

[109] US Department of the Army, Field Manual 7-0, *Train to Win in A Complex World* (Washington, DC: Government Publishing Office, October 2016), 1-41, 1-42, 2-6. The Army assigns Mission-Essential Tasks (METs) to units based on their Modified Tables of Organization and Equipment. Company and Battalion METs vary by organizational type and capability, with specific tasks reserved by echelon. Task organizing three BCT Military Intelligence Companies (MICO) into one ad hoc unit would not create the same capability as an Expeditionary Military Intelligence Battalion (E-MIB). For more on the distinction between MICO and EMIB capabilities, see US Department of the Army, Army Doctrine Publication 2-0, *Intelligence* (Washington, DC: Government Publishing Office, July 2019), Chapter 2.

[110] Jim Lacey, *Takedown*, 90-111; Nathan Jennings, "Reconsidering Division Cavalry Squadrons," 1-5. Jennings explains that the RSTAs organization lacks the protection and firepower necessary to "fight for information." The smaller size of the RSTA, relative to the robust 3-7 CAV, with its three reconnaissance and two aviation companies, limited the former's ability to execute offensive tasks.

size, but were not provided with additional vehicles.[111] This risk was acknowledged during the transformation process, but the Army did not require fully mobile *UEx* as urgently as it required BCTs.[112] Table 2 shows the growth in personnel assigned to the division headquarters.

Table 2. Personnel changes by Headquarters Type.

Table 4.2
Changes in Division Headquarters

	4th Infantry Division		82nd Airborne Battalion		29th Infantry Division		36th Infantry Division (Army National Guard)	
Personnel	Premodular	Modular	Premodular	Modular	Premodular	Modular	Premodular	Modular
Enlisted	217	555	165	602	158	590	177	594
Senior enlisted (E-7 or higher)	67	140	33	123	34	122	34	122
Officer	102	198	72	209	76	208	78	208
Company grade	33	68	27	78	28	78	34	78
Field grade	66	127	42	128	45	127	41	127
General grade	3	3	3	3	3	3	3	3
Warrant	22	45	4	41	4	40	4	41
Total	341	798	241	852	238	838	259	843

SOURCE: Data from FMSWeb, as of May 2010.

Source: Stuart E. Johnson and National Defense Research Institute, eds., *A Review of the Army's Modular Force Structure* (Santa Monica, CA: RAND, 2011). 34. Screenshot taken from Microsoft Word. Data from United States Department of the Army, *Force Management System*, 2010, accessed March 27, 2021, https://fmsweb.fms.army.mil/unprotected/splash/.

Ultimately, the decision to proceed with modular transformation accepted modular BCTs as sufficient organizations for the then-current operating environment. The first of the new BCTs deployed to Iraq in 2005. By 2007, all combat brigades in the active force completed the transformation. BCTs, after a period of adjustment, performed well in Iraq and achieved the intended efficiencies in sustainment, manning, and transportation that the Army envisioned.[113] Coupled with the implementation of the Army Force Generation Model (ARFORGEN), the Army

[111] Stuart E. Johnson and National Defense Research Institute, eds., *A Review of the Army's Modular Force Structure*, 34; US Army, FM 3-94, 6-16.

[112] Rayburn et al. *US Army in Iraq War, Vol 1*. 261, 32-34. See also figure 3.

[113] Stuart E. Johnson and National Defense Research Institute, eds., *A Review of the Army's Modular Force Structure*, 50-54.

was able to solve its strategic culmination problem. It successfully fought two simultaneous low intensity conflicts while fulfilling its other statutory obligations.[114]

The Army made several adjustments to the modular force over the following years. The Army adjusted battlespace management in Iraq to assign BCTs to smaller areas of operations, and updated its force management process to ensure that BCTs were utilized as whole units versus being piecemealed to other commands as battalion task forces.[115] In 2013, the Army eliminated ten BCTs to expand capability in its remaining thirty-one BCTs. This important update added a second engineer company to each IBCT and ABCT, changed the special troops battalion to an engineer battalion, added a third artillery battery to each IBCT and ABCT, modified the RSTA concept, and added a third maneuver battalion to all ABCTs and most IBCTs.[116]

Brigade-centrism

Modularity is somewhat of a misnomer for the change that occurred in 2005. A more descriptive term is brigade-centrism. Under modularity, the Army changed its primary combat unit from the division to the brigade combat team. In doing so, it made three significant changes to the force. It standardized the MTOE for all brigade-sized echelons, it changed its headquarters concepts for echelons above brigade, and it consolidated each division's subordinate units into four BCTs and one *UEx*. This last action divided capabilities that were previously consolidated within branch specific brigades and battalions into the MTOE of the BCT.

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[114] Ibid., 39-40. ARFORGEN married a rapid man, train, equip process to provide trained BCTs to support Defense Department priorities.

[115] Rayburn et al., *US Army in Iraq War, Vol 1*, 380-381.

[116] Todd C. Lopez, "Reorganization Hits Brigade Combat Teams," *Army News Service,* last modified July 3, 2013, accessed February 9, 2021, https://www.army.mil/article/106893/reorganization_hits_brigade_combat_teams. RSTAs are now referred to as cavalry squadrons.

The term Brigade Combat Team pre-dates modularity.[117] Brigade Combat Teams in 2003, as opposed to the post-modular BCT, were informal organizations based upon command relationships. Post-modular BCTs are assigned their subordinate parts by design. The Brigade Combat Teams in OIF I were purposefully task organized by the parent division, based upon the mission. These were "habitual relationships" between brigades and support units in the same division.[118] Habitual relationships fostered familiarity and teamwork between supported brigades and supporting units while leaving administrative control and training authority with the parent unit.

The habitual command relationship-based system allowed for flexibility in planning at the division level. With enough lead time, the division could completely shift combat power among its subordinate commands. AOE brigades were designed to function as complementary entities that could be broken apart or augmented according to the needs of the operation. In contrast, modular BCTs were not designed to be broken apart.[119] This is evident by considering the span of control for the Brigade in the AOE design vs the modular BCT design. The former had a span of control of three; the latter had a span of control of six.[120] Removing enablers like the RSTA or the FA Battalion severely reduces the capability of the modular BCT, while adding

[117] John J. McGrath, *The Brigade: A History, Its Organization and Employment in the US Army* (Fort Leavenworth, KS: Combat Studies Institute Press, 2003), 110. The army used similar concepts in WWII within its triangular divisions known as Regimental Combat Teams.

[118] 3rd Infantry Division Command and Staff, *3rd Infantry Division (Mechanized) After Action Report.* 33-34. Unless otherwise unable to do so, brigades within 3ID were always paired with the same field artillery battery when receiving direct support. This same process applied to the division's Engineer Battalion, MP Battalion, Forward Support Battalion, etc. For more on the evolution of the US Army Brigade see McGrath's, *The Brigade: A History, Its Organization and Employment in the US Army.*

[119] Rayburn et al., *Us Army in the Iraq* War, *Vol I.,* 303-304. The 11th ACRs first OIF deployment demonstrates this limitation.

[120] US Department of the Army, Army Doctrine Publication 6-0, *Mission Command* (Washington, DC: Government Publishing Office, July 2019), 4-12. Based upon the number of organic subordinate battalions, the span of control for the brigade commander in the SBCT is 1:7.

additional battalions exceeds an efficient span of control. Conversely, the AOE brigade could add several additional battalions without encountering the same problem.[121]

However, there were significant downsides to the division-centric Army. If a division were tasked to deploy partial forces, either an AOE BCT or an ad hoc task force, it would leave non-fully-mission-capable brigades and battalions remaining at home station. Building standardized modular brigades allowed the Army to have standardized force packages. If a mission called for one infantry brigade and one sustainment brigade, the Army did not need to deploy an entire division, or deploy parts of brigades.[122]

Standardizing the unit of action addressed the sustainment issues, described in Section I that resulted from non-standardized force packages. Creating a single standard for BCT MTOEs, functional brigades, and multi-functional brigades reduced complexity in the sustainment system and provided flexibility to the deployment process. The Army went from seventeen unique combat brigade MTOEs under the AOE, to just three BCT types.[123] With a modular design, the Joint Force could plan with near certainty for all Army force packages from either the Active, Guard, or Reserve Component.

For brevity, this paper has focused primarily on the BCTs, but the importance of standardizing the numerous echelons above brigade units should not be overlooked. TF Modularity referred to this aspect of the force transformation as streamlining.[124] The AOE had multiple variations of each type of support brigade and several unique formations. Modularity condensed these disparate groups into five multifunctional brigade types and thirteen functional

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[121] William M. Donnelly, "Transforming an Army at War," 44-45, 79. The design process described by Donnelly, and the reliance upon enablers to compensate for deficient maneuver combat power, shows that original modular formations had the minimum requirements to achieve its mission.

[122] Stuart E. Johnson and National Defense Research Institute, eds., *A Review of the Army's Modular Force Structure*, 9.

[123] Ibid., iii, 2.

[124] William M. Donnelly, "Transforming an Army at War," 13.

brigade types (see Figure 2). As an example, the AOE had eleven different brigade formations with organic aviation assets, the modular force has just three aviation brigades.[125]

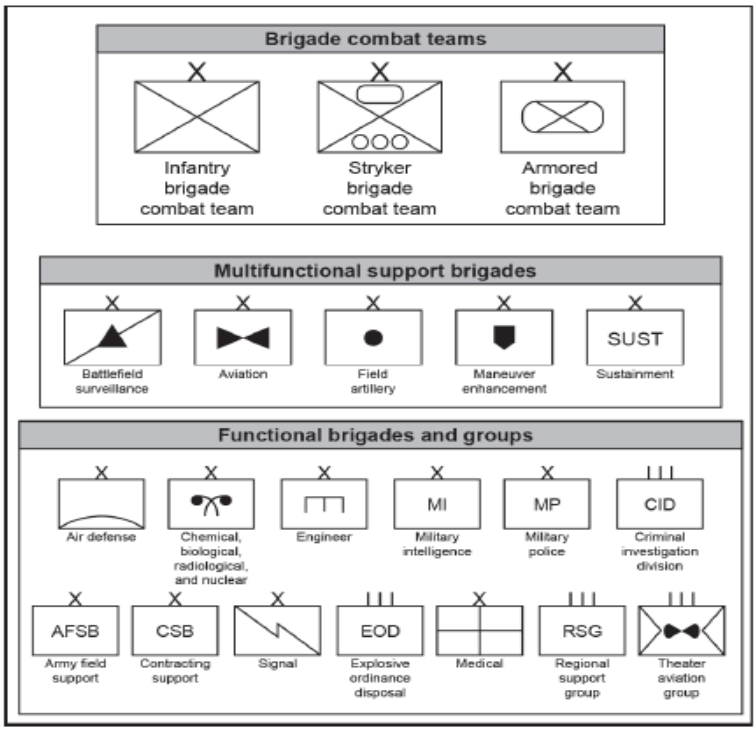

Figure 2. Modular Brigades and Groups. US Department of the Army, Field Manual 3-96, *Brigade Combat Team* (Washington, DC: Government Publishing Office, October 2015), Figure 4-4.

Modular brigades are designed to possess the organic capability to operate independently and sustain their subordinate units without augmentation. Theoretically, the Army can combine BCTs and support brigades from multiple different divisions and expect the same level of performance, regardless of the divisions with which they trained. The division HQ for the 1st Cavalry Division is the same as the 82nd Airborne Division, the 1st Armored Division, and the 1st Infantry Division. Any *UEx* can provide command and control for all three BCT types and integrate any of the functional and multi-functional support brigades.[126] (See Figure 3.) This

[125] John L. Romjue, *The Army of Excellence,* Annex A; Stuart E. Johnson and National Defense Research Institute, eds., *A Review of the Army's Modular Force Structure,* 52. The original modular force design had Theater Aviation Groups, Combat Aviation Brigades, and National Guard Combat Aviation Brigades.

[126] Field Manual 3-94. *Theater Army, Corps, and Division Operations,* 6-1, 6-3.

feature provides flexibility across the total force in two key ways. First, it allows planners to aggregate the optimal mix of BCTs and support brigades for a mission, regardless of which parent *UEx* or component of the total force from which they originate. Second, in crisis situations, it allows for the combination of any available unit under any available *UEx.* This includes the flexibility to incorporate various Army Reserve and National Guard units within a given division or corps.[127]

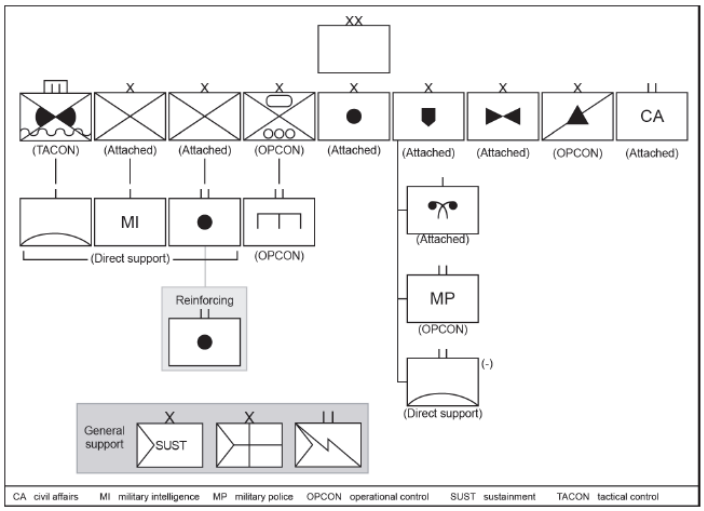

Figure 3. Task Organized Division. US Department of the Army, Field Manual (FM) 3-94, *Theater Army, Corps, and Division Operations*, 7-1.

UEx and *UEy* were innovative approaches to providing flexible headquarters. They would be capable of conducting the Army's concept of Full Spectrum Operations anywhere on the conflict continuum.[128] *UEx* was designed to take responsibility for tasks formerly held by divisions and corps while *UEy* would keep some corps tasks and some of those formerly held by the field army. Theater armies would assume any remaining responsibilities from the field army. Field Manual 3-94 *Theater Army, Corps, and Division Operations* completely omits the name,

[127] Stuart E. Johnson and National Defense Research Institute, eds., *A Review of the Army's Modular Force Structure*, (Santa Monica, CA: RAND, 2011). 19, 20, 48.

[128] Bill Benson, "Unified Land Operations: The Evolution of Army Doctrine for Success in the 21st Century" *Military Review*, (Mar-Apr 2012), 51-54. The Army adopted the notion of Full Spectrum operations from 2001-2011 to account for the operations in Iraq and Afghanistan. Benson argues that full spectrum operations was a useful idea, but not a novel concept. It provided the Army with a logic to link AirLand Battle and MOOTW.

field army, from the title.[129] TF Modularity intentionally used the term *UE* because these formations were intended to be a radical break from the old division and corps concepts. The continued use of the terms, 'division' and 'corps', obscures the intended role of these headquarters in the modular force.[130]

The difference between the former divisional structure and the current unit of employment design is wide. The *UEx* was not designed to maneuver in the way AOE divisions were.[131] The original *UEx* concept hinged upon FCS brigades being so overwhelmingly powerful that each *UEx* would control the relative combat power of an AOE corps. It also assumed that the FCS battle command system would be so effective, that the larger *UEx* command posts could control FCS Brigade maneuver from unprecedented distances.[132] Modularity produced a brigade-centric Army, but it did not provide the technologies to realize the concept. In doing so, the Army disaggregated much of its capability at the division and corps echelon. Consequentially, as the Army looks to reset for great power competition and LSCO, it requires capabilities from its echelons above brigade that no longer exist.[133]

Modularity and the Future Combat System

The Future Combat System was an ambitious research and development project that intended to produce a "leap ahead" in ground force capability. The aim of the program was to reorganize the Army into an information-based system-of-systems-centric force. The FCS

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[129] US Army, Field Manual 3-94, 1-19, 2-56. The role formerly filled by the field army is split between theater armies and corps.

[130] William M. Donnelly, "Transforming an Army at War," 15-17.

[131] US Army, FM 3-94, 6-16, 6-17. Only the division tactical command post is self-mobile. The AOE divisions in OIF I had self-mobile division main command posts. For more on command posts in OIF I, see Fontenot, Degen, and Tohn, *On Point: The United States Army in Operation Iraqi Freedom*, 395.

[132] Christopher G. Pernin et al., "Lessons from the Army's Future Combat Systems Program," 15, 58.

[133] Jen Judson, "The US Army Is Preparing for Major Changes to Force Structure" *Defense News* (March 6, 2019), last modified March 6, 2019, accessed February 10, 2021, https://www.defensenews.com/land/2019/03/06/major-army-force-structure-changes-afoot/.

equipped Army would only have one type of combat brigade that could deploy as fast as a light brigade and fight as hard as a heavy brigade – the objective unit of action. Aside from being lighter in terms of overall weight, FCS vehicles would be more energy efficient, allowing the Army to divest some of its sustainment equipment and organizations. General Eric Shinseski, the Army chief of staff who oversaw the formal launch of FCS in 1999 said "when technology permits, we will erase the distinctions that exist today between light and heavy forces, transforming the Army into a strategically responsive force that is dominant across all domains."[134]

A major influence upon FCS design was Network-centric Warfare, also referred to as Network Centric Operations (NCO). The Congressional Research Service described Network Centric Operations as:

> … a theory which proposes that the application of information age concepts to speed communications and increase situational awareness through networking improves both the efficiency and effectiveness of military operations. Proponents advocate that this allows combat units to be smaller in size, operate more independently and effectively, and undertake a different range of missions than non-networked forces. Networked sensors are sources of data, and data is processed into information. NCO is intended to increase collaboration through enabling the free flow of information across the battlespace so that acquired data is shared, processed into information, and then provided quickly to the person or system that needs it.[135]

The report further describes how the Army envisioned NCO as enabling it to "speed up the pace of warfare, prevent or reduce fratricide, and also provide the means for getting more combat power out of a smaller force."[136] These ideas run in parallel with GEN Shinsheski's and SECDEF Rumsfeld's vision for more fighting power at the cost of fewer soldiers in the fight.

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[134] Christopher G. Pernin et al., "Lessons from the Army's Future Combat Systems Program" (Santa Monica, CA: RAND December 5, 2012). 8-9. GEN Eric Shinsheski's 1999 speech to Association of the United States Army outlined the bold vision for the capabilities that FCS would bring to the army.

[135] Clay Wilson, *Network Centric Operations: Background and Oversight Issues for Congress* (Washington DC: United States Congress, March 15, 2007), 2-3.

[136] Ibid., 3.

Further, it describes how advocates of NCO pointed to OIF I as a proof of concept for the way the Joint Force utilized information dominance to destroy the Iraqi Army.[137]

FM 3-0 describes how information impacts the temporal aspects of the operational environment. Possessing superior information allows commanders to determine operational tempo relative to the enemy, preventing them from making timely decisions.[138] As discussed earlier, the coalition's decisive victory in OIF I was due in-part to improvements in digitized battlefield command systems like the Force XXI Battle Command Brigade and Below (FBCB2) and space enabled systems like the Global Positioning System (GPS) and Tactical Satellite Communications (TACSAT). These capabilities enabled V Corps and its subordinate units to integrate Joint fires, maintain situational awareness, and share intelligence across the coalition. FCS advocates pointed to sources like the Iraqi Perspectives Project that showed how the coalition overwhelmed the Iraqi Army's command and control system.[139]

The physical elements of FCS were eighteen different weapon systems connected with one unifying command network. Each weapon system was integral to the overall concept, a system of systems. Among these were the intended replacements for the Bradley Infantry Fighting Vehicle, Abrams Tank, and Paladin Self-propelled Howitzer. While the major components of FCS did not progress beyond the conceptual phase, some of the smaller ones did. The current family of small unmanned aerial vehicles is an output of FCS, as are some of the communication systems like the 117F and 117G radios.[140] As GEN Schoomaker envisioned, these components were delivered incrementally to the force.

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[137] Ibid., 3, 33.

[138] US Army, FM 3-0, 1-124.

[139] Kevin M. Woods and Joint Center for Operational Analysis (U.S.), eds., *Iraqi Perspectives Project*, 125, 128, 136.

[140] Pernin et al., "Lessons from the Army's Future Combat Systems Program," 292.

Deployment speed, precision weapons, autonomous vehicles, information dominance, and modularity were critical to the overall FCS concept. Units of action would cover nearly as much terrain as an AOE division with networked sensors and long-range precision weapons. Units of action would be standardized formations with relatively small sustainment requirements. FCS envisioned an Army that could deploy a unit of action anywhere in the world in ninety-six hours, a full division in 120 hours, and five divisions within thirty days. The mission command network and improved communications systems would allow FCS Units of Action to operate with smaller, more mobile headquarters.[141] See Figure 4 for this concept.

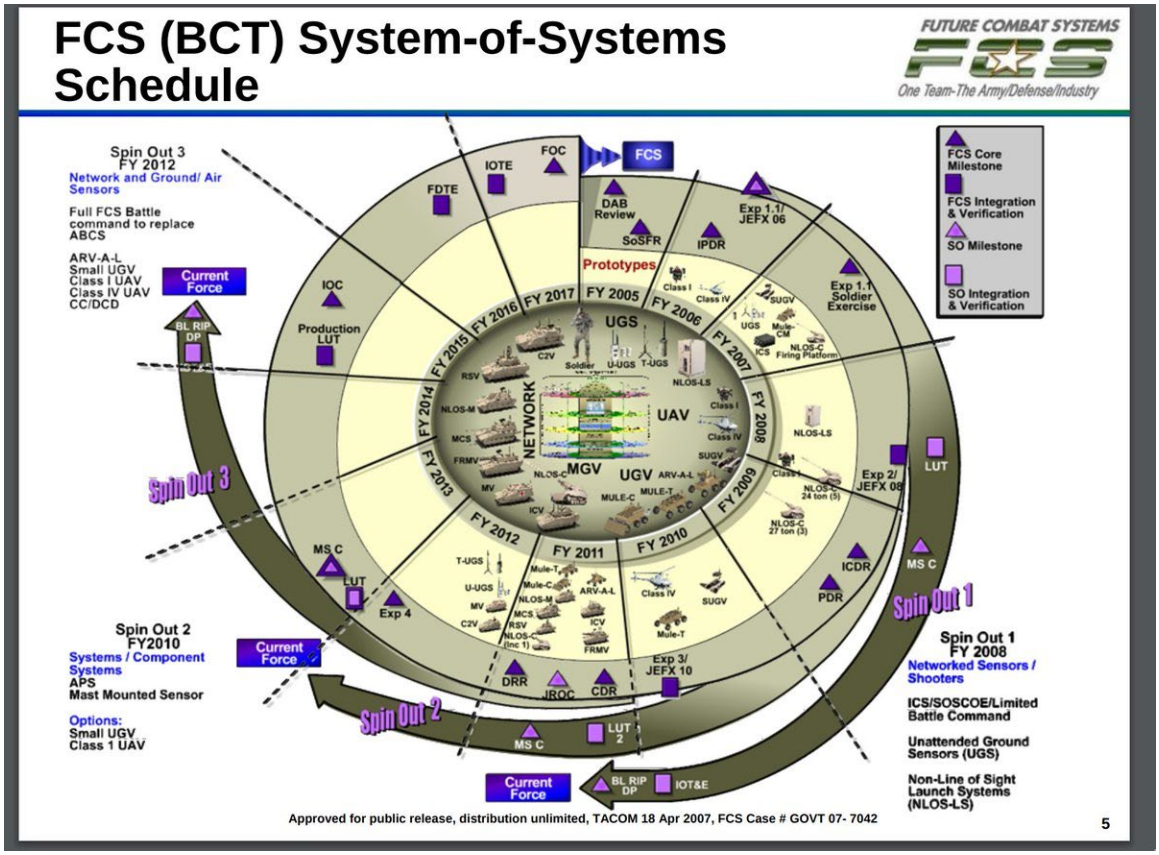

Figure 4. Future Combat System-of-Systems. US Department of the Army, Tank-automotive and Armaments Command (TACOM), Future Combat Systems Schedule, April 18, 2007.

However, the unit of employment change was not carried through with the same thoroughness as the unit of action transformation. There are several likely reasons for this, some

[141] Pernin et al., "Lessons from the Army's Future Combat Systems Program," xxii, 5-7.

rather contentious and others that are byproducts of funding and prioritization. Among these, two stand out as the primary causes: a) FCS termination, and b) the absence of a novel doctrine for Units of Employment. Firstly, without the integrated command system and "leap ahead" in materiel, the Army created an organization to operate technologies it did not possess.[142] Current BCTs are not as lethal, networked, or self-sustaining as the original FCS concept envisioned and therefore still require a substantial division headquarters to synchronize and control their operations. Second, US Army brigade and division doctrine is little changed from the AOE Army. Field Manual 3-94, *Theater Army, Corps, and Division Operations*, requires similar tasks from *UEx* divisions as those 3ID and 101AB completed in OIF I.[143]

Section III: Disconnected Doctrine and Organization

The Consequences of Cancelling FCS

Henry Louis Sullivan, the architect of the modern skyscraper, coined the phrase "form ever follows function."[144] His phrase has become a principle of design from clothing and electronics to weapons and organizations. As stated earlier, GEN Schoomaker's design requirements for the BCT were for it to be as capable as an AOE brigade, require no more forces than existed within the AOE division, and create more brigades than previously existed.[145] Prior to modularity, most brigades fought as integral components of their assigned maneuver division, enabled by division level capabilities, which were assigned by the division commander.[146] The

[142] William M. Donnelly, "Transforming an Army at War," 15, 17.

[143] US Army, FM 3-94, 6-48, 6-57, 6-61; Rayburn et al., *The US Army in the Iraq War, Vol I.,* 84-87.

[144] Louis H. Sullivan and Robert C. Twombly, *Louis Sullivan: The Public Papers* (Chicago: University of Chicago Press, 1988), from the essay, "The Tall Office Building Artistically Considered," 103.

[145] William M. Donnelly, "Transforming an Army at War," 78-81.

[146] US Army, FM 100-5, 2-21. The focus of all tactical maneuver was how to integrate combined arms at the battalion level. This focus shifted to brigades in current doctrine.

FCS equipped modular force was not designed to require a division to allocate mobility, fires, or ground reconnaissance to its highly enabled brigades. Yet, Field Manual 3-0 clearly describes that the Army will not fight LSCO with individual brigades, but with divisions and corps.[147] Looking to its future division and BCT structure, the Army should consider the organization (form) of adjacent units and immediate headquarters. Further, it should evaluate the doctrinal tasks (functions) that guide the employment of its brigades and divisions.

Two examples of this disconnected form and function between the AOE and the Modular Force are seen in the security and mobility tasks required of BCTs. FM 3-0 *Operations* describes BCTs conducting the same security missions formerly conducted by AOE division cavalry squadrons, and Maneuver Enhancement Brigades (MEB) controlling breaching operations as previously done by AOE division engineer battalions.[148] While the modular formations have the capability to do these tasks, they are not specially designed for them. The dominant aspect of modular force design was to ensure that the Army increased its number of deployable BCTs. TF Modularity emphasized the efficacy of the BCT, not the division.[149] Like the confusion surrounding the *UEx* versus division naming convention, the Army designated RSTAs with heraldry from historic Cavalry Squadrons.[150] This confuses the discussion, as the two formations are fundamentally different (see Figure 5).

[147] US Army, FM 3-0, 1-15.

[148] Ibid., 6-29, 7-34.

[149] William M. Donnelly, "Transforming an Army at War," 48.

[150] Ibid., 75-77.

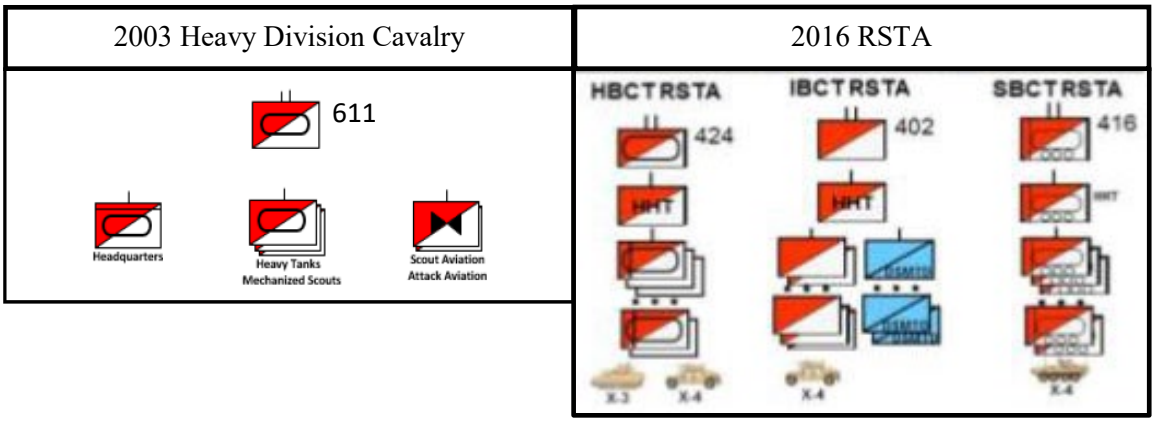

Figure 5. 2003 Heavy division cavalry comparison with RSTA by BCT type. Compiled by author from: L-Series Division Cavalry Squadron, 1995-2004. John J. McGrath, *Scouts Out: The Development of Reconnaissance Units in Modern Armies* (Fort Leavenworth, KS: Combat Studies Institute Press, 2008), 167; David L. Sanders III, *Meeting Future Army Reconnaissance and Security Requirements*, Strategy Research Project (Carlisle, PA: US Army War College, March 2013), 9.

The subordinate tasks required to conduct the reconnaissance and security task of guard for a brigade or division remain the same today as when that task was done by 3-7 CAV during OIF I. In LSCO, against an opponent with armored forces, only the ABCT is appropriate for this mission. SBCTs, even when enabled with attack helicopters and close air support, are vulnerable to direct and indirect fire overmatch from armored and mechanized forces.[151] SBCT and IBCT cavalry formations lack the protection and firepower to win the counter-reconnaissance fight against armored forces. AOE Cavalry Squadrons and Armored Cavalry Regiments had mission essential task lists that drove mastery of security and reconnaissance tasks.[152] It is unrealistic to assume current BCTs can be as capable at security and reconnaissance tasks as formations that were designed specifically, and trained exclusively, to do these missions.

[151] US Department of the Army, Army Techniques Publication 3-21.21, *SBCT Infantry Battalion* (Washington DC: Government Publishing Office, April 2016), 3-98. Counter-reconnaissance is a critical aspect of the guard mission and offensive tasks like a movement to contact.

[152] Frank A. Dolberry II, "A Dangerous Bargain: The Sacrifice of Division Cavalry" (US Army Command and General Staff College: School of Advanced Military Studies, 2018), 17-19.

Similarly, the doctrine for a division combined arms breach is little changed since OIF I. Yet, divisions have no organic engineer battalion. Divisions are assigned combat engineer battalions from the Corps Engineer Brigade or from Maneuver Enhancement Brigades (MEB) assigned to the National Guard or Army Reserve. The MEBs primary task is to provide command and control of security operations in the division consolidation area.[153] The MEB, like the BCT, is a complex organization, as depicted in figure 6. It conducts many of protection functions formerly executed by the division. Yet, unlike the BCT, the MEB does not organically possess all the subordinate battalions required to do its full range of wartime missions (see Figure 6).

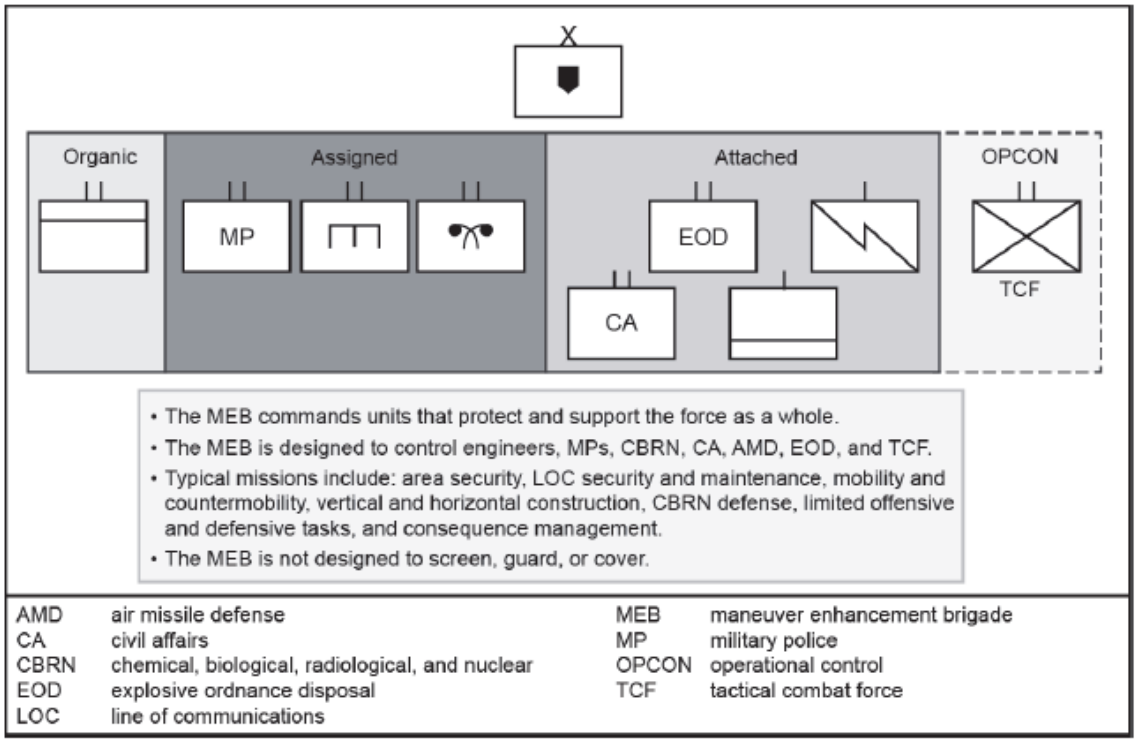

Figure 6. Maneuver Enhancement Brigade. US Army FM 3-94, *Theater Army, Corps, and Division Operations* (Washington, DC: Government Publishing Office, 2019), Figure 6-6.

All brigade combat teams have a Brigade Engineer Battalion (BEB), which has two engineer companies, a headquarters company, a signal company, and the military intelligence company.[154] However, the specific equipment of the BEB varies by BCT type. The function of

[153] US Army, FM 3-94, 6-28, 6-29.

[154] US Army, FM 3-96, 1-18, 1-39, 1-40, 1-47, 1-51.

the BEB is obscured by its historical naming convention, much like the cavalry brigade, division, and corps. The BEB is not the same as an AOE division engineer battalion. It is a renamed evolution of the former Brigade Special Troops Battalion (BSTB) with an extra engineer company.[155] It cannot accomplish the same tasks, with the same efficacy, as its AOE predecessor.[156] Most of the BEB is consumed by the BCT Tactical Operations Center, which requires the military intelligence and signal company to operate.

Combat Engineer Battalions have the necessary equipment and training to conduct division combined arms breaches. However, the division no longer has direct control of the tube artillery and security elements recommended by doctrine to enable that operation.[157] Thus, the breach mission must be assigned to a BCT or those assets must be detached from the BCT and placed under control of the MEB or the division. For the gap crossing operations the Army believes it will face during LSCO, the absence of organic engineer battalions within the division presents risk.[158]

The division Headquarters and Headquarters Battalion (HHBN), also a casualty of BCT building, does not have transportation sufficient to move itself rapidly on the battlefield, despite LSCO requirements to do so. The division HHBN only has enough vehicles to move one Tactical

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[155] William M. Donnelly, "Transforming an Army at War," 44, Chart 2.

[156] The absence of the third engineer company reduces the flexibility and resiliency of the organization. For more on this see Jason Smallfield, "TTPs for the Employment of Brigade and Task Force Engineers" *US Army | Infantry Magazine* (January-March 2014), 3.

[157] US Army, ATP 3-90.4, 3-1, 3-21. Chapter three covers mobility operations planning considerations. The breaching fundamentals are Secure, Obscure, Suppress, Reduce, Assault (SOSRA). For Division level breaches, suppression and obscuration are provided by artillery battalions, while security tasks are done by cavalry organizations or maneuver battalions; US Army, FM 3-0, 2-66 describes the role of the division artillery headquarters; US Army, ATP 3-90.4, 3-55 outlines command and control considerations for combined arms breaching operations.

[158] Michael D. Lundy, "Meeting the Challenge of Large-Scale Combat Operations Today and Tomorrow" *Military Review*, (October 2018), accessed February 16, 2021, https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/September-October-2018/Lundy-LSCO/.

Command Post (TAC) and a portion of the Main Command Post in a single lift.[159] This is curious, as the *UEx* manning is nearly three times that of the AOE division.[160] Given the anticipated threats in the Army operating concept, these issues are cause for concern. Divisions will need to protect themselves, avoid detection, and maneuver to control ground operations in any future LSCO.[161]

BCTs and *UEx*'s experienced years of combat in Afghanistan and Iraq. These were wide area security missions against enemies with limited, asymmetric means. Stability operations, while complex in nature, have different demands on echelons above brigade than LSCO.[162] BCTs and *UEx's* were sufficient organizations for stability operations as it required limited combat power augmentation above the brigade level. As opposed to the 101AB and 3ID's operations during OIF I, *UEx's* in later phases of the Iraq war did not conduct passage of lines, engage with armored formations, or synchronize brigade sized combined arms breaches.[163]

The division's ability to succeed as a tactical warfighting headquarters, as demonstrated in OIF I, is diluted by the disaggregation of its former capabilities to the BCT. As described earlier, the majority of the AOE division force structure remains in the current force, but it resides within the BCTs, not the divisions. Within any three BCTs there are enough field artillery assets to create a complete AOE fires brigade, enough engineer assets to build two AOE engineer battalions, and enough cavalry forces to create an entire AOE cavalry brigade.[164] By retaining

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[159] United Sates Department of the Army, Army Technique Publication 3-91, *Division Operations* (Washington DC: Government Publishing Office, October 2014), 2-51, 2-52.

[160] Stuart E. Johnson and National Defense Research Institute, eds., *A Review of the Army's Modular Force Structure*, 34. See Table 2.

[161] Michael D. Lundy, "Meeting the Challenge of Large-Scale Combat Operations," 3.

[162] United States Department of the Army, Army Doctrine Publication 3-0, *Operations*, (Washington DC: Government Publishing Office, July 2019), 3-2.

[163] John D. Caldwell, *Anatomy of Victory*, 408, 409.

[164] US Army, FM 3-96 1-3, 1-9, 1-11; John L. Romjue, *The Army of Excellence,* Annex A. Based upon a comparison of personnel between the two organizational design constructs. See Appendices 5-7 for BCT organization.

these assets permanently within the brigade, verses aggregating them under division control, the Army loses the ability to employ them as trained, collective units. Is permanent assignment within the BCT the most efficient and effective use of these forces?

Implications for the Future

The Army of 2021 finds itself answering a familiar question: "How to best posture itself to prevail in an uncertain future?" The Long War continues, and perhaps, is an indicator of what the Army should expect of the character of the 21st Century.[165] The threat of terrorism persists, and now the Army must find ways to counter it while preparing to defend against new versions of old threats. The Army's emerging future operating concept, Multi-Domain Operations will inform its effort to build this force.

The Congressional Research Service succinctly states, "Multi-Domain Operations (MDO) describes how the U.S. Army, as part of the joint force [Army, Navy, Air Force, and Marines] can counter and defeat a near-peer adversary [China and Russia] capable of contesting the U.S. in all domains [air, land, maritime, space, and cyberspace] in both competition and armed conflict. The concept describes how U.S. ground forces, as part of the Joint and multinational team, deter adversaries and defeat highly capable near-peer enemies in the 2025-2050 timeframe."[166]

The 2017 National Security Strategy calls for a return to Great Power competition with China and Russia. The US Army sees preparation for large-scale combat operations as essential to its ability to deter these adversaries. Given the size, capabilities, and organization of both the Chinese and Russian militaries, any ground conflict may require massive formations. However,

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[165] William M. Donnelly, "Transforming an Army at War," 19-21.

[166] Andrew Feickert, *Defense Primer: Army Multi-Domain Operations (MDO)* (Washington, DC: Congressional Research Service, December 8, 2020), 2. For more on MDO, see US Department of the Army, TRADOC Pamphlet 521-3-1, *The U.S. Army in Multi-Domain Operations 2028* (Washington DC: Government Publishing Office, December 6, 2018).

the NSS also lists North Korea, Iran, and Violent Extremist Organizations (VEOs) like ISIS as likely adversaries as well.[167]

LTG Eric Wesley, the US Army Futures and Concepts Director, described the operational challenges facing the Army in a recent speech, when he stated, "The Army has relied on counterinsurgency operations over the past 15 years that depended greatly on the Brigade Combat Team. But now, with a new focus on large-scale ground combat operations anticipated in the future operating environment, that will require echelons above brigade, all of which will solve unique and distinct problems that a given BCT can't solve by itself…You will see us seek to build out echelons above brigade — the Division, the Corps, even potentially a field Army — to get into theater that can manage these theater problems that otherwise wouldn't be achieved."[168]

The return of the field army as a standing headquarters will formally undo the logic behind the *UEx* and *UEy* construct. As the Army builds capacity at echelons above brigade, it will likely consider the process used to undo these capabilities in the first place. The AOE was designed, organized, and tested at LSCO. The Modular Force used systems built for the AOE, combined with elements of FCS, to create an organization to sustain stability operations for years on end. Whatever future organizational design the Army chooses, it must consider the ramifications of over-engineering the force for either extreme of the conflict continuum.[169]

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[167] Donald J. Trump, "National Security Strategy of the United States of America" (Office of the President, December 2017), 25, 26.

[168] Jen Judson, "The US Army Is Preparing for Major Changes to Force Structure." For more on US Army Force Transformation, see *DVIDS - Video - AUSA Global Force Symposium: Day 1 - Panel Discussion - Army Futures Command*, Panel Discussion (Huntsville, AL, March 29, 2019). Accessed March 8, 2021. https://www.dvidshub.net/video/668843/ausa-global-force-symposium-day-1-panel-discussion-army-futures-command.

[169] US Army, FM 3-0, 1-1. The Conflict Continuum spans from peace to total war. The US Military conducts a range of military operations to respond to national security challenges within this continuum.

Recommendations

The Army should not retain the modular BCT in its current design. The organizational design of the BCT was an act of necessity, not an artful design choice. Given the anticipated threats to the nation and a resource constrained environment, BCTs are not the optimal headquarters to aggregate combat, combat support, and sustainment units under. In the future, if overmatch is possible on the scale envisioned by FCS, the Army should revisit the brigade-centric concept. In the present, the Army should consider how to retain the best aspects of modularity while reimagining its echelons above brigade design. Modularity and standardization provided the Army with tremendous efficiencies in transportation, sustainment, and force generation. These characteristics should be preserved as traits of any future organization.

The Army should explore ways to return capability and expand modularity to the divisional structure. Interchangeable brigades between parent divisions is a capability that provides flexibility to Joint planning and could be reimagined in different contexts. The AOE differentiated between light and heavy divisions. This construct allowed the Army to optimize sustainment organizations, engineer battalion types, and type of fires brigades assigned to the division and corps.[170] A similar construct could help the Army tailor itself more purposefully.

The one-size-fits-all approach to combat brigades should be reconsidered. Reconnaissance and security missions are essential tasks for offensive and defensive operations in LSCO. The Army assumes risk by purposefully assigning these missions to BCTs, which have a wide swath of other missions against which to prepare for as they are not specially tailored for these tasks. As demonstrated in OIF I, division-controlled ground reconnaissance formations must possess survivability and firepower to contribute in LSCO. A design which requires the higher headquarters to remove specially tailored assets from the unit of action, in-order-to enable

[170] John L. Romjue, "The Army of Excellence," 7, 8.

other units of action, defies logic.[171] Currently, the Army should consider tailoring the Mission Essential Task List (METL) of some of its ABCTs to fulfill this mission set. Further, it should consider designing purposeful reconnaissance and security organizations for the division and corps.

Active-component divisions would benefit from organic, permanently-assigned engineer battalions to support mobility, counter-mobility, and survivability tasks. Currently, this capability comes from external organizations, despite more than a battalions' worth of engineers existing within any two BCTs. Divisions that lack essential warfighting functions, by design, do not message readiness to the nation's enemies. The Army should consider adding engineer capabilities to the division, even if it means removing that capability from the BCT. Division Headquarters can more aptly prioritize efforts among subordinates, and the engineer battalion offers more capability than separate companies.[172]

As the Army evaluates its headquarters at echelon, it should reimagine the division as a maneuver element. It should look to 3ID and 101AB in OIF I as examples for a baseline headquarters element that is capable of effective command and control, survivability, and maneuver. The divisional headquarters risks being too large to survive on the battlefields

[171] William M. Donnelly, "Transforming an Army at War," 60-61. The debate over the logic of using BCTs to provide ground reconnaissance for *UEx* versus organic division-assigned cavalry units was a point of disagreement for TF Modularity. BG (Ret.) Huba Wass de Czege, a senior advisor to TF Modularity, and the Chief of Armor, then MG Terry Tucker, advocated that requiring BCTs to provide these forces to the division weakened the parent unit. They were overruled by GEN Kevin P. Bynes, the TRADOC Commander.

[172] Fontenot, Degen, and Tohn, *On Point*, 383-426. This section provides a comprehensive list of lessons learned from OIF, specifically it speaks to the role of the corps and division headquarters in weighting priorities and task organizing to support them.

envisioned by MDO.[173] Whatever size the final requirement becomes, it should be capable of self-deployment, battlefield maneuver, and not beholden to large, physical structures.

The AOE was successful in Desert Storm and OIF I because it was part of a coherent operational design. The AirLand Battle Concept informed the doctrine, which informed the organizational design.[174] Conversely, FCS was a technology based organizational solution that was not informed by a coherent operating concept.[175] The modular aspect of FCS became the organizational solution to an emerging counter-insurgency doctrine, developed out of necessity on the battlefields in Iraq and Afghanistan. As the Army designs its future force, it should start by ensuring its operating concept is logically and strategically sound. It should derive operational and tactical doctrine within the logic of the operating concept, and then design organizations to execute these concepts.[176]

Conclusion

The Army's transition to brigade-centrism, without the "leap ahead" of the Future Combat System, left its divisions without direct control of the capabilities necessary to shape subordinate unit operations in LSCO. The shift to this modular force was based upon four critical assumptions that are no longer valid. First, Future Combat Systems and the reorganization of MTOE that would come with it never materialized. Second, the operational environment envisioned at the end of the twentieth century was flawed. The 2017 National Security Strategy

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[173] John K. Warden, Russel Keller, and Clark Frye, *Learning Lessons from the Ukraine Conflict* (Alexandria Virginia: Institute for Defense Analyses, May 2019), 7-9. The 2014 Ukraine Conflict was a catalyst for the Army's MDO concept, specifically, Russian use of unmanned systems, signal intelligence, and massed indirect fires to find, fix, and finish command posts and troop concentrations.

[174] Huba Wass de Czege et al., "Commentary on The US Army in Multi-Domain Operations 2028" (US Army War College, Strategic Studies Institute, 2020), xi-xii.

[175] Ibid., Advocates of OIF I as a proof of concept for Network-Centric Warfare undervalue the role of the AOE organization and the AirLand Battle concept and its supporting doctrine. Elements of Network-Centric Warfare made the Army more lethal, but did not change its fundamental method of warfighting.

[176] Ibid., 19-25. MDO continues to evolve through an iterative process, much like previous operating concepts.

sees a return to great power competition and the military capabilities that will be necessary to implement it include a credible LSCO capable force. Third, network-centric warfare would enable brigades to replace divisions as the foundational maneuver force in LSCO. Fourth, the FCS integrated command system would enable *UEx* and *UEy* to replace the previous division, corps, field army, theater army command construct. The Army's MDO concept calls for a return to the division as the foundational maneuver unit. MDO further envisions the field army as a necessary integrating headquarters. The Army should consider either further enabling its BCTs to the capabilities originally envisioned by FCS or restructure its forces to provide divisions more capabilities to enable division centric maneuver.

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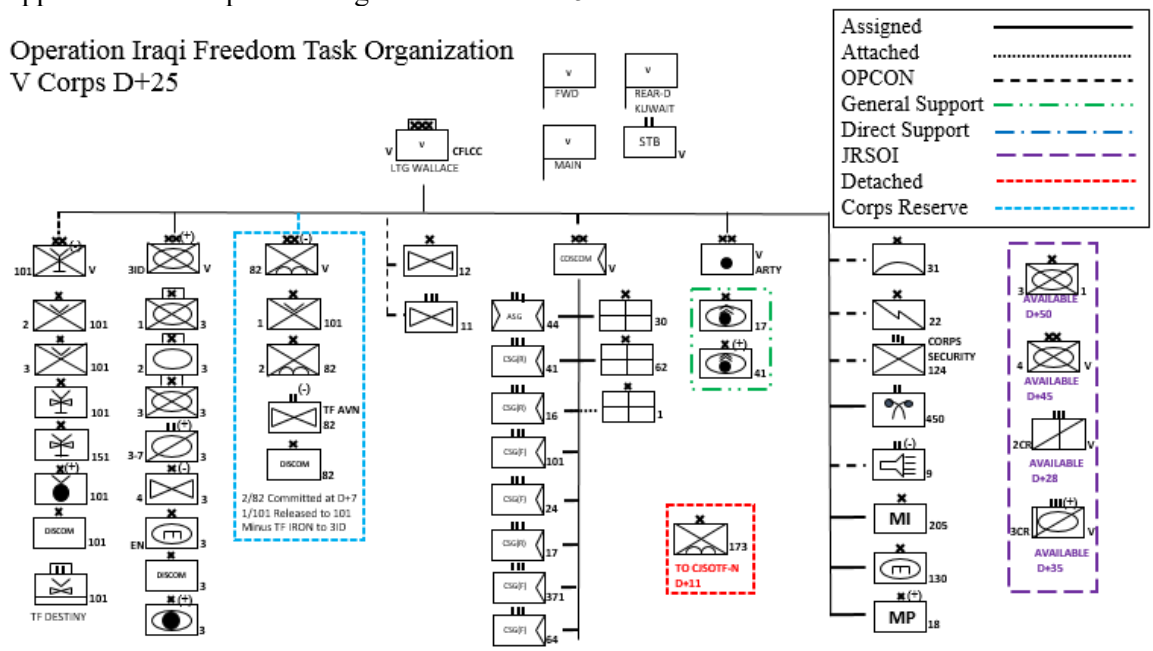
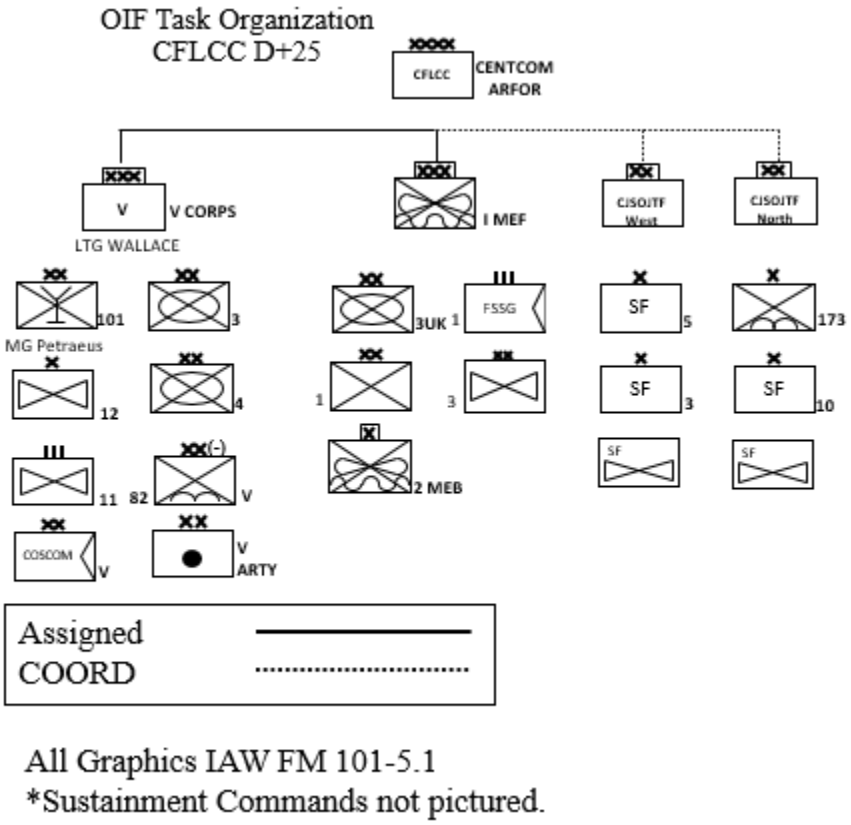
Appendix 1. V Corps Task Organization on D+25.



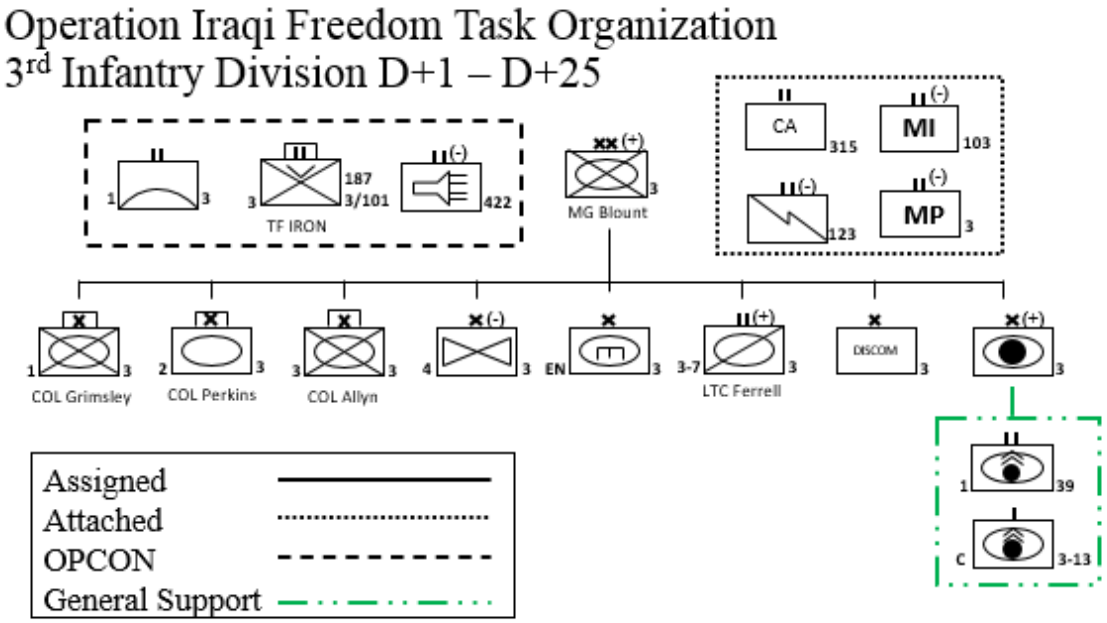
Source: Created by author. All Icons are in accordance with United States Department of the Army, FM 100-5, *Operations*, (Washington DC: Government Publishing Office, 1990). Data from Gregory Fontenot, E.J. Degen, and David Tohn, *On Point: The United States Army in Operation Iraqi Freedom*, Operation Iraqi Freedom Study Group (Fort Leavenworth, KS: Combat Studies Institute Press, 2004).

Appendix 2. CFLCC Task Organization on D+25.



Source: Created by Author. Data from Gregory Fontenot, E.J. Degen, and David Tohn, *On Point: The United States Army in Operation Iraqi Freedom*, Operation Iraqi Freedom Study Group (Fort Leavenworth, KS: Combat Studies Institute Press, 2004).

Appendix 3. 3rd Infantry Division Task Organization Through D+1 – D+25



Source: Created by Author. Data from Gregory Fontenot, E.J. Degen, and David Tohn, *On Point: The United States Army in Operation Iraqi Freedom*, Operation Iraqi Freedom Study Group (Fort Leavenworth, KS: Combat Studies Institute Press, 2004).

Appendix 4. V Corps Scheme of Maneuver with Timeline.

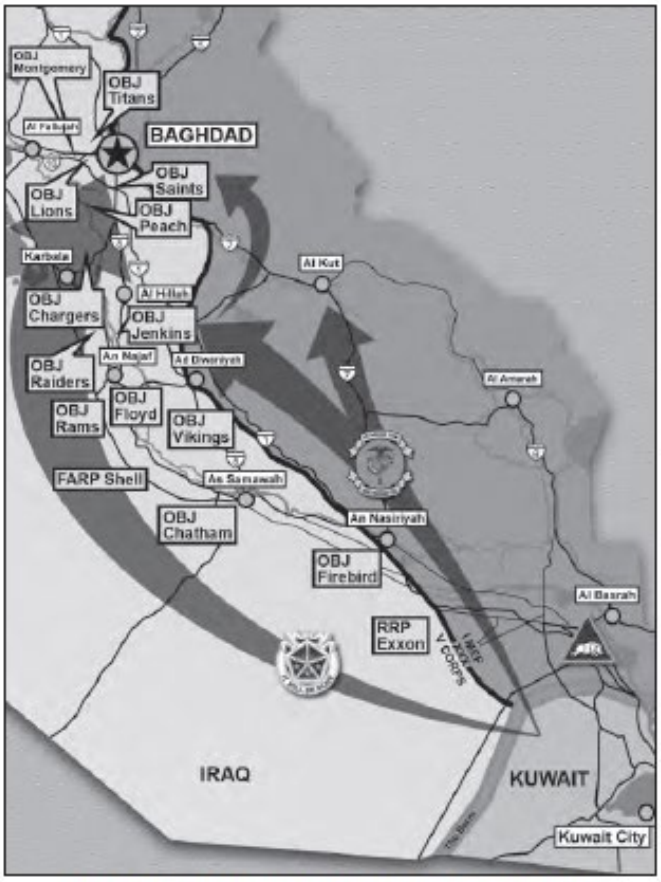


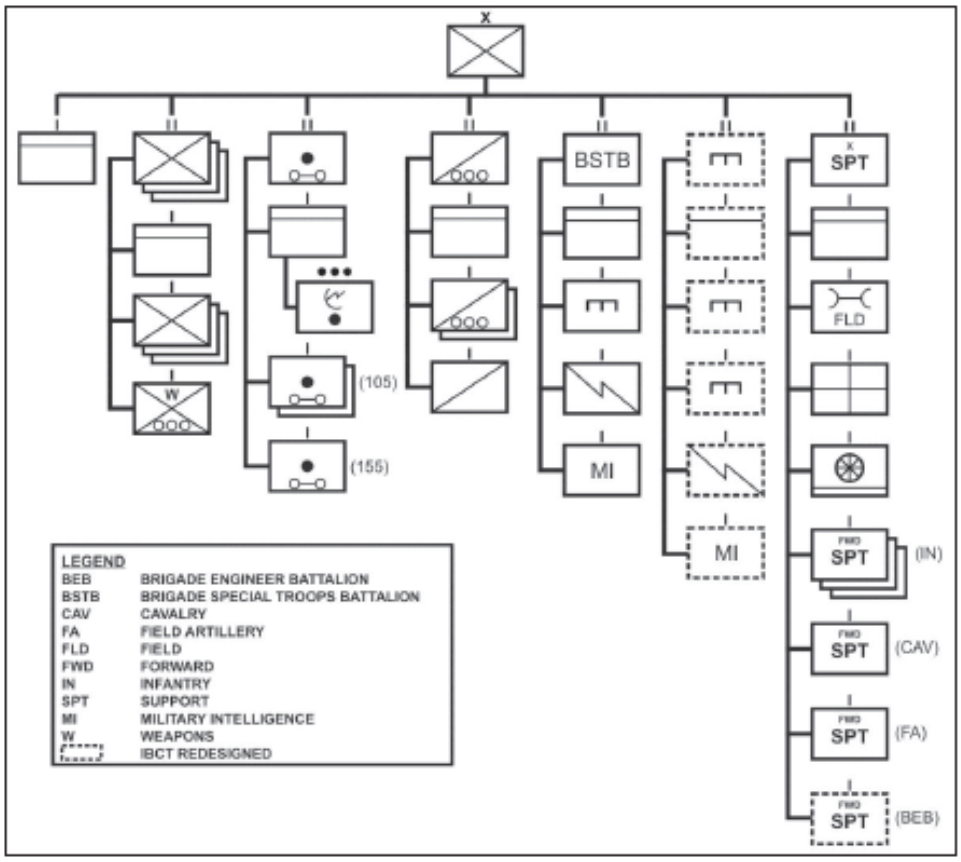
Figure 75. V Corps and I MEF maneuver to Baghdad

Timeline of V Corps Attack

- 21 MAR: Breach and Tallil Air Base (OBJ Firebird)
- 22-24 MAR: Am Samawah (OBJ Chatham)
- 22-30 MAR: 101AB and 82AB secure LOCs near OBJ Firebird and OBJ Chatham
- 22-23 MAR: OBJ Rams
- 25-27 MAR: Najaf
- 25-27 MAR: Shemal (Sandstorm)
- 26-27 MAR: Al Kifl
- 1 APR: Karbala
- 2 APR: OBJ Peach
- 3-5 APR: OBJ Saints
- 4-5 APR: Baghdad International Airport (OBJ Lions)
- 4-8 APR: OBJ Titans
- 5 APR: Thunder Run I
- 7 APR: Thunder Run II

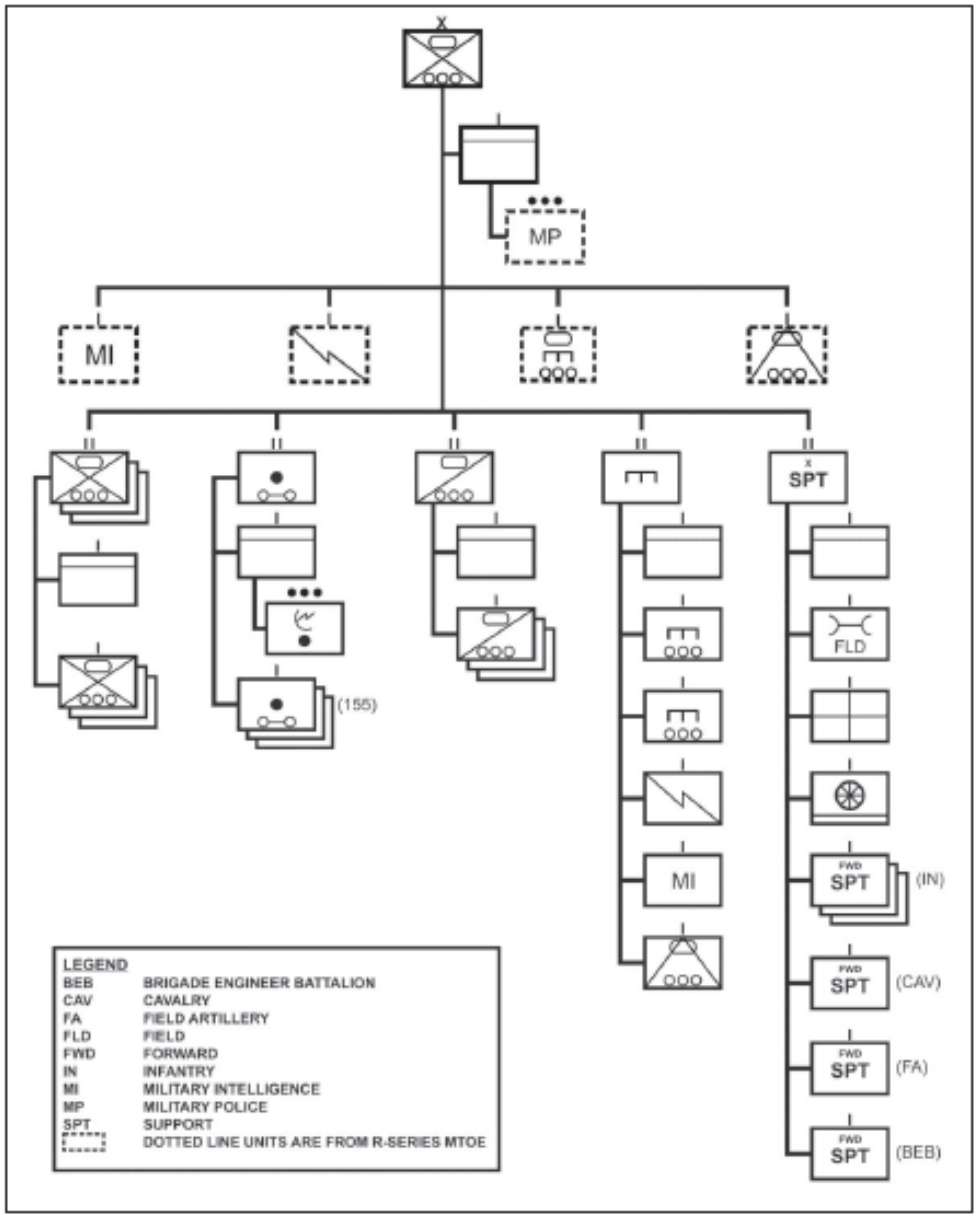
Source: Scheme of Maneuver from Gregory Fontenot, E.J. Degen, and David Tohn, *On Point: The United States Army in Operation Iraqi Freedom*, Operation Iraqi Freedom Study Group (Fort Leavenworth, KS: Combat Studies Institute Press, 2004), Figure 75. Timeline created by Author with dates from Joel Rayburn, Frank K. Sobchak, and US Army War College, eds., *The U.S. Army in the Iraq War*, vol. I, II vols. (Carlisle, PA: Strategic Studies Institute: U.S. Army War College Press, 2019).

Appendix 5. Infantry Brigade Combat Team (2015).



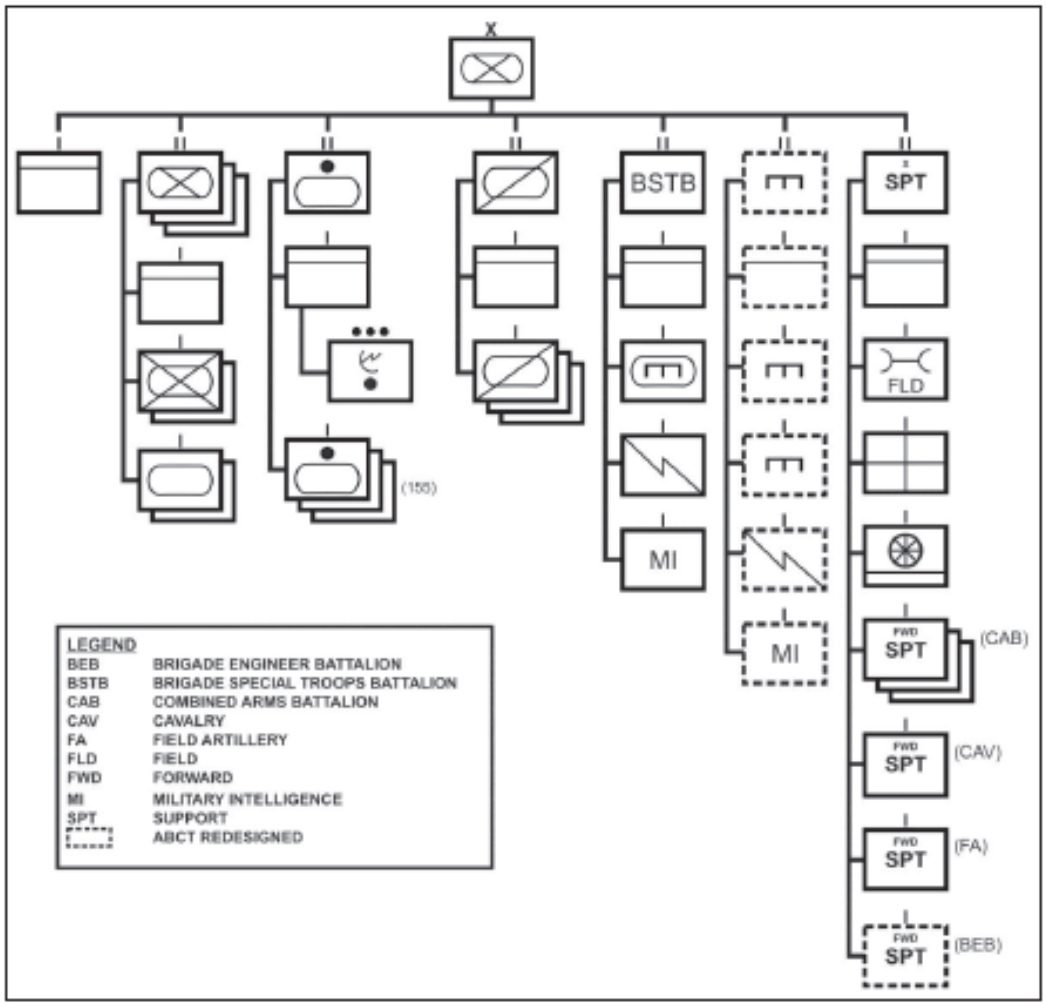
Source: US Department of the Army FM 3-96. *Brigade Combat Team* (Washington DC: Government Publishing Office, July 2015), 1-3.

Appendix 6. Modified Stryker Brigade Combat Team (2015).



Source: US Department of the Army FM 3-96. *Brigade Combat Team* (Washington DC: Government Publishing Office, July 2015), 1-9.

Appendix 7. Armored Brigade Combat Team (2015).



Source: US Department of the Army FM 3-96. *Brigade Combat Team* (Washington DC: Government Publishing Office, July 2015), 1-11.