

LEADERSHIP & INNOVATION DURING CRISIS

LIAM COLLINS

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LESSONS FROM THE IRAQ WAR



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Leadership and Innovation During Crisis: Lessons from the Iraq War
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*To the men and women of the United States Armed Forces
who will fight and innovate in our future wars*

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INTRODUCTION

1

“Those who cannot remember the past are condemned to repeat it.”¹

The above quotation by George Santayana is sometimes paraphrased to apply to a warfare context: “Those who do not learn the lessons of the past war are destined to fail in the next war.” While it may be true that nations which fail to learn from a previous war are doomed in their next one, it is also true that building a military which could have won the previous war is not sufficient for victory because the next war is likely to be profoundly different from the last. Militaries are—or at least should be—organized, trained, and equipped to win the next conflict, but rarely do militaries find themselves in the “next” conflict that they expect. There is no guarantee that the more powerful force will achieve a quick victory, or even victory at all.

For conflicts that last any significant length of time, a military must innovate. Success in war and the amount of time it takes to win a war is often influenced by innovation or the failure to innovate. During World War II, the U.S. Navy submarine force shifted its targeting focus from the Japanese naval fleet to the Japanese merchant fleet. It was only after this strategic innovation that the U.S. submarine force started to degrade the Japanese war effort.² In Vietnam, the U.S. successfully innovated with its development of airmobile warfare, yet it failed to successfully implement counterinsurgency doctrine, at least not on a large enough scale or early enough to change the conflict’s outcome.³

1 George Santayana, *Life of Reason* (New York: C. Scribner’s, 1905), 284.

2 Stephen P. Rosen, *Winning the Next War: Innovation and the Modern Military* (Ithaca, NY: Cornell University Press, 1991), 130-147.

3 See, for example, Andrew F. Krepinevich Jr., *The Army and Vietnam* (Baltimore, MD: Johns Hopkins University Press, 1986), 206.

Even though innovation can play a critical role in determining the duration and outcome of a conflict, insufficient thought has been dedicated as to how to produce a military that is capable of rapid innovation. Thus, gaining a better understanding of how militaries innovate during war is necessary to enable a military to organize, train, and educate a force to facilitate quicker innovation during conflict. Considering how expensive wars are, combatants should be strongly interested in seeing wartime innovation conducted as rapidly as possible.

Yet, there is a void in military literature relating to wartime innovation. Most of the literature deals with peacetime innovation. Historian Williamson Murray, who has produced several works on military innovation, does not believe innovation is possible in war. He believes that militaries can only adapt in war.⁴ While Hunzeker looks at how wartime armies respond to unforeseen changes in the character of war, he lumps innovation together with adaptation and emulation under the conceptual aegis of wartime learning, leaving room to explore innovation as a discrete type of change. Moreover, his theory focuses on organizational structure, leaving open the question of the role that individual leaders can play.⁵

Prior to the wars in Afghanistan and Iraq, nearly all the limited work on wartime innovation examined cases from older wars. Even the findings of Rosen's *Winning the Next War: Innovation and the Modern Military*—one of the most well-known works on military innovation—may be limited. While Rosen examines both peacetime and wartime innovation, he argues that wartime innovation is rare because there is seldom sufficient time, and he does not include any cases after World War II. Yet, it is possible that factors which explained innovation in the first half of the twentieth century may not have the same effect in the first half of the twenty-first century, due to significant changes in the military, culture, and society. In the past decade, a growing number of scholars have examined change during the wars in Iraq and Afghanistan, but most have focused exclusively

4 Williamson Murray, interview by author; and Williamson Murray, *Military Adaptation in War with Fear of Change* (New York: Cambridge University Press, 2011).

5 Michael A. Hunzeker, *Dying to Learn: Wartime Lessons from the Western Front* (Ithaca, NY: Cornell University Press, 2021).

on adaptation. Many of these studies focused entirely on the development of counterinsurgency doctrine.⁶ Thus, a deeper understanding of military innovation in a more recent war and across a broader set of innovations is necessary.

Also understudied is the role of the leader in innovation. Generals like George Washington and Robert E. Lee have become famous for their success in battle. Great victories and terrible defeats are often attributed to the generals who fought them. It is widely accepted that leadership can play a significant role in influencing the outcome of a battle, yet there is not the same understanding of the role that leaders can play in influencing organizational innovation. It stands to reason that leaders can influence innovation within the military just as they can influence victory in battle.

Some might wonder if the study of innovation in war is even necessary. Does war happen frequently enough, and does it last long enough for innovation to matter? Looking at the experiences of the U.S. in the twentieth and twenty-first centuries, the answer is clearly yes for both. Between the Spanish-American War's cease-fire on August 12, 1898, and the end of Operation ENDURING FREEDOM in Afghanistan on December 28, 2014, the U.S. has been involved in a major war for a total of more than 30 years (363 months) out of those 116 years (see Table 1-1). Put another way, the U.S. was at war 26% of the time. Noteworthy is that this time of "peace" was characterized by significant military involvement in operations in El Salvador, Grenada, Panama, Bosnia, and other locations. Even if war was less frequent, the consequences of being unprepared are so high that it is prudent to act as if war is likely.

6 See, for example, James A. Russell, *Innovation, Transformation, and War: Counterinsurgency Operations in Anbar and Ninewa Provinces, Iraq, 2005-2007* (Stanford, CA: Stanford University Press, 2011); David Barno and Nora Bensahel, *Adaptation Under Fire: How Militaries Change in Wartime* (New York: Oxford University Press, 2020); Murray, *Military Adaptation*; and David H. Ucko, *The New Counterinsurgency Era: Transforming the U.S. Military for Modern Wars* (Washington, DC: Georgetown University Press, 2009).

WAR	DURATION OF U.S. INVOLVEMENT (MONTHS)	TIME BETWEEN END OF PREVIOUS WAR AND START OF NEXT WAR (MONTHS)
WORLD WAR I	19	224
WORLD WAR II	45	277
KOREAN WAR	37	57
VIETNAM WAR	101	133
GULF WAR	1.4	216
AFGHANISTAN WAR	160	126
IRAQ WAR	105	0
TOTAL	363	1033
AVERAGE	67	172

TABLE 1-1. Duration of U.S. involvement in wars and time between wars⁷

Also noteworthy is the duration of these conflicts. Mistakenly, some may think that war is too short for innovation to occur. History, however, suggests otherwise. While this may be true for the shortest wars, and more limited operations like the invasion of Grenada, it is not true for most wars. In fact, the Gulf War is the lone exception on the above list, but that war also had a more limited scope and more limited objectives. The average duration of the seven major wars that the U.S. has been involved in during the 116 years is nearly 67 months (more than five and a half years). If the Gulf War is excluded, the average jumps to almost 78 months (nearly six and a half years). Even this number is negatively skewed since U.S. involvement in World War I, World War II, and the Vietnam War was shorter than the duration of each. Clearly ample time often exists for innovation in conventional wars and counterinsurgencies. Thus, in addition to preparing for war, militaries should prepare to rapidly innovate during war. Innovation is part of war, and militaries should be preparing their people for it.

⁷ The Iraq War is not included in the total duration because it would double count the number of months that the nation was at war, as there was war in Afghanistan at the same time. The Iraq War is, however, included in the average duration because not including it would negatively skew the average. Because there was no gap between the end of Operation ENDURING FREEDOM and the start of the Iraq War, I chose not to include it in the average number of months between wars. Given there is not always a clearly agreed-upon start or end to a war, I use the most widely accepted dates for each: World War I (April 6, 1917-November 11, 1918), World War II (December 7, 1941-August 14, 1945), Korean War (June 27, 1950-July 27, 1953), Vietnam War (August 7, 1964-January 27, 1973), Gulf War (January 17, 1991-February 28, 1991), Afghanistan (September 11, 2001-December 28, 2014), and Iraq War (March 20, 2003-December 15, 2011).

While it is easy to retrospectively observe there was ample time for innovation, it might not be apparent from the onset as leaders often expect a quick victory. Why bother innovating if the war will be over before an innovation can be implemented? With this mindset, any effort dedicated to innovation would only detract from the war effort. One needs to look only at the last century, however, to realize this expectation is naïve as this was illustrated once again with Russia's most recent invasion of Ukraine. If most wars last a minimum of three years and some last a decade or more, it is both reasonable and prudent to anticipate that a war will last longer than expected, and commanders should plan for innovation from the onset.

This study will demonstrate that major military innovations often take years to develop and implement. Yet the innovation process can likely be shortened if the military has innovative-facilitating processes and organizations, innovative cultures, and leaders capable of leading innovation from the onset. As Secretary of Defense Donald Rumsfeld famously remarked, "You go to war with the Army you have...not the Army you might want or wish to have at a later time."⁸ Militaries almost always fail to correctly anticipate the type of war that they will find themselves engaged in and, thus, they will be fighting the war "with what they have" and "not what they want" so they must innovate. Since innovation in war seems likely, then militaries should want to go with a military capable of rapid innovation instead of developing it later.

How often is wartime innovation required? Table 1-1 provides some insight. On average, the U.S. has fought a major war every 16 to 17 years (172 months). Thus, a career officer—one who remains in the military for at least 20 years—can expect to go to war at least once during their career no matter how unlikely that prospect may seem at the time of their commissioning.

Much like previous wars, wartime innovation during the Iraq War was instrumental to its outcome. Despite the "major combat operations" phase ending on May 1, 2003, the war lasted another eight and a

⁸ Thomas E. Ricks, "Rumsfeld Gets Earful from Troops," *The Washington Post*, December 9, 2004, accessed December 11, 2023, <https://www.washingtonpost.com/archive/politics/2004/12/09/rumsfeld-gets-earful-from-troops/ec74b055-5090-496b-a66c-145d37a79473/>.

half years. From 2003 to 2004, casualties more than tripled, from 2,427 to 8,004.⁹ By 2005, it was widely recognized that the U.S. was facing an insurgency and suffering a significant number of casualties to improvised explosive devices (IEDs). By 2006, a majority of U.S. citizens believed the United States was losing.¹⁰ In April 2007, Senator Harry Reid (D-NV) declared the war “lost.”¹¹ Despite the grim outlook, the U.S. eventually turned the tide. This reversal did not happen due to the fielding of new technologies or simply employing additional assets using the same doctrinal strategy. Instead, the change resulted from leaders like General David Petraeus and General Stanley McChrystal and the innovations they led. Those innovations helped change the outcome of the war.

While leadership directed these important innovations, the existing literature on military innovation does not systematically analyze the role of leadership throughout the innovation process. It, thus, fails to offer a generalizable understanding of how innovative leaders emerge or what they can do to make change more likely. This study aims to fill that gap by synthesizing a leadership model of military innovation using literature on leadership and military innovation and then applying that model to successful and failed innovation cases during the Iraq War. By analyzing the role of leadership at each phase of the innovation process, I produced a model that uses organizational theory to explain wartime innovation better than existing models of military innovation.

A leader plays a critical role in the success or failure of wartime innovation and the form that the innovation takes. While it is possible for minor innovations to develop within an organization without the direct involvement, approval, and knowledge of its leader, this is not possible for major innovations. Major military innovations involve new doctrine, new goals, new organizations, and/or new high-cost

9 Data comes from Defense Casualty Analysis System, “U.S. Military Casualties – Operation IRAQI FREEDOM (OIF) Casualty Summary by Month and Service,” last updated December 19, 2023, accessed December 19, 2023, <https://dcas.dmdc.osd.mil/dcas/app/conflictCasualties/oif/byMonth>.

10 Peter Baker and Jon Cohen, “Americans Say U.S. Is Losing War,” *The Washington Post*, December 13, 2006, accessed December 21, 2023, <https://www.washingtonpost.com/archive/politics/2006/12/13/americans-say-us-is-losing-war-span-classbank-headpublic-politicians-split-on-iraq-panels-ideas-span/bf0d5d14-fa85-445a-a3ce-77d0097bd9c1/>.

11 Associated Press, “Reid: Iraq War Lost, U.S. Can’t Win,” *NBC News*, April 20, 2007, accessed December 21, 2023, <https://www.nbcnews.com/id/wnba18227928>.

items, and these types of changes cannot be implemented without the deliberate decision of a senior military leader with the power and authority to make the change.

A senior military leader plays a significant role during all phases of the innovation process. During the formulation phase, the senior military leader shapes problem identification by how open their organization is to criticize existing performance and how open they are to allowing subordinates to criticize weapon systems, doctrine, or concepts they may have made a career backing. As things move from problem identification to solution development, the senior military leader can facilitate the development of innovative ideas by employing specific leader influence tactics. These tactics include providing intellectual stimulation, effectively balancing involvement with freedom, providing necessary support, selecting the projects to develop, providing output expectations and feedback, facilitating diversity, and facilitating an open and experimental culture.

During the adoption phase, the senior military leader's role is clear: they decide whether to adopt or discard the innovative idea. Often, this leader must garner the legislative or executive support required to fund or authorize the change. Successful senior military leaders understand how to gain this support from their civilian leaders.

A senior military leader's role during the implementation phase is to ensure subordinates adopt the innovation. The biggest challenge comes from subordinates who oppose the innovation. To overcome this challenge, the senior military leader must employ tactics that eliminate the information asymmetry necessary to identify whether subordinates are embracing the innovation and then reward those who are and punish those who are not. Successful leaders employ many of the following tactics: they select and empower trusted subordinates to critical positions, they make innovation a clear priority, they conduct frequent "battlefield circulation," and they gain unfiltered information from lower-level subordinates.

This book is organized as follows: in Chapter Two, I review the literature on innovation and synthesize the leadership model of military innovation. Chapters Three through Six are case studies involving innovations by the U.S. military during the Iraq War.

In Chapter Three, I discuss the innovation of counterinsurgency doctrine—both a failed and successful innovation. Initial attempts to develop and implement counterinsurgency doctrine in 2004-2005 failed because the leaders postured to adopt the doctrine lacked the required domain-specific expertise to facilitate its development, adoption, and implementation. The doctrine was only successfully implemented when General Petraeus—a senior military leader with the necessary domain-specific expertise—was able to apply the appropriate influence tactics to develop, adopt, and implement the doctrine into the Army's training and education and employ it in Iraq.

In Chapter Four, I examine the organizational innovation of the Asymmetric Warfare Group—a successful innovation. This chapter demonstrates just how difficult it is for the Army to create a new organization. It describes how General Cody overcame institutional resistance to create the new unit. He leveraged appointed officials to establish the new unit and applied the proper influence techniques to ensure bureaucrats did not stifle his initiative.

In Chapter Five, I explain how General McChrystal developed the Find, Fix, Finish, Exploit, and Analyze cycle—a combination of organizational and doctrinal innovation—and then created an interagency network that ultimately decimated al Qaeda in Iraq. It details the evolution of his task force from 2003 to 2007—one capable of ten operations a month to ten operations per night—and describes how the task force “finished” Zarqawi, the leader of al Qaeda in Iraq, and devastated the terrorist organization. Like Petraeus, McChrystal was able to apply the appropriate influence tactics required to develop, adopt, and implement the innovation.

In Chapter Six, I examine the Mine Resistant Ambush Protected vehicle procurement—a failed innovation. Despite quantifiable evidence demonstrating the vehicle's superiority in combat, the military refused to purchase the vehicle until late 2006. The first two efforts failed because the innovation champions were unable to employ an effective strategy and build the coalition required to get the decision in front of a senior military leader capable of adopting the vehicle. The third attempt succeeded because the innovation champions finally got

the relevant senior military leader—the Commandant of the Marine Corps—to adopt the innovation and then actively pursue the funding it required for implementation.

The case studies include details that paint the picture of the scope of the challenge awaiting a military leader who wants to fight for organizational change amid a war. These are not details that a senior military leader can safely ignore or overlook while playing golf; they must prioritize innovation and be actively involved if they want innovation to occur. It also reminds civilian officials that countless details, or places within the organizations they are charged to run, could stymie innovation.

In the conclusion, I summarize this study's major findings and discuss why the leadership model of military innovation explains wartime innovation—at least innovations during the Iraq War—better than existing models. Given the critical role that leadership plays in innovation, I also present some recommendations on how the U.S. military should adjust its organizational structure, training, education, promotion system, and culture to enhance wartime innovation in the future.

2

THE LEADERSHIP MODEL OF MILITARY INNOVATION

What is military innovation? How, when, and why does it occur? Is it primarily driven from the bottom up or the top down? Does it occur due to external influences, or is it primarily internally driven? Which factors are particularly important for facilitating innovation during war? How significant a role, if any, does a leader play in innovation? This chapter reviews the literature on military innovation, organizational innovation, and leadership theory to address these questions and to derive the leadership model of military innovation.

Defining Military Innovation

Defining the word *innovation* is not an easy task. One challenge is distinguishing innovation from invention, change, and adaptation. Thus, it should not come as a surprise that *innovation* consistently ranks in the top ten percent of words looked up on Merriam-Webster.com.

Distinguishing Innovation from Other Forms of Change

In their seminal work, *Organizations*, March and Simon do not define *innovation* but do provide a description: “Initiation and innovation are present when change requires the devising and evaluation of new performance programs that have not previously been a part of the organization’s repertory and cannot be introduced by a simple application of

programmed switching rules.”¹ They attempt to distinguish innovation from other forms of change and provide a fairly good description that could be turned into a definition. The crucial components they include for something to be considered an innovation are that it must be *new* and require a *deliberate decision*.

Since the publication of March and Simon’s early work, organizational scholars have yet to reach a consensus definition. There are, however, several components common to many definitions. In his study of innovation at the organizational level, Damanpour defines *innovation* as “the adoption of an idea or behavior new to the adopting organization.”² Many other definitions include this common core but with additional qualifiers. Some include the requirement for the idea to have been generated from within the innovating organization. Others include the requirement of first use or the perception of first use by the organization. Still, others include a measure of significance; thus, only major changes should be considered innovations. What is common among all these definitions is that each author is attempting to differentiate innovation from lesser forms of change.

Many organizational and military innovation scholars distinguish innovation from routine change. Giese distinguishes military innovation from military modernization, which is about “upgrading old equipment to perform old missions.” He states that technological innovations concern “advances in equipment or adapting new technologies to perform old missions,” while military innovation is “more about new roles and missions than doing old ones better. It is how things are done rather than what they are done with.”³ For example, the Army transitioning from an M60 to an M1 tank dramatically increased the tank’s lethality and survivability, but it did not necessitate a significant change in doctrine or strategy. Accordingly, it would be considered a routine change even if the actual weapon system might be considered an innovation from a technological standpoint. The development

1 James G. March and Herbert A. Simon, *Organizations* (New York: John Wiley and Sons, 1958), 174-175.

2 Fariborz Damanpour, “Organizational Complexity and Innovation: Developing and Testing Multiple Contingency Models,” *Management Science* 42, no. 5 (1996): 694, <https://www.jstor.org/stable/2634460>.

3 Jon F. Giese, “Military Innovation: Sources of Change for United States Special Operations Forces.” (Monterey, CA: Naval Postgraduate School, 1999), <https://apps.dtic.mil/sti/pdfs/ADA374276.pdf>.

of AirLand Battle doctrine—in which the M1 tank had an important role—would, however, be considered a [doctrinal] innovation.

It is also important to distinguish innovation from invention. March and Simon recognized the challenge of trying to distinguish innovation from change, stating that “not every change in behavior qualifies as [innovation].”⁴ Mohr argues that “invention implies bringing something new into being; innovation implies bringing something new into use.”⁵ Becker and Whisler describe invention as “fundamentally a creative act of the individual” while innovation is “fundamentally a co-operative group action.”⁶ Accordingly, the invention of a new weapon, weapon system, procedure, or tactic does not by itself amount to an innovation. To be an innovation, the military must figure out how to employ the new weapon or implement the new tactic into its doctrine. To illustrate, the Germans successfully implemented the doctrinal innovation of elastic defense-in-depth tactics during World War I, even though much of the idea was invented by the French. After capturing a French document depicting some of the defensive tactics, the Germans modified and implemented the tactics themselves.⁷ Likewise, a captured French document on offensive tactics had an enormous influence on offensive doctrine developed by the Germans in 1917.⁸

Farrell and Terriff distinguish innovation from adaptation and emulation. For them, innovation involves “developing new military technologies, tactics, strategies and structures.” Adaptation involves “adjusting existing military means and methods,” which may “lead to innovation when multiple adjustments over time gradually lead to the evolution of new means or methods.” And emulation involves “importing new tools and ways of war through imitation of other military organizations.”⁹

4 James G. March and Herbert A. Simon, *Organization*, 2nd ed. (Cambridge, MA: Blackwell, 1993), 195.

5 Lawrence B. Mohr, “Determinants of Innovation in Organizations,” *American Political Science Review* 63, no. 1 (1969): 111-126, <https://doi.org/10.2307/1954288>.

6 Selwyn W. Becker and Thomas L. Whisler, “The Innovative Organization: A Selective View of Current Theory and Research,” *The Journal of Business* 40, no. 4 (1967): 463, <https://www.researchgate.net/publication/24102314>.

7 Hunzeker, *Dying to Learn*, 77-82.

8 Timothy T. Lufper, “The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War,” (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1981), 11, <https://www.armyupress.army.mil/Portals/7/combat-studies-institute/csi-books/leavenworth-papers-4-the-dynamics-of-doctrine.pdf>

9 Theo Farrell and Terry Terriff, “The Sources of Military Change,” in *The Sources of Military Change: Culture, Politics, Technology*, ed. Theo Farrell and Terry Terriff (Boulder, CO: Lynne Rienner, 2002), 6.

Zisk, however, believes that innovation can result from emulation. She notes that many political scientists who have studied innovation describe a policy innovation occurring “when a new idea is adopted by an organization or a state, and followed by policy action, no matter how long the idea has been present in the world, and no matter how many other states have adopted the policy beforehand.”¹⁰ Thus, it is essential to clearly distinguish innovation from adaptation and invention, which is shown in Table 2-1.

	ADAPTATION	INVENTION	INNOVATION
DEFINITION	An adjustment to environmental conditions	A new product or idea; bringing something new into being	The introduction of something new; a new idea, method, or device; bringing something new into use
EXAMPLE	A furniture company changing its crib design in response to new laws mandating closer spacing of its bars	Telephone Television Cotton gin Automobile Concrete	Assembly line Agricultural mechanization Space flight Interstate highways Paper currency
MILITARY DEFINITION	Adjusting existing military means and methods to a change in the environment; the refinement of traditional routines; the grafting of new missions, techniques, or tactics onto the old	A new product or idea (related to warfare); bringing something new into being (related to warfare)	The adoption of a change related to the goals; tactics, strategies, or doctrine; and/or structure that is perceived as new to the organization
MILITARY EXAMPLE	Russia changing from massing artillery fires to precision fires in Ukraine due to a shortage of ammunition	GPS technology Radar Jet engine Tank Helicopter Mustard gas	AirLand Battle doctrine Carrier aviation Submarine warfare Armored warfare Airmobile warfare Stormtroop tactics

TABLE 2-1. Adaptation, invention, and innovation¹¹

10 Kimberly M. Zisk, *Engaging the Enemy: Organizational Theory and Soviet Military Innovation 1955–1991* (Princeton, NJ: Princeton University Press, 1993), 4.

11 The definition for *adaptation* comes from Merriam-Webster.com, accessed October 17, 2023. The military definition for adaptation comes from Farrell and Terriff, “The Sources of Military Change,” 6. The definition for *invention* comes from Mohr, “Determinants of Innovation in Organizations,” 112. The definition for *innovation* comes from Merriam-Webster.com, accessed October 17, 2023; and Mohr, “Determinants of Innovation in Organizations,” 112.

Even the dictionary makes it difficult to distinguish invention from innovation. One way to distinguish them is to use the example of the tank and armored warfare. The tank is an invention, whereas armored warfare is an innovation. The idea for the tank, putting a gun on an armored, tracked vehicle, occurred to many people around the same time.¹² The first prototypes were built in 1915 and first employed by the British at the Battle of Flers-Courcelette in September 1916, but it was not until the Battle of Cambrai in November 1917 that the British first employed the tank effectively as part of a combined arms team.¹³ Nonetheless, the tank saw relatively little employment for much of the war, with the British producing roughly 2,600, the French several thousand, and the Germans only a few dozen by the end of the war.¹⁴ Despite all three having similar exposure to the invention during the war, the Germans were the only ones to innovate during the interwar period and put the invention into actual use.

Williamson Murray describes how the Germans effectively created *blitzkrieg* doctrine and employed armor in a manner that fundamentally changed how war was fought. By contrast, the French viewed the tank as an armored weapon that supported the “methodological battle” and failed to develop a new doctrine to take advantage of the invention. For the French, it was simply a new weapon system that they grafted onto existing doctrine. For them, the tank was an adaptation.¹⁵ Kuo argues that the British went too far in embracing the tank, creating tank-only divisions because they believed that infantry, artillery, and cavalry would play “the part of interested spectators” and “do next to nothing.”¹⁶ The British, however, were mistaken as German combined-arms maneuver significantly outperformed British armored

12 Rosen, *Winning the Next War*, 121.

13 David Fletcher et al., *Armoured Fighting Vehicles of the World* (London: Cannon, 1970); and Craig Moore, “Combined arms warfare at Cambrai,” *History Press*, November 14, 2017, accessed November 15, 2023, <https://www.thehistorypress.co.uk/articles/combined-arms-warfare-at-cambrai/#:~:text=The%20first%20time%20tanks%20were,many%20accounts%20of%20that%20battle>.

14 H. P. Willmott, *First World War* (London: Dorling Kindersley, 2003).

15 Williamson Murray, “Armored Warfare: The British, French, and German Experiences,” in *Military Innovation in the Interwar Period*, ed. Williamson Murray and Allan R. Millett (New York: Cambridge University Press, 1996), 6–49.

16 B. H. Liddell Hart, “The Development of the ‘New Model’ Army: Suggestions on a Progressive but Gradual Mechanicalisation,” *Army Quarterly* 9, no.1 (1924), 45; and Kendrick Kuo, “Dangerous Changes: When Military Innovation Harms Combat Effectiveness,” *International Security* 47, no. 2 (2022): 68–69, https://doi.org/10.1162/isec_a_00446.

maneuver in World War II's early battles.¹⁷ The British attempted to innovate, but the doctrine they developed did not improve organizational performance vis-à-vis the Germans and, thus, would not be considered an innovation.

Defining Military Innovation

There is no widely accepted definition for “military innovation,” but a survey of the existing literature on military innovation produces two major findings: (1) many scholars fail to define *innovation*, and (2) those who do provide a definition often provide a definition for *military innovation* as something that must be distinguished from, and is significantly different than, the definition of *innovation* that is commonly used in the organizational studies literature. Often this body of literature focuses on studying only doctrinal innovations. However, an overly restrictive definition is problematic, as it implies that doctrinal innovations are the only type of innovation that matters. Also, this approach is inconsistent with the broader innovation literature that considers doctrinal innovation as only one of the many different types of innovation.

Much of the military innovation literature, including some seminal works, fails to provide a clear definition. For example, Posen provides no definition when exploring the sources of French, British, and German military doctrine between the World Wars.¹⁸ Neither does Adamsky, despite *innovation* being in the title of his book, *The Culture of Military Innovation*.¹⁹ In some respects, these scholars appear to take their cue from Supreme Court Justice Potter Stewart who, realizing that pornography is difficult to define, simply wrote “I know it when I see it,” in his concurring opinion of *Jacobellis v. Ohio*.²⁰

17 Kuo, “Dangerous Changes,” 76-80.

18 Barry R. Posen, *The Sources of Military Doctrine: France, Britain, and Germany Between the World Wars* (Ithaca, NY: Cornell University Press, 1984).

19 Dima Adamsky, *The Culture of Military Innovation: The Impact of Cultural Factors on the Revolution in Military Affairs in Russia, the US, and Israel* (Stanford, CA: Stanford University Press, 2010).

20 The quote is from Supreme Court Justice Potter Stewart in his concurring opinion in *Jacobellis v. Ohio* in 1968. Potter Stewart, *Jacobellis v. Ohio: Concurring Opinion of Justice Stewart*, June 22, 1964, Law.Cornell.edu, <http://www.law.cornell.edu/supreme->

Justice Stewart may have gotten away without a definition, and many scholars may argue that their cases are axiomatic and, therefore, need no definition, but the different and complex dynamics that constitute innovation in a broad sense and discussed in this study require a clear and comprehensive definition.

Grissom defines military innovation as “a change in operational praxis that produces a significant increase in military effectiveness.” After surveying the literature on military innovation, he develops this definition and finds that “military innovation scholars gravitate toward historical cases that share a distinct set of attributes.” For Grissom, these attributes “constitute a consensus (if tacit) definition of military innovation.” The three components that the tacit definition includes are (1) “an innovation changes the manner in which military formations function in the field,” (2) “an innovation is significant in scope and impact,” and (3) “innovation is tacitly equated with greater military effectiveness.”²¹ Kuo provides perhaps the shortest definition of military innovation: “the process of creating a new capability.”²² But even he felt the need to clarify the meaning of “new capability” as “a new institutionalized technique of organized violence intended to convert a service’s resources into success in future missions.”²³

After reviewing the literature, this study defines innovation as *a major change that improves organizational performance and is perceived as new to the organization*, with the change related to one of more of the following:

- (1) The goals of the organization.
- (2) The tactics, strategies, doctrine, or operational art.
- (3) The structure of the organization.

I selected a broad definition that is more common to the organizational literature than a narrower definition that is common to many military innovation studies. This allows me to pull from a broader base of literature. I include “major” in the definition to distinguish innovation from

[court/text/378/184](http://dx.doi.org/10.1080/01402390600901067).

21 Adam Grissom, “The Future of Military Innovation Studies,” *Journal of Strategic Studies* 29, no. 5 (2006): 907, <http://dx.doi.org/10.1080/01402390600901067>.

22 Kuo, “Dangerous Change,” 52.

23 Ibid.

lesser forms of change.

Factors That Explain Innovation

“Factors found to be important for innovation in one study are found to be considerably less important, not important at all, or even inversely important in another study.”²⁴

The quotation above is nearly 50 years old, yet it still accurately captures the state of the literature. This should not come as a complete surprise considering innovation results from a complicated process involving individuals and groups interacting with organizational characteristics and external factors to facilitate or impede innovation. Thus, these ambiguous findings can be attributed to several factors: different studies measure and classify variables differently, a quantitative study may overlook many interactions that are difficult to quantify, variables that may facilitate the development of an innovation may have the opposite effect during implementation, factors that facilitate one type of innovation (product, process, etc.) may impede a different type of innovation, and factors that encourage innovation in one sector may have no effect in another. What follows is a summary of the most cited factors that facilitate or hinder innovation. These variables are grouped into four categories, as shown in Table 2-2.

	CHARACTERISTICS OF THE INNOVATION	CHARACTERISTICS OF THE ORGANIZATION	FACTORS RELATING TO INNOVATION PROMOTION	OTHER FACTORS
VARIABLE	Cost Perceived relative advantage Communicability Complexity Type	Size Complexity Culture Slack	Promotion strategy Coalition building Civilian intervention Military maverick	Technology Uncertainty Distress Failure

TABLE 2-2. Variables that impact military innovation

24 George W. Downs Jr. and Lawrence B. Mohr, “Conceptual Issues in the Study of Innovation,” *Administrative Science Quarterly* 21, no. 4 (1976): 700, <https://doi.org/10.2307/2391725>.

Characteristics of the Innovation

Scholars have identified dozens of attributes that affect the likelihood of innovation; the most common are listed here.²⁵ Just to be clear, what is described is the effect of the specific variable on the likelihood of innovation, holding all other variables constant. For example, if two innovations are equally costly to implement, the one that is easier to explain and comprehend (better communicability) is more likely to be adopted. Or, to illustrate the reverse, if two innovations are equally easy (or difficult) to explain and understand, the least costly innovation is more likely to be adopted.

Cost. The logic is simple, high-cost innovations are less likely to be adopted.²⁶ The cost of innovation also comes into play during innovation promotion. Davis finds that a common tactic of innovation opponents is to argue that the innovation “will cost too much.”²⁷

Perceived relative advantage. Rogers defines relative advantage as “the degree to which an innovation is perceived as better than the idea it supersedes.”²⁸ This captures a number of similar variables such as “efficiency” or “cost/benefit ratio.”²⁹ For example, the Ford Motor Company made the costly transition to an assembly line because it assessed that the cost associated with the transition would be more than offset by the benefit that it would gain in future efficiency. Relative advantage, however, is difficult to know in advance and, thus, subject to debate. For military doctrine, it is often debated as to whether the new doctrine is indeed “better than the idea it supersedes.” Training and wargaming may provide some insight, but some concepts and capabilities can be truly tested only in war.

Communicability/Complexity. This refers to the ease or difficulty of explaining the innovation to others. Rogers finds that the complex-

25 For a list of 25 attributes, see Kevin P. Kearns, “Innovations in Local Government: A Sociocognitive Network Approach,” *Knowledge and Policy* 5, no. 2 (1992): 45-67, <https://doi.org/10.1007/BF02692805>.

26 Downs and Mohr, “Conceptual Issues in the Study of Innovation,” 702-3.

27 Vincent Davis, *The Politics of Innovation: Patterns in Navy Cases* (Denver: University of Denver, 1966), 57-58, <https://apps.dtic.mil/sti/tr/pdf/ADA288792.pdf>.

28 Everett M. Rogers, *Diffusion of Innovations*, 4th ed. (New York: The Free Press), 1995, 15.

29 See for example, Kearns, “Innovations in Local Government.”

ity of an innovation is negatively correlated with its adoption.³⁰ For example, it is relatively easy to grasp the concept of a video streaming service, such as Netflix, even if one lacks the technical understanding of how the Internet works. By contrast, counterinsurgency doctrine or multi-domain operations are more difficult to understand, and using buzzwords like “clear, hold, build” or phrases like “the combined arms employment of joint and Army capabilities to create and exploit relative advantage” help only to a limited extent.³¹ The perceived complexity of the innovation may also influence the development of the innovation itself. Kier argues that the French officer corps adopted a defensive doctrine during the interwar period not because they thought it superior to offensive doctrine but because they did not think that short-term conscripts could master the complexity of offensive doctrine.³²

Type of innovation. Damanpour distinguishes between administrative, technical, production, and process innovations.³³ While many military innovation scholars consider only doctrinal innovation, some consider technological innovations or innovations relating to goals, strategies, and structure.³⁴ I adopt a similar typology, classifying military innovations as technological, doctrinal, or organizational. It stands to reason that innovations of one type may be easier to adopt and implement than others. Indeed, concluding his review of 30 years of doctrinal changes in the U.S. Army, Doughty found that “intellectual changes can sometimes be more difficult to achieve than materiel changes.”³⁵

30 Rogers, *Diffusion of Innovations*; and Downs and Mohr, “Conceptual Issues in the Study of Innovation,” 701-2.

31 Department of the Army, FM 3-0, *Operations* (Washington, DC: Headquarters, Department of the Army, 2022), 1-2, https://armypubs.army.mil/epubs/DR_pubs/DR_a/ARN36290-FM_3-0-000-WEB-2.pdf.

32 Elizabeth Kier, “Culture and Military Doctrine: France between the Wars,” *International Security* 19, no. 4 (1995): 65-93, <https://doi.org/10.2307/2539120>; and Elizabeth Kier, *Imagining War: French and British Military Doctrine Between the Wars* (Princeton, NJ: Princeton University Press, 1997).

33 Damanpour, “Organizational Complexity and Innovation.”

34 See, for example, Matthew A. Evangelista, *Innovation and the Arms Race: How the United States and the Soviet Union Develop New Military Technologies* (Princeton, NJ: Princeton University Press, 1988), 51; and Farrell and Terrieff, “The Sources of Military Change,” 5.

35 Robert A. Doughty, *The Evolution of U.S. Army Tactical Doctrine, 1946-1976* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1979), 47.

Characteristics of the Organization

Some scholars examine organizational factors to explain why some organizations are more innovative than others. A literature review finds the most common factors include the organization's size, complexity, culture, and slack.

Size. Most studies find that organizational size is positively correlated with innovation, and some find that size and wealth are among the strongest predictors of innovation.³⁶ Logically, one would expect large organizations to have more diverse facilities that could aid in the development of innovation and a greater ability to absorb a costly loss associated with unsuccessful innovations.³⁷ Yet other scholars argue that small organizations are "more flexible, have a greater ability to adapt and improve, and demonstrate less difficulty accepting and implementing change."³⁸ Ultimately, the findings are inconclusive. Some studies find that size is not significant,³⁹ others find it negatively correlated,⁴⁰ and others find a positive relationship.⁴¹

Complexity. Blau considers four dimensions of complexity: spatial, occupational, hierarchical, and functional.⁴² Rogers considers the effect of centralization and finds that centralization is negatively correlated with innovativeness.⁴³ In highly centralized organizations, initiating innovation is harder because leaders at each level can stop the innovative effort before it reaches the decision-maker required for adoption. Implementation is easier, however, because once the decision-maker adopts the innovation, it is easier for them to en-

36 Rogers, *Diffusion of Innovation*; and Mohr, "Determinants of Innovation in Organizations," 112.

37 Mohr, "Determinants of Innovation in Organizations," 121-122.

38 Fariborz Damanpour, "Organizational Size and Innovation," *Organizational Studies* 13, no. 3 (1992): 377, <https://doi.org/10.1177/017084069201300304>.

39 See, for example, Michael Aiken et al., "Organizational Structure, Work Process, and Proposal Making in Administrative Bureaucracies," *The Academy of Management Journal* 23, no. 4 (1980): 631-652, <https://doi.org/10.2307/255553>.

40 See, for example, Jerald Hage, *Theories of Organizations* (New York: Wiley, 1980).

41 Damanpour, "Organizational Size and Innovation," 392-393; and Mohr, "Determinants of Innovation in Organizations," 122.

42 Peter M. Blau, "A Formal Theory of Differentiation in Organizations," *American Sociological Review* 35, no. 2 (1970): 201, <https://doi.org/10.2307/2093199>.

43 Rogers, *Diffusion of Innovations*, 379.

sure its implementation.⁴⁴ By contrast, decentralization facilitates initiation but can impede implementation.⁴⁵ In terms of functional complexity, many studies find that organizations with a high diversity of functional expertise among its people are more likely to innovate. Having a greater variety of specialists increases the diversity and depth of knowledge within the organization, which increases the development of new ideas and their cross-fertilization.⁴⁶ While there is often a strong correlation between size and complexity, it is not always the case. For example, the U.S. Postal Service is very large, yet relatively flat and lacks complexity. Lang argues that “modern military establishments qualify as complex organizations irrespective of size” due to their diverse populations that include infantry, armor, engineers, aviation, logistics, intelligence, and many other specialties.⁴⁷ Ultimately, most studies find organizational complexity positively correlated with innovation.⁴⁸

Culture. Both the organizational and military innovation literature conclude that culture is an important factor. Schein defines culture as “the set of shared, taken-for-granted implicit assumptions that a group holds and that determines how it perceives, thinks about, and reacts to its various environments.”⁴⁹ He argues that most researchers underestimate the importance of culture in how organizations function and that organizations often display “learning disabilities” or “defensive routines” that get in the way of learning.⁵⁰ Thompson finds that cultures that are characterized by the wide diffusion of ideas are more likely to

44 See, for example, Jerald Hage and Michael Aiken, “Program Change and Organizational Properties a Comparative Analysis,” *The American Journal of Sociology* 72, no. 5 (1967): 503-519, <https://www.jstor.org/stable/2775676>; George W. Downs Jr., *Bureaucracy, Innovation, and Public Policy* (Lexington, MA: Lexington Books, 1976), 89; and Rogers, *Diffusion of Innovations*, 379.

45 See, for example, Harvey M. Sapolsky, “Organizational Structure and Innovation,” *Journal of Business* 40, no. 4 (1967): 497-510, <https://www.jstor.org/stable/2351631>; and James Q. Wilson, “Innovation in Organization: Notes Toward a Theory,” in *Approaches to Organizational Design*, ed. James D. Thompson (Pittsburgh: University of Pittsburgh Press, 1966), 193-218.

46 Michael Aiken and Jerald Hage, “The Organic Organization and Innovation,” *Sociology* 5, no. 1 (1971): 63-82, <https://doi.org/10.1177/003803857100500105>; Rogers, *Diffusion of Innovations*, 379; and Damanpour, “Organizational Complexity and Innovation,” 694-695.

47 Kurt Lang, “Military Organizations,” in *Handbook on Organizations*, ed. James G. March (Chicago: Rand McNally, 1965), 838.

48 See, for example, Mohr, “Determinants of Innovation in Organizations,” 63; Damanpour, “Organizational Complexity,” 693-714; and Rogers, *Diffusion of Innovations*, 380.

49 Edgar H. Schein, *Organizational Culture and Leadership*, 2nd ed. (San Francisco: Jossey-Bass, 1992); and Edgar H. Schein, “Culture: The Missing Concept in Organizational Studies,” *Administrative Science Quarterly* 41, no. 2, (1996): 229-240, <https://doi.org/10.2307/2393715>.

50 Schein, “Culture,” 229-240.

innovate.⁵¹ Tushman and O'Reilly find that creative cultures have two main ingredients: (1) support for risk taking and change and (2) tolerance for mistakes.⁵² In his review of military innovation, Roxborough finds "open" cultures that foster debate are necessary for innovation.⁵³ Many military innovation scholars find culture to play a critical role in successful innovation and the form that it takes.⁵⁴ In fact, it may be the most commonly cited and discussed variable by military innovation scholars. When it comes to culture, Murray believes "it may be the most important enabler of military innovation."⁵⁵ Barno and Bensahel "believe that culture is an integral element of [doctrine, technology, and leadership] rather than a separate component with independent explanatory power."⁵⁶ Several scholars argue that the U.S. military is technologically dependent and firepower-focused, and this culture shapes the form innovation takes.⁵⁷

Slack. Most scholars find that organizational slack—excess resources, and in particular wealth—positively correlated with innovation.⁵⁸ Cyert and March hypothesize that success produces excess resources which the firm can decide to use in various ways, and one such

51 Victor A. Thompson, "Bureaucracy and Innovation," *Administrative Science Quarterly* 10, no. 1 (1965): 11, <https://doi.org/10.2307/2391646>.

52 Michael L. Tushman and Charles A. O'Reilly III, *Winning Through Innovation* (Boston: Harvard Business School Press, 1997), 113–115.

53 Ian Roxborough, "Organizational Innovation: Lessons from Military Organizations," *Sociological Forum* 15, no. 2 (2000): 372, <https://www.jstor.org/stable/684822>.

54 See, for example, Farrell and Terriiff, "The Sources of Military Change;" Kier, *Imagining War*; Michael J. Meese, "Institutionalizing Maneuver Warfare: The Process of Organizational Change," in *Maneuver Warfare: An Anthology*, ed. Richard D. Hooker, Jr. (Novato, CA: Presidio, 1993) 202–203; Adamsky, *The Culture of Military Innovation*; Thomas G. Mahnken, *Technology and the American Way of War Since 1945* (New York: Columbia University Press, 2010); Jacqueline Newmyer, "The Revolution in Military Affairs with Chinese Characteristics," *Journal of Strategic Studies* 33, no. 4 (2010): 483–504, <https://doi.org/10.1080/01402390.2010.489706>; Jeannie L. Johnson, *The Marines, Counterinsurgency, and Strategic Culture: Lessons Learned and Lost in America's Wars* (Washington, DC: Georgetown University Press, 2018), <https://www.jstor.org/stable/j.ctvvn6z>; and Austin Long, *The Souls of Armies: Counterinsurgency Doctrine and Military Culture in the US and UK* (Ithaca, NY: Cornell University Press, 2016).

55 Williamson Murray, "Thinking About Innovation," *Naval War College Review* 54, no. 2 (2001): 118–129, <https://digital-commons.usnwc.edu/nwc-review/vol54/iss2/11>.

56 Barno and Bensahel, *Adaptation Under Fire*, 28.

57 See, for example, Russell F. Weigley, *The American Way of War: A History of United States Military Strategy and Policy* (New York: Macmillan, 1973); Jeffrey Record, "The American Way of War: Cultural Barriers to Successful Counterinsurgency," *Policy Analysis* No. 577 (Washington, DC: CATO Institute, 2006); Colin S. Gray, "The American Way of War: Critique and Implications," in *Rethinking the Principles of War*, ed. Anthony D. McIvor (Annapolis, MD: Naval Institute Press, 2005), 13–40; and Thomas G. Mahnken, "The American Way of War in the Twenty-First Century," in *Democracies and Small Wars*, ed. Efraim Inbar (Portland, OR: Frank Cass, 2003), 71–81.

58 See, for example, Thompson, "Bureaucracy and Innovation;" Mohr, "Determinants of Innovation in Organizations;" and Rogers, *Diffusion of Innovations*.

way is for research and development.⁵⁹ Yet, there are plenty of examples of Fortune 500 companies like Eastman Kodak and Blockbuster going bankrupt despite having significant slack before their demise. Although slack may encourage innovation, Roxborough's survey on military innovation finds that "resource constraints are seldom a serious obstacle" to innovation.⁶⁰ Thus, even if slack may facilitate innovation, a lack of slack may not be a significant obstacle.

Factors Relating to Innovation Promotion

Scholars have identified numerous factors that can facilitate or impede the adoption and implementation of the innovation after the innovative idea has been developed; the more common ones are discussed below.

Promotion strategy and *coalition building*. Scott argues that the leaders of innovative efforts must expressly take strategy into account.⁶¹ Hargadon and Douglas argue the strategy that entrepreneurs select is critical to innovation development, stating "entrepreneurs must locate their ideas within the set of existing understandings," adding that "innovations that distinguish themselves too much from existing institutions are susceptible to blind spots in the public's comprehension and acceptance."⁶² Thus, innovators must select a strategy to promote their innovation and the strategy they select has a significant effect on its ultimate success. Strategy has two important components: (1) building a pro-innovation coalition, and (2) selling the innovative idea. Davis stresses the importance of building a horizontal and vertical coalition to get the support of top management, while Meese and Rosen describe innovation as an ideological struggle.⁶³ Davis also stresses the importance of how the pro-innovation

59 Richard M. Cyert and James G. March, *A Behavioral Theory of the Firm*, 2nd ed. (Malden, MA: Blackwell, 1992), 189.

60 Roxborough, "Organizational Innovation," 372.

61 Randall K. Scott, "Creative Employees: A Challenge to Managers," *Journal of Creative Behavior* 29, no. 1 (1995): 64-71, <https://doi.org/10.1002/j.2162-6057.1995.tb01424.x>.

62 Andrew B. Hargadon and J. Yellowlees Douglas, "When Innovations Meet Institutions: Edison and the Design of the Electric Light," *Administrative Science Quarterly* 46, no. 3 (2001): 476 and 493, <https://doi.org/10.2307/3094872>.

63 Davis, *The Politics of Innovation*, 51-58; Meese, "Institutionalizing Maneuver Warfare," 201-203; and Rosen, *Winning the Next War*.

alliance must sell its innovation: it deliberately avoids trying to couch the idea as something too bold and completely new and instead tries to sell the innovation as a better way to perform a well-established task or mission.⁶⁴ Jensen argues that change in military organizations requires “advocacy networks” to champion new concepts developed by “incubators.”⁶⁵ Schon goes so far to say that “the new idea either finds a champion [a senior person within the organization who embraces it] or dies.”⁶⁶ Several studies show that innovations are unlikely to succeed without the support of top management.⁶⁷ Yet, according to Sharma, support is not easily obtained due to the innovation’s cost and the high chance of failure.⁶⁸

Civilian intervention and the *military maverick*. These variables are relevant in democratic societies where the military is subordinate to civilian policymakers. Lang and Posen argue that civilian intervention is necessary for military innovation.⁶⁹ Lang contends that militaries are resistant to change due to the strategic uncertainty that results from change. They resist scrapping old ideas until the new ones have received a complete test. Thus, military innovation must be promoted by civilians who force a reluctant military to change.⁷⁰ Posen agrees but finds that civilian leaders lack the military expertise to develop innovation on their own and their influence is contingent on finding a maverick within the military who is promoting an innovation they can throw their weight behind.⁷¹ Rosen disagrees, instead arguing that civilian intervention “is only effective to the extent that it can support or protect” these officers.⁷² Meese agrees with Rosen but takes it a step further by stating that civilian leadership can stop innovation, but it is much tougher for civilian leaders to promote innovation.⁷³ In a similar vein Millett argues that

64 Davis, *The Politics of Innovation*, 56-57.

65 Benjamin M. Jensen, *Forging the Sword: Doctrinal Change in the U.S. Army* (Stanford, CA: Stanford University Press, 2016).

66 Donald A. Schon, “Champions for Radical New Inventions,” *Harvard Business Review* 41, no. 2 (1963): 77-86.

67 See, for example, Mariann Jelinek and Claudia B. Schoonhoven, *The Innovation Marathon: Lessons from High Technology Firms* (Oxford, UK: Blackwell, 1990).

68 Anurag Sharma, “Central Dilemmas of Managing Innovation in Large Firms,” *California Management Review* 41, no. 3 (1999): 146-164, <https://doi.org/10.2307/41166001>.

69 Lang, “Military Organizations,” 856-858; and Posen, *The Sources of Military Doctrine*, 54-59.

70 Lang, “Military Organizations,” 856-858.

71 Posen, *The Sources of Military Doctrine*, 57.

72 Rosen, *Winning the Next War*, 8-22.

73 Meese, “Institutionalizing Maneuver Warfare,” 204-205.

innovation is usually expensive that innovation cannot prosper without the support and patronage of civilian political leadership.⁷⁴

Other Factors

This final group of variables includes factors external to the innovation, the organization, or the promotion pathway.

Technology. There is an entire literature focused on modern technology's role in a high-tech revolution in military affairs in the 1990s and early 2000s. Its proponents argue that the superior technology of stand-off weapons and information dominance—near complete information of what the enemy and friendly forces are doing—represented a revolution in military affairs, and this change was primarily technology-driven.⁷⁵ While the wars in Afghanistan and Iraq largely debunked the claim that this did indeed represent a revolution in military affairs, the advancements showed the interplay between technology and innovation.⁷⁶ It demonstrated that new technology might facilitate innovation, but it is rarely possible for technology to be the sole source of innovation since people within an organization must figure out how to put technology to use. Barno and Bensahel argue that technology is one of the three most critical components of military adaptability.⁷⁷ Imershein finds that “change does not result from technology itself, but depends upon new technical knowledge which forms the core of a reorganized knowledge of organizational operations.”⁷⁸ Change results from the actions

74 Allan R. Millett, “Patterns of Military Innovation in the Interwar Period,” in *Military Innovation in the Interwar Period*, ed. Williamson Murray and Allan R. Millett (New York: Cambridge University Press, 1996), 359-360.

75 See, for example, Eliot A. Cohen, “A Revolution in Warfare,” *Foreign Affairs* 75, no. 2 (1996): 37-54, <https://doi.org/10.2307/20047487>; Andrew F. Krepinevich Jr., *The Military-Technical Revolution: A Preliminary Assessment* (Washington, DC: Center for Strategic and Budgetary Assessments, 2002), <https://csbaonline.org/uploads/documents/2002.10.02-Military-Technical-Revolution.pdf>; and Michael G. Vickers and Robert C. Martinage, *The Revolution in War: Thinking Smarter About Defense* (Washington, DC: Center for Strategic and Budgetary Assessments, 2004), <https://csbaonline.org/research/publications/the-revolution-in-war/publication/1>.

76 Christopher M. Schnaubelt, “Whither the RMA?” *Parameters* 37, no. 3 (2007): 95-107, <https://press.armywarcollege.edu/parameters/vol37/iss3/24>.

77 Barno and Bensahel, *Adaptation Under Fire*, 22.

78 Allen W. Imershein, “Organizational Change as a Paradigm Shift,” *Sociological Quarterly* 18, no. 1 (1977): 35, <https://www.jstor.org/stable/4105562>.

of organizational members who employ new technical knowledge.⁷⁹ Meese argues that technology does not drive doctrinal innovation and “military history is replete with volumes that document the advance of technology without regard to doctrine.”⁸⁰ Posen finds that new technology is rarely by itself a catalyst unless the military has direct experience with the new technology in combat or experience through a client state’s combat experience.⁸¹ In some cases, the causal relationship is reversed, and it is a new doctrine that drives technological innovation.⁸²

Environmental uncertainty. There is general agreement that rapid environmental changes stimulate innovation due to the uncertainty that it creates for decision-makers.⁸³ Child finds that under conditions of high uncertainty, some organizations “create specialized staff positions and units to secure and evaluate relevant information” which facilitates innovation.⁸⁴ Zisk argues the Soviets produced doctrinal innovation in response to changes in the U.S. and NATO doctrines of Flexible Response, the Schlesinger Doctrine, and AirLand Battle.⁸⁵ Kier, however, believes that military doctrine “is rarely a calculated response to the external environment,” and internal factors explain innovation more than external ones.⁸⁶

Distress. This variable refers to how successful an organization perceives itself. An organization is distressed when it views itself as being unsuccessful or failing. When an organization is in a state of distress, it may be willing to take more chances since its survivability may depend on it. Cyert and March argue that failure induces searches, and searches often result in solutions. Thus, unsuccessful firms should be more likely to innovate than successful ones.⁸⁷ Yet they readily acknowledge that the studies do not always bear this out.⁸⁸ Knight finds that distress

79 Ibid.

80 Meese, “Institutionalizing Maneuver Warfare,” 205.

81 Posen, *The Sources of Military Doctrine*, 55-59.

82 Meese, “Institutionalizing Maneuver Warfare,” 193-211.

83 See, for example, Mohr, “Determinants of Innovation in Organizations,” 63; Downs, *Bureaucracy, Innovation, and Public Policy*, chapter 2; and Gerald Zaltman et al., *Innovations and Organizations* (New York: Wiley, 1973).

84 John Child, “Organizational Design and Performance: Contingency Theory and Beyond,” *Organization and Administrative Sciences* 8, no. 2 (1977): 169-183.

85 Zisk, *Engaging the Enemy*.

86 Kier, “Culture and Military Doctrine,” 66.

87 Cyert and March, *A Behavioral Theory of the Firm*, 188.

88 Edwin Mansfield, “Technical Change and the Rate of Imitation,” *Econometrica* 29, no. 4 (1961): 741-766, <https://doi.org/10.2307/2282611>.

changes are characterized by cost-reduction projects, firing the president, reshuffling people, and minor changes in the product or production process as opposed to major innovations since the distressed organization cannot afford the risk and lacks the slack to implement new processes or develop new products, which are characteristic of slack innovations.⁸⁹ Knight finds that firms become more conservative and less innovative as they move toward failure.⁹⁰ Yet success often impedes innovation and can lead to what Lou Gerstner, a former CEO at IBM, calls the “winner’s curse” when successful companies fail to innovate because they face no performance gap. Companies like RCA and Xerox that once led their sector are now either nonexistent or hold a significantly smaller market share because they failed to innovate.⁹¹ In war, a military is distressed if it views the war going poorly and, thus, may innovate to find a solution to a recognized performance gap.

Military defeat. Posen argues that military organizations innovate after a defeat because it challenges the organization’s basic existence.⁹² While logically sound, a cursory look at history shows that this is not always the case.⁹³ Rosen argues that history is full of examples of armies and navies that were defeated in war and went on to being defeated in the next one because they failed to innovate.⁹⁴ In his study of the Vietnam War, Krepinevich concludes that “the Army made little effort to preserve the learning that had occurred during the war; rather, it expunged the experience from the service’s consciousness.”⁹⁵ Thus, the U.S. Army lacked effective counterinsurgency doctrine at the start of the Iraq War. Likewise, Bushnell demonstrates the Russian army was not very innovative after its defeat in the Russo-Japanese war.⁹⁶ Rosen demonstrates that militaries can also innovate

[org/10.2307/1911817](https://doi.org/10.2307/1911817).

89 Kenneth E. Knight, “A Descriptive Model of the Intra-Firm Innovation Process,” *Journal of Business* 40, no. 4 (1967): 484-485, <https://www.jstor.org/stable/2351630>.

90 Ibid., 485.

91 Tushman and O’Reilly, *Winning through Innovation*, 18 and 219-220.

92 Posen, *The Sources of Military Doctrine*, 47.

93 Ibid., 57-59.

94 Rosen, *Winning the Next War*, 8-9; and Meese, “Institutionalizing Maneuver Warfare,” 203-204.

95 Krepinevich, *The Army and Vietnam*.

96 John Bushnell, “The Tsarist Army after the Russo-Japanese War: The View from the Field,” in *Proceedings of the 1982 International Military History Symposium*, ed. Charles R. Shrader (Carlisle Barracks, PA: U.S. Army War College, 1982), 77-90.

after victories as the United States did with helicopter warfare, carrier aviation, and amphibious assaults.⁹⁷ Thus, it appears that defeat in a previous war has little impact on innovation.

The Role of Leadership in Innovation

While the previous section discussed different variables, this section focuses on the impact of a single variable: leadership. Throughout history, great victories and terrible defeats are attributed to military leaders such as Napoleon Bonaparte, George Washington, Robert E. Lee, Ulysses S. Grant, Dwight D. Eisenhower, George S. Patton, Erwin Rommel, and George Custer. Military leaders become household names because of the credit and/or blame which is attributed to them. Historians routinely demonstrate how a decision from a particular general determined the outcome of major battles. Thus, it is widely accepted that leadership can make a significant difference in battle. The role, however, that a leader plays in military innovation is less understood. Barno and Bensahel argue that leadership is an important factor for military change, but few other military innovation scholars consider the role of leadership.⁹⁸

There has been some debate in the business and organizational literature about the role of the leader in organizational performance. The two primary perspectives are the individualist and contextualist views. The individualist view argues that leaders have a significant and possibly crucial impact on the organizations they head.⁹⁹ Several studies support this view and show that innovation is unlikely to succeed without top management support.¹⁰⁰ By contrast, contextualists argue that leadership differences have little or no impact on organizational performance. Leaders are constrained by other situational

97 Rosen, *Winning the Next War*, 9.

98 Barno and Bensahel, *Adaptation Under Fire*, 28.

99 Alan B. Thomas, "Does Leadership Make a Difference to Organizational Performance?" *Administrative Science Quarterly* 33, no. 3 (1988): 388-389, <https://doi.org/10.2307/2392715>.

100 Deborah Dougherty and Cynthia Hardy, "Sustained Product Innovation in Large, Mature Organizations," *The Academy of Management Journal* 39, no. 5 (1996): 1120-1153, <https://www.jstor.org/stable/2569994>; and Jelinek and Schoonhoven, *The Innovation Marathon*.

factors (some of those discussed earlier), and these factors determine organizational performance.¹⁰¹ An individualist would agree with military historians and attribute battlefield results to the actions and decisions of generals. By contrast, a contextualist would argue that the Confederate successes in the early years of the Civil War cannot be attributed to Robert E. Lee. Any number of generals would have had similar success. Instead, other factors—such as geography, training, etc.—determined the early Confederate successes. Ultimately, a vast majority of studies show that leadership can affect organizational performance.¹⁰² Thus, it is useful to determine when leadership matters most and how it affects the organization, particularly when it comes to innovation.

According to the substitutes for leadership theory, different situational factors can enhance, neutralize, or substitute for leader behaviors.¹⁰³ Substitutes are variables that make leadership impossible or unnecessary for subordinates and reduce the extent to which subordinates rely on their leaders.¹⁰⁴ For example, leadership has little role to play in tasks that are unambiguous and routine, tasks that provide their own feedback, and tasks that are intrinsically satisfying.¹⁰⁵ Likewise, the leader's role is muted in cohesive work groups—because the groups have less of a need for a leader—and in self-managed work teams where employees rely on one another, not on their leader.¹⁰⁶

Neutralizers are variables that make it impossible for leaders to influence outcomes. Neutralizers reduce, block, or cancel the leadership-outcome relationship.¹⁰⁷ Leaders have little ability to influence out-

101 Thomas, "Does Leadership Make a Difference?" 388-389.

102 Mumford et al., "Leading Creative People Orchestrating Expertise and Relationships," *Leadership Quarterly* 13, no. 6 (2002): 705-712, [https://doi.org/10.1016/S1048-9843\(02\)00158-3](https://doi.org/10.1016/S1048-9843(02)00158-3).

103 Steven Kerr and John M. Jermier, "Substitutes for Leadership: Their Meaning and Measurement," *Organizational Behavior and Human Performance* 22, no. 3 (1978): 375-403, [https://doi.org/10.1016/0030-5073\(78\)90023-5](https://doi.org/10.1016/0030-5073(78)90023-5).

104 Chester A. Schriesheim, "Substitutes-for-Leadership Theory: Development and Basic Concepts," *Leadership Quarterly* 8, no. 2 (1997): 105, https://www.academia.edu/47979780/Substitutes_for_leadership_theory_Development_and_basic_concepts.

105 Deanne N. Den Hartog and Paul L. Koopman, "Leadership in Organizations," in *Handbook of Industrial, Work and Organizational Psychology, Volume 2: Organizational Psychology*, ed. Neil Anderson et al. (Thousand Oaks, CA: Sage, 2002), 166-187; and Kerr and Jermier, "Substitutes for Leadership," 375-403.

106 Den Hartog and Koopman, "Leadership in Organizations," 166-187; and Jennifer R. Villa et al., "Problems with Detecting Moderators in Leadership Research Using Moderated Multiple Regression," *Leadership Quarterly* 14, no. 1 (2003): 3-23, [https://doi.org/10.1016/S1048-9843\(02\)00184-4](https://doi.org/10.1016/S1048-9843(02)00184-4).

107 Chester A. Schriesheim, "Substitutes-for-Leadership Theory," 105.

comes or performance when subordinates are indifferent to rewards, and in organizations where the decision to reward subordinates does not rest with the leader.¹⁰⁸

Enhancers are variables that augment or strengthen the leadership-outcome relationship. The leader can have a significant impact on performance when the organization is composed of experienced workers who can translate even ambiguous guidance into results when the task is nonroutine, when the organization gives the leader the ability to reward subordinates, and when the organization has group norms that encourage cooperation with leaders.¹⁰⁹ Thus, the substitutes for leadership theory offer insight into when leadership can influence innovation.

Before delving into the traits a leader should possess to facilitate innovation, it is first necessary to understand the innovator the leader wishes to influence. Mumford et al. note that while creativity is often associated with artists or scientists, creative work occurs in advertising, engineering, management, finance, the military, and many other professions.¹¹⁰ Creative thinking is required for complex, ill-defined problems in which the solution involves the generation of a new idea.¹¹¹ This is often the situation that military professionals face.

Innovators are unique in how they approach a problem and develop a solution. Most innovators are creative individuals who possess many of the following characteristics: they engage in high-risk activity, are often erratic and unpredictable, are attached to their work, are receptive to all kinds of ideas, rely on free exploration, tend to be nonconformists who question authority and the existing solution, are more cosmopolitan, possess greater intelligence, have a more favorable attitude to change, are better able to cope with uncertainty and risk, and have a more positive professional orientation.¹¹² In short, they dif-

108 Kerr and Jermier, "Substitutes for Leadership," 375-403.

109 Jon P. Howell et al., "Moderator Variables in Leadership Research," *Academy of Management Review* 11, no. 1 (1986): 88-102, <https://doi.org/10.2307/258333>; Kerr and Jermier, "Substitutes for Leadership," 375-403; and Den Hartog and Koopman, "Leadership in Organizations," 166-187.

110 Michael D. Mumford et al., "Thinking Creatively at Work: Organization Influences on Creative Problem Solving," *Journal of Creative Behavior* 31, no. 1 (1997): 7-17, <https://doi.org/10.1002/j.2162-6057.1997.tb00777.x>.

111 Mumford et al., "Leading Creative People," 707-708.

112 Knight, "A Descriptive Model," 481; Thompson, "Bureaucracy and Innovation," 11; Mohr, "Determinants of Innovation in Organizations," 113; and Rogers, *Diffusion of Innovations*.

fer in what they see as the problem and how they conduct their search for a solution.¹¹³ An individual's creativity is also shaped by their experiences and expertise, which usually develop gradually.¹¹⁴

Mumford et al. find that leading creative efforts differs from leading in other domains in three distinct ways. First, the work is fundamentally different. The task is often novel and ill-defined; thus, the leader cannot rely on predefined structures and instead must induce structure and provide direction for work with no inherent direction. Second, the leader must rely on different ways to influence. Often, the subordinates have greater autonomy and are intrinsically motivated that the leader cannot rely on a traditional position of power to direct work. In fact, such a traditional approach may have the opposite effect. Third, there is the inherent conflict between the organization and innovation. Innovation is expensive and risky; thus, the leader must balance the resources spent on innovation with the demand of the organization to produce results.¹¹⁵

Yet, before turning to leadership, it is essential to examine the leaders themselves. Studies have found that the two most important traits for the leaders of innovative efforts are (1) domain-specific expertise and (2) creative problem-solving skills. Together, they provide the ability and credibility needed to influence and provide structure to ill-defined tasks.¹¹⁶ Thamhain and Gemmill show that given the autonomy, achievement motivation, and work focus of creative people, the most powerful form of influence for a leader is their expertise.¹¹⁷ Basadur, Runco, and Vega find that people must possess creative problem-solving skills to effectively evaluate creative ideas.¹¹⁸ While not as crucial as domain-specific expertise and creative problem-solving skills, other traits do have an impact. Mumford et al. find that leaders also need to have planning skills to give structure,

113 Knight, "A Descriptive Model," 481.

114 Teresa M. Amabile, "How to Kill Creativity," *Harvard Business Review* 76, no. 5 (1998): 77-87, <https://hbr.org/1998/09/how-to-kill-creativity>; and Anders K. Ericsson and Neil Charness, "Expert Performance: Its Structure and Acquisition," *American Psychologist* 49, no. 8 (1994): 725-747, <https://doi.org/10.1037/0003-066X.49.8.725>.

115 Mumford et al., "Leading Creative People," 711-712.

116 Ibid., 712-713.

117 Hans J. Thamhain and Gary R. Gemmill, "Influence Styles of Project Managers: Some Project Performance Correlates," *Academy of Management Journal* 17, no. 2 (1974): 216-224, <https://doi.org/10.2307/254975>.

118 Min Basadur et al., "Understanding how creative thinking skills, attitudes and behaviors work together," *Journal of Creative Behavior* 34, no. 2 (2000): 77-100, <https://doi.org/10.1002/j.2162-6057.2000.tb01203.x>.

timing, and objectives to the project; social skills to address the needs of different constituencies; communication skills to effectively communicate the value of the innovation as it relates to the organization's goals; and persuasive skills to "sell" the new idea and build support.¹¹⁹ Rogers also finds that the leader's attitude toward change is positively correlated with innovation.¹²⁰

Other studies have shown that the personality trait of openness is most relevant to innovation. Openness is defined as "the recurrent need to enlarge and examine experience."¹²¹ Individuals high in openness are more creative, more likely to hold unconventional beliefs, able to search for relevant and conflicting perspectives, able to work with symbols and abstractions, and generally more receptive to change.¹²² These leader traits and skills are shown in Table 2-3.

LEADER TRAITS AND SKILLS
Openness
Domain-specific expertise
Creative problem-solving skills
Planning skills
Social skills
Communication skills
Persuasive skills

TABLE 2-3. Traits and skills for leaders of innovative efforts

In addition to these leadership traits, Mumford et al. find that the influence tactics that leaders adopt to manage these innovative efforts also matter. Even in cases where the leader develops the innovative idea, the leader often requires a team to develop the idea into a true innovation. Therefore, these influence tactics apply to facilitating innovation conceived at any level. They find that leading creative

119 Mumford et al., "Leading Creative People," 716-719.
120 Rogers, *Diffusion of Innovations*, 380.
121 Robert R. McCrae and Paul T. Costa Jr., "Conceptions and Correlates of Openness to Experience," in *Handbook of Personality Psychology*, ed. Robert Horgan et al. (New York: Academic Press, 1997), 826.
122 Gerrass and Wong, "Changing Minds in the Army," 8.

efforts calls for an integrative style that permits the leader to orchestrate expertise, people, and relationships in a way that brings new ideas into being. They find seven areas that are particularly important for leading creative individuals and projects, shown in Table 2-4 below.¹²³

LEADER INFLUENCE TACTICS
Selecting and prioritizing the right projects
Building a collaborative team
Providing output expectation and feedback
Providing intellectual stimulation
Providing ideational, work, and social support
Balancing freedom and oversight
Engendering an open and experimental culture

TABLE 2-4. Influence tactics for leading creative work

Project selection is one of the earliest influencers of innovation. The projects a leader selects and prioritizes provide early signals to the organization about the value of innovation.¹²⁴ The leader's choice of projects affects both the likelihood of innovation and the form it takes.

The second influence tactic relates to the innovative team's composition. Shanthamani argues that a leader's challenge is not one of motivation but of finding a way to encourage the involvement of creative people in the task at hand.¹²⁵ Thus, how a leader assigns and manages their people and their ability to bring in people outside their control contributes to innovation. Several studies also demonstrate that a diverse team facilitates innovation because many problems are highly complex and require different types of expertise—expertise that is beyond the scope of a single individual. As a result, Abra finds that effective innovation often requires collaborative efforts of differing composition, duration, and intensity.¹²⁶ When collaboration is required, leadership plays an

123 Mumford et al., "Leading Creative People," 719-725.

124 Ibid., 727-728.

125 V. S. Shanthamani, "Job Involvement and Occupational Motivation of R&D Personnel," *Indian Journal of Industrial Relations* 18, no. 1 (1982): 121-131, <https://www.jstor.org/stable/27768709>.

126 Jock Abra, "Collaboration in Creative Work: An Initiative for Investigation," *Creativity Research Journal* 7, no. 1 (1994): 1-20, <https://doi.org/10.1080/10400419409534505>.

increasingly important role in putting the team together.

The third influence tactic relates to output expectations and feedback.¹²⁷ Cardinal discovered that the presence of specific goals is negatively correlated with innovation; conversely, broader output expectations are positively correlated.¹²⁸ Eisenberger and Cameron found that combining expectations with rewards can contribute to creativity.¹²⁹ Amabile observed that rewards which capitalize on both external motives—such as pay and bonuses—and intrinsic motives—such as time to pursue new ventures, additional space or equipment, and professional recognition—are particularly effective.¹³⁰

Studies also demonstrate the importance of the leader in encouraging idea generation, participating in the idea generation efforts, and providing intellectual stimulation. A leader can impact idea generation by how they define the problem, the parameters they place on the solution, and the time frame they allow for discussion. Also important is encouraging and facilitating a search for creative solutions without prematurely shooting down creative ideas.¹³¹ Studies also find that leaders should provide feedback, but they should wait until the early developmental work is complete.¹³²

The fifth area of influence is support. Mumford et al. find that leaders must provide three types of support: ideational, work, and social.¹³³ Andrews and Gordon discovered that early, negative feedback inhibits creativity. Thus, a leader's action to protect the early efforts can have a significant impact on innovation.¹³⁴ Studies also find that leaders should shelter innovative ideas, serve as advocates of new ideas, and recognize and reward subordinates for producing new ideas.¹³⁵

The sixth way that leaders can influence is to balance freedom and

127 Ibid., 725.

128 Laura B. Cardinal, "Technological Innovation in the Pharmaceutical Industry," *Organizational Science* 12, no. 1 (2001): 19-36, <https://www.jstor.org/stable/2640394>.

129 Robert Eisenberger and Judy Cameron, "Detrimental Effects of Reward: Reality or Myth?" *American Psychologist* 51, no. 11 (1996): 1153-66, <https://doi.org/10.1037/0003-066X.51.11.1153>.

130 Teresa M. Amabile, "Entrepreneurial Creativity through Motivational Synergy," *Journal of Creative Behavior* 31, no. 1 (1997): 18-26, <https://doi.org/10.1002/j.2162-6057.1997.tb00778.x>.

131 Mumford et al., "Leading Creative People," 719-721.

132 Ibid., 723.

133 Ibid.

134 Frank M. Andrews and Gerald Gordon, "Social and Organizational Factors Affecting Innovation Research," *Proceedings for the American Psychological Association* 78 (1970): 570-589.

135 Mumford et al., "Leading Creative People," 723.

control. Several studies demonstrate that there is a curvilinear relationship between control and innovation. Innovation peaks with a moderate level of freedom and control and works best when the leader is involved and familiar with the work. This allows the leader to provide timely guidance and support. If control is too tight, it decreases motivation due to a loss of autonomy. Likewise, if it is too loose, the autonomous group is deprived of valued inputs from the leader. This creates an isolation effect.¹³⁶

The final influence tactic relates to culture. Mumford et al. find a consistent set of traits for innovative cultures: risk-taking, freedom, work challenge, openness, trust, support, intellectual orientation, intrinsic involvement, and experimentation.¹³⁷ Culture is not static, but it is “sticky,” meaning it is slow to change. While some studies have shown that leaders can influence the culture of their organizations, less is available to tell leaders how they should behave to develop a culture that is more innovative.¹³⁸

In summary, the organizational and leadership literature demonstrates that leadership can and does impact innovation. First and foremost, innovation is unlikely without the leader’s support. Second, creative individuals and creative efforts often differ from routine tasks. Thus, the influence tactics a leader should employ to facilitate innovative efforts differ from those used to facilitate routine tasks. These tactics include selecting and prioritizing the right projects; building a collaborative team; providing output expectation, feedback, intellectual stimulation, and support; balancing freedom and oversight; and engendering an open and experimental culture. Third, the most important traits for leaders of innovative efforts are openness, possessing relevant domain-specific expertise, and possessing creative problem-solving skills.

136 See, for example, Rose Trevelyan, “The Paradox of Autonomy: A Case of Academic Research Scientists,” *Human Relations* 54, no. 4 (2001): 495-525, <https://doi.org/10.1177/0018726701544005>.

137 Mumford et al., “Leading Creative People,” 732-733.

138 Ibid.; and Benjamin Schneider, “The People Make the Place,” *Personnel Psychology* 40, no. 3 (1987): 437-453, <https://doi.org/10.1111/j.1744-6570.1987.tb00609.x>; and Paul E. Tesluk et al., “Influences of Organizational Culture and Climate on Individual Creativity,” *Journal of Creative Behavior* 31, no. 1 (1997): 27-41, <https://doi.org/10.1002/j.2162-6057.1997.tb00779.x>.

The Innovation Process

Innovation can be analyzed at the individual, organizational, and extra-organizational level. At the individual level of analysis, Knight describes a three-step process consisting of (1) the individual recognition of the problem, (2) a search process, and (3) problem-solving innovation. Innovators differ from non-innovators in two respects: what they see as the problem and what they consider in their search for a solution. The non-innovator will likely search for a solution already in effect. By contrast, the innovator may develop new problem concepts that result in a new combination of interactions between personnel and resources, which generates a search for solutions that were not previously feasible or relevant.¹³⁹

At the organizational level, Utterback describes three sub-processes: “(1) idea generation, (2) problem solving, and (3) implementation.”¹⁴⁰ He describes the first two as culminating in invention and the last resulting in innovation.¹⁴¹ Rowe and Boise break the innovation process into five broad stages: “(1) knowledge accumulation, (2) formulation (of an innovation), (3) decision, (4) implementation, and (5) diffusion.”¹⁴² While the specific number of steps varies by author depending on which components they combine into a single step or break into distinct steps, the steps have the same basic components.

Military Innovation Models

Most military innovation scholars ignore the process that has evolved within the broader organizational literature and have developed their own understanding of innovation, with six dominant models emerging. In his 2006 review of military innovation studies, Grissom identified four

139 Knight, “A Descriptive Model,” 486-490.

140 James M. Utterback, “The Process of Technical Innovation within the Firm,” *Academy of Management Journal* 14, no. 1 (1971), 77, <https://www.jstor.org/stable/254712>.

141 Ibid., 76.

142 Lloyd A. Rowe and William B. Boise, “Organizational Innovation: Current Research and Evolving Concepts,” *Public Administration Review* 34, no. 3 (1974): 286, <https://doi.org/10.2307/974923>.

dominant models—the civil-military model, the interservice model, the intraservice model, and the cultural model—and introduced a fifth: the bottom-up process.¹⁴³ Since his review, the principal-agent model has emerged. These models are summarized in Table 2-5.

MODEL	SCHOLARS	DETERMINANT	DESCRIPTION
CIVIL-MILITARY	Lang Posen Zisk	Civilian policymakers Military maverick	Militaries are resistant to change as “tradition-oriented” officers have a vested interest in maintaining the status quo. Thus, civilian policymakers are required to force the military to innovate, often through a military maverick.
INTERSERVICE	Sapolsky Bacevich	Resource scarcity	Military services seek to maintain their budgets for their traditional missions. When a new mission area emerges that does not fall within a traditional mission of any particular service, the services compete for this new mission, believing the winner will accrue additional resources. Innovation results from this competition.
INTRASERVICE	Rosen Coffey	New military capability	Branches within the same military service seek to maintain their relevancy. As new military capabilities emerge, they fight to accrue additional resources. Innovation results from this competition. Alternatively, if the established branches do not embrace the new capabilities, then a new branch may emerge.
CULTURAL	Farrell Adamsky Kier Murray	Culture	A nation’s culture sets the context for military innovation. A nation’s reaction to new technology and strategic opportunities is shaped by its culture and determines the form that innovation takes.
PRINCIPAL-AGENT	Stulberg Salomone Avant	Principal-agent problem Leader tactics	Implementing an innovation depends on the leader—who can be a civilian policymaker or a military officer—overcoming the principal-agent problem. Innovation results from a strategic interaction between the principal and their agents.
BOTTOM-UP	Davis Lupfer Gudmundsson Hunzeker	Promotion strategy Coalition building	Organizational members at the bottom of the organization are closest to the fight and the first to recognize a performance gap exists and develop a solution. Innovation results when the innovators at the bottom of the organization can convince the top to adopt and implement the innovation.

TABLE 2-5. Military innovation models

143 Grissom, “The Future of Military Innovation Studies,” 920-924.

Civil-Military Model

Posen and Lang developed the civil-military model. Lang argues that militaries are generally incapable of innovation from within; thus, civilian policymakers are required to force innovation. Innovators like General Billy Mitchell are blocked by their “tradition-oriented” colleagues who have a vested interest in maintaining established practices. As a result, Lang believes that civilian policymakers are required if innovation is to be introduced.¹⁴⁴ Similarly, Posen argues that because members of an organization have a stake in the way things are, doctrinal innovation will rarely be sponsored by the organization itself. Fearing that doctrinal innovation may cause uncertainty, the organization tends to avoid such uncertainty. Thus, innovation will occur only if a civilian policymaker intervenes, often with the help of a military maverick.¹⁴⁵ While Posen fails to define what he means by a maverick, it is likely an officer promoting innovation who bucks the system and is somewhat of a rebel and outsider among his peers. Civilian leaders lack the repository of expert knowledge on how to fight; thus, they require a maverick to intervene between themselves and the military bureaucracy to force innovation.¹⁴⁶ When studying the interwar doctrinal developments in Germany, Britain, and France, Posen concludes that it was the civil-military dynamic that determined innovation. German leaders pushed the Wehrmacht to innovate, resulting in *blitzkrieg* doctrine. British leaders pushed the RAF to innovate, resulting in Fighter Command’s system of radars, command centers, and fighter squadrons. The French failed to innovate because their civilian leaders did not push the military to do so.¹⁴⁷

Zisk’s research on the innovation of Soviet doctrine during the Cold War supports the civil-military model. She, however, demonstrates that civilian intervention need not result in civil-military conflict. She analyzes the Soviet response to changes in the United States

144 Lang, “Military Organizations,” 856-858.

145 Posen, *The Sources of Military Doctrine*, 54-59.

146 *Ibid.*, 57.

147 *Ibid.*, 224-226.

and NATO doctrines of Flexible Response, the Schlesinger Doctrine, and AirLand Battle and finds that Soviet military officers were not bureaucratic actors wedded to the status quo. When presented with changes to the external security environment, they reacted by producing innovative doctrine. The Soviet military innovated in response to Flexible Response without civilian intervention. For all three, she finds that Soviet innovation resulted from the complex interaction among the Soviet officer corps, political leaders, and civilian Soviet defense planners. It was much more conciliatory than contentious and characterized by formal debates and information coalition building.¹⁴⁸

Interservice Model

Proponents of the interservice model argue that resource scarcity catalyzes military innovation. Military services seek to maintain their budgets, authorities, and end-strengths, which requires them to maintain control over their traditional missions. When a new mission area emerges that does not fall within the traditional mission of any service, or an old mission is reopened for competition between the services, the services compete over the new mission or to gain control of the contested mission, believing the winner will accrue the additional resources. Thus, innovation results from this competition.¹⁴⁹

Sapolsky argues that the Navy developed the Polaris missile because of interservice competition. The Navy was competing with the Air Force and its Minuteman intercontinental ballistic missile for a portion of the budget. This interservice rivalry allowed the Navy to clear internal bureaucratic obstacles necessary to develop the Polaris submarine-launched ballistic missile system and helped the Navy assemble the talent and resources needed for innovation. The result was the third leg of the nuclear triad, as submarine-launched ballistic missiles complemented the existing intercontinental ballistic missiles

148 Zisk, *Engaging the Enemy*.

149 Grissom, "The Future of Military Innovation Studies," 910-911; Posen also attributes interservice rivalry to the growth of the triad. Posen, *The Sources of Military Doctrine*, 57.

and strategic bombers.¹⁵⁰ Armacost argues that the interservice rivalry between the U.S. Army and the U.S. Air Force for the intermediate-range nuclear missile mission led to the development of the Jupiter and Thor missile systems in the 1950s.¹⁵¹ Under President Eisenhower's nuclear-centric New Look Doctrine, the Army, as Bacevich argues, strategically maneuvered to prevent a potential loss of budget share to the Air Force. This maneuver involved acquiring tactical nuclear weapons and developing a new doctrine for operating on a nuclear battlefield.¹⁵² One shortcoming of this model is that it seems to be based only on cases of peacetime innovation; hence, it is unclear whether the model applies to wartime innovation.

Intraservice Model

According to the intraservice model, innovation results from competition between established branches within a single military service that produces a new branch or new military capabilities. Rosen argues that military innovation in peace and war are fundamentally different. In peace, the services fight over resources and what the next war will look like. He considers it to be an “ideological” struggle that revolves around a new theory of victory, an “explanation of what the next war will look like and how officers must fight if it is to be won.”¹⁵³ Respected senior military officers, he adds, formulate a strategy for innovation and can be effective only if they can create a new “promotion pathway” to the senior ranks so that young officers supporting the innovation can rise to the top.¹⁵⁴ Innovation is successful only if the advocates can establish a new theory of victory and new promotion pathways: “Power is won through influence over who is promoted to positions of senior

150 Harvey M. Sapolsky, *Polaris System Development: Bureaucratic Programmatic Success in Government* (Cambridge, MA: Harvard University Press, 1972).

151 Michael H. Armacost, *The Politics of Weapons Innovation: The Thor-Jupiter Controversy* (New York: Columbia University Press 1969).

152 Andrew Bacevich, *The Pentomic Era: The U.S. Army between Korea and Vietnam*. (Washington, DC: National Defense University Press, 1986), 103-128.

153 Rosen, *Winning the Next War*, 20.

154 Ibid., 8-22.

command.”¹⁵⁵ Junior officers will not embrace the doctrine if they see it as a dead end to their career. As to the role of civilians in innovation, Rosen believes that “civilian intervention is only effective to the extent that it can support or protect these officers.” Thus, it has a limited role in facilitating ongoing innovative efforts but little ability to direct new ones.¹⁵⁶ Coffey argues that intraservice rivalry dooms mechanized infantry to obscurity. Mechanized infantry falls between the Armor and Infantry branches, and since neither branch truly embraces it, they block technological and doctrinal innovation.¹⁵⁷

Cultural Model

The cultural model argues that culture—“the set of basic assumptions and values that shape shared understanding, and the forms or practices whereby these meanings are expressed, affirmed, and communicated, to the members of the organization”—is the major causal factor of military innovation.¹⁵⁸ Culture sets the context for military innovation, and it shapes how organizations react to new technology and strategic opportunities.¹⁵⁹ Murray believes culture to be “the most important enabler of military innovation.” He finds that innovative militaries have the following: internal cultures that encourage dissent, debate, study, and honest experimentation in their preparations for war; rigorous professional military education; serious self-study; and cultivation of substantive exchanges about the significant military issues of the day.¹⁶⁰ Kier argues that the culture of an organization “shapes its members’ perceptions and affects what they notice and how they interpret it: it screens out some parts of reality while magnifying others.”¹⁶¹ She finds that culture decisively shaped

¹⁵⁵ Ibid., 8-20.

¹⁵⁶ Ibid., 21.

¹⁵⁷ Rod A. Coffey, “Doctrinal Orphan or Active Partner? A History of U.S. Army Mechanized Infantry Doctrine” (Fort Leavenworth, KS: U.S. Army Command and General Staff College 2000), <https://apps.dtic.mil/sti/tr/pdf/ADA384122.pdf>.

¹⁵⁸ Kier, “Culture and Military Doctrine,” 69-70.

¹⁵⁹ Millett, “Patterns of Military Innovation,” 329-368.

¹⁶⁰ Murray, “Thinking About Innovation,” 125; and Williamson Murray, “Does Military Culture Matter?” *Orbis* 43, no. 1 (1999): 28 and 33, [https://doi.org/10.1016/S0030-4387\(99\)80055-6](https://doi.org/10.1016/S0030-4387(99)80055-6).

¹⁶¹ Kier, “Culture and Military Doctrine,” 69.

the doctrine of the British and French Armies between the World Wars.¹⁶² The biggest shortcoming of the cultural model is that it can explain why some organizations are more innovative than others, but provides little insight into the innovative process.

Principal-Agent Model

The principal-agent model is the newest approach. Stulberg et al. argue that a successful transformational strategy depends on the interaction between material incentives and the extent to which the organization embraces prevailing managerial norms. They examine the innovation process as the strategic interaction between a principal and an agent, in which the principal is trying to implement change, and the agent is deciding how much they will support the innovation. Stulberg et al. describe a four-step process: (1) service commanders first settle on the general contours of new ways of war, (2) they decide on how to oversee the implementation of new directives, (3) sub-units choose between strictly adhering to change or not, and (4) commanders choose to reward vigilant compliance or to punish opportunism. Depending on the combination of managerial norms and procedural oversight, four outcomes are possible: vigilant transformation, hedging/deliberate change, foot-dragging/resistance to change, and sabotage or stasis.¹⁶³ If leaders fail to employ the necessary tactics to overcome internal resistance, then implementation fails.

Avant finds support for the principal-agent model when studying the British and American experiences in counterinsurgency. Both Lord Salisbury and President John F. Kennedy attempted to induce change within their respective militaries, but only Salisbury succeeded. Kennedy failed to overcome the principal-agent problem, which allowed the Army to drag its feet and impede change. The U.S. Army is beholden to both the President as the Commander-in-Chief and to

¹⁶² Kier, *Imagining War*.

¹⁶³ Adam N. Stulberg et al., *Managing Defense Transformation: Agency, Culture and Service Change* (Burlington, VT: Ashgate, 2007), 35-62.

Congress through its power of the purse. Kennedy may have directed the Army to adopt a counterinsurgency doctrine, but congressional budgetary policy encouraged the Army to focus on Europe. Salisbury was successful because of Britain's parliamentary system, in which the same party controls the executive and legislative branches; thus, the British military could not play one side against the other.¹⁶⁴ The biggest shortcoming of this model is that it says nothing about the formulation and adoption phases of the innovation process.

Bottom-Up Model

The bottom-up model argues that military innovation developing from the bottom of an organization will be adopted only if the innovator or innovation champion pursues an effective strategy and builds a coalition effective enough to overcome organizational resistance to change and get the leader to adopt the innovation. Grissom finds it surprising that the previous models do not allow for bottom-up innovation even though several empirical cases for bottom-up innovation are known.¹⁶⁵ Eliot Cohen argues that "throughout most of military history, to include the current period, change tends to come more from below, from the spontaneous interactions between military people, technology and particular tactical circumstances." For Cohen, the critical question is whether an organization can adopt those changes widely.¹⁶⁶ Barno and Bensahel argue that tactical adaptations are often bottom-up, while institutional adaptations are often top-down. They also find that technological adaptation at the institutional level must overcome internal turf battles and the peacetime acquisition bureaucracy.¹⁶⁷ Lupfer and Gudmundsson demonstrate bottom-up innovation with the development of German tactics in World War I.¹⁶⁸ Hunzeker likewise uses

164 Deborah D. Avant, *Political Institutions and Military Change: Lessons from Peripheral Wars* (Ithaca, NY: Cornell University Press, 1994).

165 Grissom, "The Future of Military Innovation Studies," 920-921.

166 Eliot A. Cohen, "Change and Transformation in Military Affairs," *Journal of Strategic Studies* 27, no. 3 (2004), 400, <https://doi.org/10.1080/1362369042000283958>.

167 Barno and Bensahel, *Adaptation Under Fire*, 54-56.

168 Lupfer, "The Dynamics of Doctrine"; and Bruce I. Gudmundsson, *Stormtroop Tactics: Innovation in the German Army, 1914-*

World War I to argue that structural differences between the British, French, and German armies shaped both the degree to which front-line leaders could effectively advocate for change and top-level leaders could overcome resistance to change among the rank and file.¹⁶⁹

Davis explains innovation resulting from a political struggle within a single service. He finds that the innovator tends to be a mid-career officer who attempts to build a horizontal political alliance of peers and then recruits supporters in key positions of authority and power at higher levels to build a vertical alliance. This pro-invention alliance seldom seeks or admits extra-organization supporters or allies unless this appears necessary as a last resort. Thus, they avoid civilian intervention. The pro-innovation coalition seldom seeks to sell its ideas regarding new conceptions of international politics, military strategy, or tactics. Instead, it sells it as a “better way to pursue some well-established...task or mission,” intentionally minimizing the perception of major change during the selling period. If/when a counter-alliance develops, it usually emerges at senior rank levels and builds strength by acquiring members at the lower ranks. They typically argue against the innovation because “it will cost too much” and do not want to be seen as opposing progress. Like the pro-innovation coalition, they seldom argue in terms of new conceptions of international politics, grand military strategy, or tactics. Innovation can only occur if the pro-innovation alliance can overcome the entrenched communities.¹⁷⁰

Summary

While military innovation scholars tend to engage in competitive theory testing, pitting their preferred explanation against all others, the reality is that each model likely has something to contribute to the explanation. While there is disagreement about whether the

1918 (Westport, CT: Praeger 1995).

169 Hunzeker, *Dying to Learn*.

170 Davis, *The Politics of Innovation*, 51-58.

formulation phase process is bottom-up or top-down, there is consensus that the implementing process is top-down. There is also a general agreement that it is a complicated process, with many recognizing the fight for adoption as a political or ideological struggle. There is a significant disagreement about the role of policymakers and military mavericks.

Many military innovation scholars note that military innovation—especially wartime innovation—is fundamentally different and more difficult than innovation in other sectors. The military is an enormous bureaucracy, and bureaucracies are inherently resistant to change by design. Rosen notes, “Almost everything we know in the theory about large bureaucracies suggests not only that they are hard to change, but that they are *designed not to change*.”¹⁷¹ Bureaucracies are designed to simplify a complex environment and reduce uncertainty. Barno and Bensahel argue that they often “focus on short-term problems rather than long-term strategies” and establish “standard operating procedures” to help in this regard.¹⁷² This standardization has its benefits, but it also “[limits] a bureaucracy’s ability to adapt to new and changing circumstances.” Like Rosen, they argue, “Bureaucracies resist change because change increases the uncertainty that they are *deliberately designed to avoid*.”¹⁷³

One reason militaries are resistant to change is the cost of failure is much higher. For a private company, the worst that can happen is that it goes out of business. Investors lose money and workers lose their jobs, but that is nothing compared with failure in the military, which could result in the loss of territory and the loss of many lives. Because the stakes are so much higher, military leaders “tend to resist change that they believe will put the lives of their soldiers at undue risk.”¹⁷⁴ Thus, they “may hesitate to abandon ‘tried-and-true’ weapon systems, organizations, or tactics in favor of new approaches that may—in their view—unnecessarily put lives at risk.”¹⁷⁵

171 Rosen, *Winning the Next War*, 2.

172 Barno and Bensahel, *Adaptation in War*, 10-11.

173 *Ibid.*, 11.

174 *Ibid.*, 17

175 Suzanne C. Nielsen, *An Army Transformed: The U.S. Army's Post-Vietnam Recovery and the Dynamics of Change in Military*

Another significant difference between the military and other organizations is that militaries only rarely do what they are designed to do, which is to fight wars. Most organizations do what they are designed to every day. There is a profound difference between peacetime and wartime. Because the stakes are so much higher in war, Rosen describes a different process for wartime innovation and peacetime innovation. He argues that wartime innovation is fundamentally different because the military is “in business” and theories that apply to organizational learning are of less utility because other organizations do not face a malevolent threat. He also believes that the opportunities for innovation increase in war because old methods and innovations can be tested and compared.¹⁷⁶ Murray, Barno, and Bensahel also believe the process is different in peace and war. They do not believe that innovation can occur in war. They argue that militaries can innovate during peacetime, but only adapt in war.¹⁷⁷

The Leadership Model of Military Innovation

Unfortunately, the existing literature on military innovation tends to avoid examining the innovation process from start to finish and tends to understate the role of the senior military leader. Thankfully, we can borrow insights from the broader literature on organizational change and leadership to redress this error and synthesize a leadership model of military innovation. The major components of each phase of the innovation process are shown in Table 2-6.

Organizations (Carlisle, PA: Strategic Studies Institute, 2010), 12, <https://apps.dtic.mil/sti/pdfs/ADA528830.pdf>.

¹⁷⁶ Rosen, *Winning the Next War*, 22-39.

¹⁷⁷ Murray, interview by author; and Barno and Bensahel, *Adaptation in War*, 18.

	FORMULATION	ADOPTION	IMPLEMENTATION
MAJOR COMPONENTS	Knowledge accumulation Problem/Performance gap identification Idea generation	Strategy selection Coalition building Decision to adopt	Principal-agent problem Enforcement strategy
DIRECTION	Bottom-up or top-down	Bottom-up for bottom-up innovations Coalition building and strategy selection may not be required for top-down innovations	Primarily top-down

TABLE 2-6. Phases of the innovation process

The role of the leader is an area that has been under-researched in the military innovation literature.¹⁷⁸ Since *leader* is an ambiguous term, and most officers in the military are considered leaders, I use the term *senior military leader* to differentiate leaders who can adopt a major innovation from the myriad of other leaders within the military who cannot. A senior military leader is a general or admiral with the authority to approve and implement major changes. Only the military's most senior leaders have the authority to approve major changes to doctrine, goals, and organizational structure and to pursue the acquisition of new and expensive weapon systems. These leaders play a significant role in each phase of the innovation process that can help facilitate or impede innovation.

178 Rosen, Barno, and Bensahel are some who consider the role of senior military leaders. See, Rosen, *Winning the Next War*, and Barno and Bensahel, *Adaptation Under Fire*.

Formulation

The formulation phase is where the innovative idea is developed. It starts with the accumulation of knowledge that identifies the need for innovation. In some cases, innovation is spurred by a performance gap. In other cases, innovation may result from accidental encounters with opportunities or from slack within the organization.¹⁷⁹ A performance gap occurs when “an institution is not accomplishing its objectives in the situation that it faces.”¹⁸⁰ In war and peace, the impetus for innovation is often different. In war, a recognized performance gap is the most common cause.¹⁸¹ In peace, a perceived performance gap is less likely to be the primary impetus, since a nation is not actually fighting. Yet in peacetime, a perceived gap may result from a change in the international environment or a change in the potential threat. Zisk found that innovations in Soviet doctrine during the Cold War developed in response to changes in U.S. and NATO doctrines.¹⁸² Innovation may also be spurred by a new technological capability that may drastically improve the military’s capability or be spurred by the demonstration of a major military innovation by another state.¹⁸³ A senior military leader can shape the problem identification phase by how open they are to criticize existing performance or practices and how open they are to the criticisms of others—especially when the criticisms may be directed at weapon systems, doctrine, or concepts that they built their career on.

Regardless of where the need originates, the next step is developing a solution to the problem. Simon describes searches as limited by “bounded rationality.” He argues that individuals cannot optimize their decisions, due to the limits of human intellectual capacity and an inability to achieve omniscience. This results from “failures of knowing all the alternatives, uncertainty about relevant exogenous events, and

179 March and Simon, *Organizations*, 2nd ed., 204; and Cyert and March, *A Behavioral Theory of the Firm*, 189.

180 John A. Nagl, *Learning to Eat Soup with a Knife* (Chicago: University of Chicago Press, 2002), 192.

181 March and Simon, *Organizations*, 2nd ed. Cyert and March call this distress innovation in Cyert and March, *A Behavioral Theory of the Firm*, 188.

182 Zisk, *Engaging the Enemy*.

183 Michael Horowitz, *The Diffusion of Military Power: Causes and Consequences for International Politics* (Princeton, NJ: Princeton University Press, 2010), 26–27.

inability to calculate consequences.”¹⁸⁴ Given these constraints, instead of searching for an ideal solution characterized as utility maximization, individuals and organizations satisfice, meaning they act to satisfy only the minimum requirements. Individuals form an aspiration as to how good a solution is required, and as soon as they discover a solution that meets their current aspiration level, they choose the alternative and end the search.¹⁸⁵

Simon also notes that psychological studies have shown aspiration levels are influenced by the environment. He argues benign environments provide many good alternatives and aspirations rise. By contrast, in harsher environments, aspirations fall. Thus, in war the expectation is that any alternative that is better than the status quo should be immediately adopted—in peacetime, there is more time to search for an optimal solution. Simon, however, also notes that aspiration levels are not static. The selected alternative soon becomes the status quo, and a search for a better alternative begins anew.¹⁸⁶

Individuals within the same organization may identify the same performance gap but will often develop different solutions. Bounded rationality and satisficing help to explain why this occurs. Individuals are limited in their search for a solution by the time available and their intellectual limitations. Creativity does not come from an individual’s intellectual capacity to invent something new. Instead, it is the outcome of their accumulated creative thinking skills and technical expertise.¹⁸⁷ Expertise is gained through training, education, and experience. Individuals gain experience and knowledge relatively slowly, so their solution set is largely shaped by their current endowment of creative thinking skills and technical expertise. Thus, bringing together a team of individuals with diverse experiences expands the potential solution set for any given problem.

In war, innovation might be more of a bottom-up process because the individuals at the lower levels are in the best position to realize that

184 Herbert A. Simon, “Rational Decision Making in Business Organizations,” *American Economic Review* 69, no. 4 (1979): 502, <https://www.jstor.org/stable/1808698>; and March and Simon, *Organizations*, 2nd ed., 158–163.

185 Simon, “Rational Decision Making,” 502–503.

186 Ibid.

187 Amabile, “How to Kill Creativity,” 77–87.

their current modus operandi is failing them, and they are the ones whose lives are most at risk. Yet, they also have less domain-specific technical expertise and fewer resources available to dedicate to addressing the problem. Thus, they are more likely to self-constrain when searching for a solution and rule out options that a higher-level individual might not. As a result, individuals at the top and bottom of the same organization are likely to develop different solutions to the same problem.

Regardless of where the idea is initiated, a senior military leader plays a significant role in the formulation phase. First and foremost, the leader shapes innovation by the projects which they choose to invest in. The leader also shapes the organization's culture with their level of risk tolerance, openness to change, and willingness to openly criticize existing doctrine, strategy, or performance. These impact both bottom-up and top-down innovation. Even if the senior military leader develops an innovative idea, they require a team to develop the idea. Therefore, how the leader structures the innovative effort and interacts with the team can help promote or impede innovation. Existing research finds that leaders are most effective when they select and empower the right team; provide the necessary intellectual stimulation (which is dependent on their domain-specific expertise); provide the team the necessary ideational, work, and social support; and balance the team's freedom with the appropriate level of oversight. As discussed in the literature review, other structural factors—such as the organization's size, complexity, culture, and slack—may also factor into formulating the innovative solution.

Adoption

The adoption phase starts after the innovative idea has been developed and ends when the innovation has either been adopted or rejected by the authorized senior military leader. There is rarely a distinct break from the formulation phase to the adoption phase, as it is common for the innovation to be refined while the struggle for adoption is occurring. Despite playing an important role in the formulation phase, the senior military leader plays an even more crucial role during the

adoption phase. As discussed earlier, many studies have shown that innovation is unlikely to succeed without top management support. This should not come as a surprise and should hold for military organizations as well since most major innovations involve new doctrine, new goals, new organizations, and/or new high-cost systems, and none of these can be implemented without the deliberate decision of a senior military leader to adopt the innovation.

Some innovations are initiated from the top down, but for those initiated from the bottom up, the innovator must get their idea in front of the senior military leader for a decision. Success depends on (1) the innovator(s) selecting an effective strategy to “sell” the innovation, and (2) building a coalition to promote the innovation and overcome the organization’s resistance to change. A counter-alliance may form for many reasons, such as the belief that the innovation will not work, the belief the innovation is not worth the cost, or the belief that the innovation may threaten their interests or standing within the organization. Innovators who attempt to build a coalition based on a groundbreaking change will likely energize a powerful counter-alliance that feels threatened. Instead, the innovators are more likely to succeed if they sell the idea as simply a “better way to pursue some well-established task or mission.”¹⁸⁸ Some describe it is a political struggle. In some cases, the performance gap is widely recognized, and multiple innovations and pro-innovation alliances may compete with one another for adoption.

During this phase, structural characteristics—such as the organization’s size, complexity, culture, and slack—all continue to influence the outcome. In a large, hierarchical organization, adoption is more difficult because there are more intermediaries who can derail the potential innovation before it reaches the senior military leader. Thus, depending on what level within the organization the innovation starts, building a vertical coalition can be extremely important. Likewise, the role of slack may influence a senior military leader’s decision to adopt the innovation. Even if the leader sees the potential utility of an innovation, they might not adopt it if they believe the organization lacks the capacity or time to

188 Davis, *The Politics of Innovation*, 55-58.

implement it. Other times, leaders will discard a proposed innovation because the innovation is simply wrongheaded and should be opposed.

Major innovations often require changes to the military's structure, significant funding, or policy changes that only policymakers can authorize. Thus, the senior military leader's role during the adoption phase is often convincing policymakers to support the proposed change and to authorize the spending or enact the necessary policy changes to make the innovation a reality. Therefore, the senior military leader must be politically savvy and know how to gain this critical support. The policymaker's primary role in the process is limited, but important. The military and military operations have become increasingly complex at the same time as the number of policymakers with significant military experience has decreased. As a result, few policymakers have the domain-specific expertise to lead military innovation and to try to force change onto a reluctant military.

Policymakers' roles in peacetime and wartime are likely to be different. In wartime, policymakers are likely to support innovations brought to them by senior military leaders, because they defer to their military expertise. Policymakers do not want to be viewed as not supporting the warfighter, at least during major wars, when the war is one of the most salient political issues. This does not necessarily apply to "brush fire wars" or conflicts on the periphery. For these lesser wars—where the nation has less at stake—policymakers might even prefer to lose rather than expend the resources required to win.¹⁸⁹ Thus, they are less likely to defer to military leaders—as was demonstrated during the air war for Kosovo in 1999. In addition, in major wars, policymakers are likely to support most of the innovations that senior military leaders bring before them. During peacetime, there is less of a sense of urgency. Policymakers are likely to take longer to make decisions and to support initiatives at a rate lower than in wartime. Since the nation is not at war, they can debate the urgency and the cost of the desired change. Also, other politics come into play—where a system is produced may be more important than what is being produced.

189 See, for example, Kristen A. Harkness and Michael A. Hunzeker, "Military Maladaptation: Counterinsurgency and the Politics of Failure," *Journal of Strategic Studies* 38, no. 6 (2015): 777-800, <https://doi.org/10.1080/01402390.2014.960078>.

Implementation

The implementation phase begins after the senior military leader has adopted the innovation—with the necessary policymaker support, if required—and ends when the innovation has been discarded or successfully implemented within the organization. This phase is essentially a top down process with success largely determined by how effective the senior military leader is at ensuring implementation within an organization when a large number may oppose it.

After a senior military leader decides to adopt the innovation, subordinates and subordinate units must implement the innovation. Despite the hierarchical nature and the perceived order-following culture of the military, implementation is not guaranteed—subordinates in the military shirk as they do any other organization. Thus, an innovation can be successfully implemented only if the leader can overcome this principal-agent problem and ensure that their subordinates are implementing it.

Innovation will always produce a mix of individuals who support and oppose the change. The vigilant transformers (zealots) do not need to be convinced; they are fully onboard and leading the charge to change. The hedgers are not yet fully convinced that the change will work or last, so they respond by meeting the minimum requirements. The foot draggers may not directly oppose the innovation but may shrink the implementation for various reasons. The saboteurs (martyrs) are shirkers who look for any way to sabotage the change but try to do so in a way that is not career suicide.

A senior military leader's challenge is knowing if their subordinates are implementing the change. For changes that are easy to observe, the problem is muted if the senior military leader is willing to punish the shirkers who are easy to identify. However, for many innovations, it is difficult for the leader to know if the innovation is being implemented. They must figure out ways to overcome this information asymmetry and reward those implementing the change while punishing those who do not. Thus, it is entirely possible for an innovation to fail during the implementation phase despite the senior military leader having adopted it.

Successful leaders employ effective techniques to overcome this information asymmetry and enforce implementation. One of the more common techniques that military leaders employ include clearly communicating that implementing the innovation is a top priority. This makes shirking less appealing because punishment is likely to be greater. Other techniques include appointing trusted subordinates into critical positions to help implement the change and gaining unfiltered access to information to determine who is embracing the change and who is shirking. Unfiltered information can be gained by using trusted agents (typically junior officers who previously worked for them) to serve as “informants” or “spies” to report directly to them, conducting frequent “battlefield circulation” (visits to subordinate units) to see if units are implementing the innovation, talking to lower-level subordinates without their commander filtering the information, using videoconferences to gain information, and having reports go directly to them without getting filtered by subordinate commands or staffs.

Perhaps the most common and most effective technique senior military leaders employ is placing handpicked subordinates into key positions. The innovative idea may or may not be their own, but once they have adopted and embraced it, they need a team to ensure implementation. No single leader can change an organization of any size and scale on their own. Throughout their careers, senior military leaders build a cadre of faithful followers—mid-level officers typically ranging from major to colonel—whom they can trust to make decisions faithfully and wisely in their absence. They also have great latitude in selecting officers from anywhere within the military for positions within their organizations. They cannot handpick officers for every position, but they often can for key positions to expand their scope and reach.

The senior military leader must make the implementation of the innovation a priority and clearly communicate that it is a priority to their organization. A leader can emphasize only a limited number of priorities. Major innovations represent a significant change from the status quo; hence, even without deliberate resistance, implementation can be extremely difficult and unlikely to occur unless the leader makes a concerted effort to ensure its implementation.

Leadership Model of Military Innovation

The leadership model of innovation is shown in Table 2-7 below. It captures the tactics and tasks that a leader must successfully employ to facilitate innovation at each phase of the innovation process.

PHASE	FORMULATION	ADOPTION	IMPLEMENTATION
INFLUENCE TACTICS	Select/prioritize the right projects Build a collaborative team Provide output expectation and feedback	For bottom-up innovations, selecting an effective strategy and building a vertical coalition are required to reach the senior military leader for decision	Select/empower trusted subordinates into critical positions Make implementation a priority Communicate innovation is a priority Obtain unfiltered information through: • Videoconferences • Battlefield circulation • Informants • Direct reports/debriefs
	Provide intellectual stimulation Provide ideational, work, and social support Balance freedom and oversight Engender an innovative culture	Adopt the innovation Gain policymaker support and resources	

TABLE 2-7. Leadership model of military innovation

Research Approach

There are three dominant perspectives on innovation, one at the individual level and two at the organizational level: (1) the individualistic perspective, (2) the structuralist perspective, and (3) the interactive perspective.¹⁹⁰ The individualist perspective emphasizes that the individual—the innovator, entrepreneur, product champion, or leader—is the principal of change and the major determinant of innovation within an

190 Carol Slappendel, "Perspectives on Innovation in Organizations," *Organizational Studies* 17, no. 1 (1996): 109-113, <https://link.gale.com/apps/doc/A18347918/AONE?u=anon-a72838e5&sid=googleScholar&xid=37807afc>.

organization. According to this perspective, innovators' actions are not constrained by external factors—instead, innovators are self-directing agents driven by the goals they set, and they have traits that set them apart from non-innovators.¹⁹¹ While the focus is on the individual, many individualists readily acknowledge that in addition to the individual attributes of the innovator, the workgroup, the psychological climate, leadership, and resources all play a role in innovation.¹⁹²

The structuralist perspective emphasizes the structural characteristics of an organization or the environment as key determinants of change. Many of these variables were introduced earlier in the chapter. According to this perspective, innovation is determined more by these factors than by the actions of individuals. For example, a leader may have some influence on the innovation within an organization, but his role is minor compared with other factors. It is the slack, complexity, culture, and the environment that play a much larger role in innovation.¹⁹³

The interactive perspective argues that innovations are a product of complex, and sometimes paradoxical, relationships between individual actions and organizational structures.¹⁹⁴ The interactive process acknowledges that innovations do not remain static during the innovation process and may be transformed by it.¹⁹⁵ The individualist and structuralist perspectives have some significant disadvantages; namely, they are overly subject to attribution error and provide limited insight into the innovation process. Another problem is that both perspectives often lead to studies that can be described as “variance research.” These “large-N” studies test several independent variables to determine the effect of a particular variable on the rate of adoption or implementation of innovation. While these studies often provide important insight into the power of a particular variable, they establish correlation without offering much in the way of a causal theory from which we can generate

¹⁹¹ Ibid., 110.

¹⁹² See, for example, Susanne G. Scott and Reginald A. Bruce, “Determinants of Innovative Behavior: A Path Model of Individual Innovation in the Workplace,” *Academy of Management Journal* 37, no. 3 (1994): 580-607, <https://www.ccsenet.org/journal/index.php/ass/article/view/31596>.

¹⁹³ Slappendel, “Perspectives on Innovation,” 113-118.

¹⁹⁴ Ibid., 118-122.

¹⁹⁵ Richard E. Walton, *Innovating to Compete* (San Francisco: Jossey-Bass, 1987), 319.

policy recommendations.¹⁹⁶ For example, the size of an organization is generally found to be positively correlated with innovation, but what specifically is it about the size that matters? Studies conducted using the structuralist perspective have provided some clarity as to which aspects of size matter, but many questions remain.

Thus, given the three perspectives that can be used, the interactive process is the most appropriate for this study. First, it is reasonable to believe that military innovation is a complex, evolutionary process that involves the interaction of individuals, organizational structure, and the environment, and these interactions may change over time. If this is the case, then qualitative case studies are the appropriate analytical approach. Second, it would be extremely difficult to create a large-N dataset for military innovation in war for many reasons: it is extremely difficult to code many variables—such as distress, complexity, leaders, and leadership—and these variables often interact with one another and change over time. This often results in too few cases and too many variables to provide meaningful insight, even if the variables could be coded. Thus, to gain any real insight into the innovation process, the interactive process perspective and case study approach are preferred.

Case Selection

Given the complexity of the innovation process and the limited number of major wartime innovations, case studies offer the best framework for studying wartime innovation. However, the depth of understanding what they offer comes at a price. Given the time required to research each individual case, only a limited number of cases can be analyzed. Hence, the selection of cases is extremely important and demands rigorous analysis of the advantages and limitations of each potential case study to convincingly demonstrate that I did not just pick cases that “fit with” my theory.

The cases explored in this study are limited to those by the U.S.

196 Slappendel, “Perspectives on Innovation,” 122-123.

military in Iraq. Given the consensus that wartime innovation differs from peacetime innovation and that this study is focused on lesser-studied wartime innovation, limiting the cases to only those of wartime innovations by the U.S. in Iraq offers several advantages. First, restricting the cases to those by a single nation in a single war will control for many potential confounding variables. This increases the confidence in the findings. For example, several scholars have argued that civil-military relations and national culture play a significant role in innovation. If cases from other countries were analyzed, it would be difficult to determine if the findings were due to the role of the leader or if they were due to the national culture or civil-military relations unique to a particular nation. Likewise, restricting cases to a single war by the U.S. controls for other potential confounds. For example, the Iraq War was fairly consistent in terms of the degree to which the Bush administration and the American people cared about it. The degree to which various U.S. administrations and the American public cared about the Afghanistan War, Vietnam War, Korean War, and World War II varied greatly; hence, including cases from other wars could introduce potential confounds.

Another reason to focus on the U.S. is that it led the coalition effort, provided the vast majority of forces and resources for the war, and is the nation that others often emulate—at least when it comes to military power. Quite simply, the U.S. should offer the most cases of successful and unsuccessful innovation to study. The length of the Iraq War and the distressed situation of the U.S. military by 2004 made the war an optimal environment for wartime innovation.

Yet another reason to focus on innovation in Iraq is that most of the work on wartime innovation uses cases from wars that are decades old. Studying innovation in a modern war allows the opportunity to see if earlier theories of military innovation are still applicable in the current civil-military and interconnected, global, and geopolitical environment.

There are, however, some drawbacks to restricting research in this manner. First, only the first two months of the war could be characterized as a conventional war. For the most part, the war could be described as an insurgency with the significant involvement of a nonstate actor under the backdrop of a low-level civil war. Thus, the external validity of the

findings may be limited and might not apply to other types of conflicts. Nevertheless, there is no logical reason to believe that the innovation process for conventional wars would differ from the process in a large and expensive counterinsurgency. Notwithstanding this issue, given the durations and challenges that the U.S. has faced in non-conventional wars over the past century, these are wars for which wartime innovation is important. Therefore, it makes sense to focus on innovation in one of these wars, even if the findings might not be externally valid to more conventional conflicts. Despite the mantra of “no more Vietnams,” the U.S. found itself involved in a large-scale counterinsurgency a quarter of a century later. Thus, the findings of this study are relevant even in the unlikely case they are not valid for other types of conflicts.

The next task was to select the specific cases. The U.S. developed dozens and maybe even hundreds of innovations during the Iraq War, including those related to the medical field; doctrine; intelligence-gathering capabilities; web forums; new intelligence, surveillance and reconnaissance, and uncrewed aerial vehicle capabilities; among many others. Consistent with other military innovation scholars, I selected only cases of major military innovations, because they require the greatest resources or represent the most significant change from the status quo. Hence, they should be the hardest to implement.

It was essential to have variation in the dependent variable of study. As a result, I selected cases of successful and unsuccessful major military innovation without any preconceived notions about what I hoped to find. I wanted to include at least one case of doctrinal innovation, since that is the sole focus of many military innovation scholars. However, it was also important to include nondoctrinal innovations to see if the processes and factors affecting other types of innovation are significantly different from doctrinal innovation.

To appreciate the range of complexities involved and to provide insight into the innovation process and the factors that matter most, this study analyzes four cases: counterinsurgency doctrine (failure and then success); the creation of the Asymmetric Warfare Group (success); the innovation of the Find, Fix, Finish, Exploit, and Analyze cycle (success); and the fielding of the MRAP (failure and then success).



COUNTERINSURGENCY DOCTRINE: GENERAL PETRAEUS LEADS CHANGE

Despite the realization that the military was facing an insurgency as early as the summer of 2003, the U.S. Army failed to develop an effective counterinsurgency doctrine until 2006 and failed to implement it in Iraq until 2007. Some officers started experimenting with counterinsurgency tactics in Iraq as early as 2003. The Army attempted to develop a formal doctrine as early as 2004, but these early efforts failed to produce a coherent doctrine that could be implemented throughout Iraq. Early attempts failed because the senior military leaders responsible for developing and implementing counterinsurgency doctrine lacked the necessary domain-specific expertise required to lead this effort. These efforts stalled until General David Petraeus commanded the U.S. Army Combined Arms Center at Fort Leavenworth and oversaw the development of counterinsurgency doctrine. He subsequently commanded coalition forces in Iraq capable of implementing that doctrine. The innovation of new doctrine became possible when a senior military leader with relevant technical expertise was placed in a position to develop, adopt, and implement that doctrine.

The Tenets of Counterinsurgency Doctrine

Army doctrine is “a body of thought on how Army forces intend to operate as a member of the joint force, in the present near term, with current force structure and material....It focuses on how (not what) to

think about operations and what to train.”¹ Doctrine effectively guides the military as far as *what* means should be employed and *how* they should be employed.² Military scholar Michael Evans defines doctrine as “the foundation of military professional knowledge. Doctrine is to soldiers what blueprints are to architects or briefs to lawyers.”³ The Army captures its doctrine through doctrinal publications that “standardize military principles, terms, and [techniques, tactics and procedures] throughout the Army.”⁴

Many mistakenly believe the U.S. military lacked counterinsurgency doctrine when it invaded Iraq in 2003. On the contrary, it possessed doctrine but needed effective doctrine for an environment like Iraq, which lacked a functioning government and its security forces. In the aftermath of Vietnam, the Army purged itself of almost anything to do with counterinsurgency—the Army eliminated it from training, almost completely eliminated it from its professional military education, and failed to update its doctrine—in effect, to ensure that it would never again have to conduct a large-scale counterinsurgency. This was also influenced by the Army’s predominant culture and bias toward conventional combat operations relying on technology and firepower.⁵

Due to conflicts in El Salvador and Nicaragua in the 1980s, however, the Army did not completely purge itself of counterinsurgency doctrine. Instead, it assigned the proponentry of the doctrine to the Special Forces branch, with the doctrine based on a small advisory footprint without large-scale military intervention. Vietnam was highlighted as an example to avoid because the high level of American support “undermined Vietnamese government authority and [Army of Vietnam] credibility.”⁶ Since the 1980s and continuing into the 2000s, in places such as Colombia, special operations forces were the Army’s only elements that

1 U.S. Army Training and Doctrine Command, TRADOC Regulation 25-36, *The U.S. Army TRADOC Doctrinal Literature Program* (Fort Monroe, VA: U.S. Army Training and Doctrine Command, 2004), 18.

2 Posen, *The Sources of Military Doctrine*, 13.

3 Michael Evans, *Forward from the Past: The Development of Australian Army Doctrine, 1972-Present* (Canberra: Land Warfare Studies Centre, 1999), 2.

4 U.S. Army Training and Doctrine Command, TRADOC Regulation 25-36, 17-19.

5 See, for example, Weigley, *The American Way of War*; Record, “The American Way of War;” Gray, “The American Way of War;” and Mahnken, “The American Way of War in the Twenty-First Century.”

6 Conrad C. Crane, *Avoiding Vietnam: The U.S. Army’s Response to Defeat in Southeast Asia* (Carlisle, PA: Strategic Studies Institute, 2002).

studied, trained, and executed counterinsurgency. While counterinsurgency was not one of the eight core Army special operations forces tasks, foreign internal defense was, and counterinsurgency was a component of foreign internal defense.⁷ For the rest of the military, the study of counterinsurgency was relegated to the few officers who might study it on their own at a civilian graduate university.

The Army's doctrinal publications that existed at the time demonstrate this view. The 2003 version of the U.S. Army's capstone doctrinal manual, FM 3-0, *Operations*, devoted only a single page to counterinsurgency, and it emphasized minimal support to the host nation.⁸ While FM 90-8, *Counterguerrilla Operations*, technically existed as doctrine, it had last been updated in 1986, and few knew of its existence, let alone had ever read it. It provided techniques, tactics, and procedures for how to defeat guerrillas but failed to provide insight into counterinsurgency more broadly. It explicitly stated that "there is a difference in the terms *counterinsurgency* and *counterguerrilla*." It described counterinsurgency as the "internal defense and development programs...which addresses both the populace and the insurgent" while "counterguerrilla operations are geared to the active military element of the insurgent movement only."⁹ Thus, even if the manual had been widely used, it would have been useful only for attacking the armed wing of Iraq's insurgency, but of little use in addressing the insurgency more broadly.

Consequently, in 2003, the Army's counterinsurgency doctrine was captured in FM 31-20-3, *Foreign Internal Defense: Tactics, Techniques and Procedures for Special Forces*, which had been last updated in 1994.¹⁰ The manual made it clear that foreign internal defense was often a major component of [counterinsurgency].¹¹ It also captured basic counterinsurgency fundamentals stating, "legitimacy is the center of

7 Department of the Army, FM 3-05, *Army Special Operations Forces* (Washington, DC: Headquarters, Department of the Army, 2006), 2-1 and 2-2, <https://irp.fas.org/doddir/army/fm3-05.pdf>.

8 Conrad C. Crane, "United States," in *Understanding Counterinsurgency, Doctrine, Operations, and Challenges*, ed. Thomas Rid and Thomas Keaney (New York: Routledge, 2010), 75-86.

9 Department of the Army, FM 90-8, *Counterguerrilla Operations* (Washington, DC: Headquarters, Department of the Army, 1986), 1-4, <https://smallwarsjournal.com/documents/fm90-8.pdf>.

10 Department of the Army, FM 31-20-3, *Foreign Internal Defense: Tactics, Techniques and Procedures for Special Forces* (Washington, DC: Headquarters, Department of the Army, 1994), https://www.academia.edu/6620486/FM_31_20_3_Headquarters_Department_of_the_Army_FOREIGN_INTERNAL_DEFENSE_TACTICS_TECHNIQUES_AND_PROCEDURES_FOR_SPECIAL_FORCES.

11 Ibid., 1-16.

gravity for both the insurgents and the counterinsurgents.”¹² The manual is a “31” series, however, indicating that the doctrine was specific to Special Forces. It espoused a small footprint where U.S. forces would primarily serve in an advisory and training role.¹³ Unfortunately, this doctrine was insufficient in Iraq because the Iraqis had no existing security forces. Irrespective of the doctrinal publications, the fact that the military never war-gamed, simulated in a training environment, taught in its professional military education, or dedicated real intellectual thought to counterinsurgency operations left a vast majority of Army personnel without a counterinsurgency capability when the Army found itself facing an insurgency in Iraq.

What is counterinsurgency doctrine? Many people mistakenly believe it is solely about winning the “hearts and minds” of the populace. While this is important, it is also meaningless without providing security. As Machiavelli famously penned in the sixteenth century, “It is safer to be feared than loved.”¹⁴ Lay observers tend to overemphasize the nonlethal aspects of counterinsurgency.

David Galula, an early counterinsurgency theorist, described counterinsurgency warfare as a conflict between the insurgent attempting to change the government and the incumbent attempting to maintain control. Fundamentally, it is both a civil war and an asymmetric war, with the battle for the population a key component. Thus, protecting the population is a critical component of a successful counterinsurgency strategy.¹⁵

Like conventional military operations, counterinsurgency includes a combination of offensive, defensive, and stability operations. Offensive and defensive operations are an integral part of counterinsurgency warfare, but stability operations are generally weighted more heavily than they are for major combat operations.¹⁶ A useful model for understanding counterinsurgency operations breaks ground force missions into

12 Ibid., 1-9.

13 Ibid., 1-15 and 1-16.

14 Nicolo Machiavelli, *The Prince*, trans. George Bull (London: Penguin Classics, 2003).

15 David Galula, *Counterinsurgency Warfare: Theory and Practice* (Westport, CT: Praeger Security, 1964).

16 Department of the Army, FM 3-24, *Counterinsurgency* (Washington, DC: Department of the Army, 2006), 34-35, <https://www.hsdl.org/?view&did=468442>.

two categories: framework operations and surge operations. Framework operations are those tasks the counterinsurgent must constantly perform, such as force protection, securing population centers and lines of communication, and sustainment activities. Surge operations are tasks that the counterinsurgent undertakes as conditions and resources permit, such as targeted raids to kill or capture insurgents or other offensive operations to clear enemy safe havens. To be effective, the counterinsurgent must *clear* enemy forces from an area, *hold* the terrain to prevent the enemy from returning, and *build* civil capabilities and infrastructure that the populace needs—hence the term “clear, hold, build.”¹⁷

During surge or *clear* operations, good intelligence is required to discriminate insurgents from civilians. Insurgents do not wear military uniforms. They often live, hide, and receive critical support from the population through coercion or sympathy for their cause. Without precise intelligence and discriminate targeting, trying to eliminate the insurgents is possible only if the counterinsurgent is willing to accept high levels of civilian casualties and the negative repercussions that result. Thus, good intelligence is required to target insurgents and isolate them from the population. Without it, the military will be used as a blunt, imprecise instrument, and the population will feel the brutal effect. This often alienates the population and serves to strengthen, not weaken, the insurgency.¹⁸

During framework operations, protecting the populace is a critical function. In any insurgency, there is an active minority that supports the cause (the insurgent), an active minority that opposes the cause (the counterinsurgent), with the remainder falling somewhere in the middle as a passive and neutral majority.¹⁹ An insurgency cannot face the government head-on; thus, it is reliant on the population for support. Insurgents may terrorize the population to show that the government is incapable of providing security or bait the government into overreacting and lashing out against the population. Both result in the government losing legitimacy and the support of the population. Thus, insurgents seek the voluntary support of the population, but will also

17 Peter Mansoor, “Army” in *Understanding Counterinsurgency, Doctrine, Operations, and Challenges*, ed. Thomas Rid and Thomas Keaney (New York: Routledge, 2010), 75.

18 *Ibid.*, 75-78.

19 Department of the Army, FM 3-24, *Counterinsurgency*, 35-36.

use coercion to prevent the population from providing intelligence to government forces. The most effective way to protect the population is to live among it.²⁰ This is the *hold* phase.

The final critical component to effective counterinsurgency operations is civic action and humanitarian assistance, which are part of the *build* phase. Providing security alone is not enough; counterinsurgents must address some of the root causes of the insurgency. These causes often boil down to power, resources, or territory. The population is the decisive terrain, and the key to victory is convincing the people that the governing authority offers them a better life than the insurgent.²¹ Establishing good governance, developing infrastructure to provide needed services, and economic development to provide jobs are all necessary components. While these operations may be led by other parts of the government, the military often plays a significant role in the build phase simply because of its enormous budget and manpower.

The Failure to Develop and Implement Counterinsurgency Doctrine (2004–2005)

The innovation of counterinsurgency doctrine was initially unsuccessful because the senior military leaders responsible for it failed to develop and implement effective doctrine.

The Development of the Interim Counterinsurgency Field Manual (FMI 3-07.22)

At the start of the Iraq War, U.S. Army Training and Doctrine Command had the overall responsibility for developing Army doctrine but delegated the responsibility to the U.S. Army Combined Arms Center at Fort Leavenworth, Kansas.²² Within the Combined Arms Center,

²⁰ Mansoor, "Army," 78–82.

²¹ *Ibid.*, 82–83.

²² U.S. Army Training and Doctrine Command, TRADOC Regulation 25–36, 4.

the Combined Arms Doctrine Directorate developed and integrated Army doctrine.²³ When doctrine had to be updated or developed, the Combined Arms Doctrine Directorate director typically assigned the responsibility to an author or writing team. A doctrinal writing team was comprised of a team leader, editor, visual information specialists, and other support personnel. For routine doctrinal development, the process typically took two years. When there was an urgent need, an accelerated process—taking nine to twelve months—could be used. The biggest difference between the two processes was the number of drafts. In accelerated development, only a single draft was written and staffed. For routine development, there were at least two drafts and often more. The Combined Arms Center commander served as the approval authority for most doctrinal publications with the Chief of Staff of the Army signing most doctrinal publications.²⁴

The first attempt to develop counterinsurgency doctrine began, albeit briefly, when the Army assigned Colonel Clint Ancker as the Combined Arms Doctrine Directorate director in 1996.²⁵ He had taught a revolutionary warfare course as a history instructor at the United States Military Academy and counterinsurgency courses at the Infantry's professional military educational schools. Recognizing the lack of counterinsurgency doctrine, he approached the Combined Arms Center's deputy commandant about developing doctrine for the Army and was told, "Don't bother. The Army will never commit conventional army forces to counterinsurgency again."²⁶ Thus, Ancker made no effort to revise the doctrine until 2004, when Lieutenant General William "Scott" Wallace became the Combined Arms Center commander.

After graduating from West Point in 1969, Wallace was commissioned as an Armor officer and served a tour in Vietnam in 1972 as an assistant district advisor and later as an operations advisor. In the mid-1990s, he commanded the Army's National Training Center. Later, he

23 U.S. Army Combined Arms Center, "Combined Arms Doctrine Directorate (CADD)," USACAC.Army.mil, last updated November 10, 2022, accessed November 2, 2023, <https://usacac.army.mil/organizations/mccoe/cadd#:~:text=CADD%20ensures%20that%20all%20Army,%2C%20multinational%20multi%2DService%20doctrine>.

24 U.S. Army Training and Doctrine Command, TRADOC Regulation 25-36, 24-29.

25 Clint Ancker, interview by author.

26 Steve Capps, interview by author; and Ancker, interview by author.

commanded the 4th Infantry Division. He commanded the U.S. Army's V Corps during the March 2003 invasion of Iraq, where he spearheaded the drive to Baghdad.²⁷ After the first week of the war, Wallace famously said, "The enemy we're fighting is different from the one we'd war-gamed against."²⁸ Later, he remarked, "the degree of fanaticism of those attacking" and the "suicidal nature of the paramilitary surprised me."²⁹ While his comments reportedly angered General Tommy Franks, he remained in command of V Corps for a normal two-year tour, when he turned over command to newly promoted Lieutenant General Ricardo Sanchez.³⁰ On June 14, 2003, Wallace assumed command of the Combined Arms Center.

Wallace did not know what the Combined Arms Center commander did beyond running the Command and General Staff College, and later jokingly told a historian that he imagined playing golf most afternoons. Only after taking command did Wallace understand the potential influence of the position. In addition to running the Command and General Staff College, he was also the deputy of the U.S. Army Training and Doctrine Command, which gave him power over the combat training centers, the Battle Command Training Program, and the Center for Army Lessons Learned. He quickly became aware that this position provided him with a significant ability to contribute to the war effort; hence, there would be little time for golf. The Combined Arms Doctrine Directorate authored doctrine, the Command and General Staff College and other schools taught doctrine, observer-controllers at the combat training centers ensured units employed the doctrine during exercises, and the Center for Army Lessons Learned evaluated the results and recommended improvements. Wallace realized that it was the Army's "engine of change."³¹

27 Jerry D. Morelock, "Wallace, William Scott," in *The Encyclopedia of Middle East Wars: The United States in the Persian Gulf, Afghanistan, and Iraq Conflicts*, ed. Spencer C. Tucker (Santa Barbara, CA: ABC-CLIO, 2010), 1402.

28 Julian Borger et al., "Longer War Is Likely, Says US General," *Guardian*, March 28, 2003, accessed November 2, 2023, <https://www.theguardian.com/world/2003/mar/28/iraq.richardnortontaylor1>.

29 Bob Kerr, "Meet the Press: New Combined Arms Center Commander Discusses Iraq, Training, Leaders, Lessons-Learned," TRADOC.Army.mil, August 28, 2003; and PBS Online, "Interview: Lt. Gen. William Scott Wallace," *Frontline*, February 26, 2004, accessed October 25, 2023, <http://www.pbs.org/wgbh/pages/frontline/shows/invasion/interviews/wallace.html>.

30 Morelock, "Wallace," 1402.

31 Fred Kaplan, *The Insurgents: David Petraeus and the Plot to Change the American Way of War* (New York: Simon & Schuster, 2013), 130-131.

The enemy in Iraq had surprised him, and the reports coming back from the field and the lessons being captured by the Center for Army Lessons Learned continued to depict an enemy that the U.S. was ill-prepared to face. At a press conference only two months after taking command, Wallace described how the Combined Arms Center supported the war effort and how he planned to use his “experience in Iraq and that experience with our Soldiers to make sure that the things that we’re doing in the schoolhouse and in the training we support here at the Combined Arms Center is on the mark.” He explained that the Battle Command Training Program was gathering lessons and techniques from units currently deployed and sharing them with units getting ready to deploy. Wallace described how he would incorporate the lessons into the training and scenarios at the combat training centers. He also stated that the Center for Army Lessons Learned would share the lessons with the army at large, and those lessons would be used for developing plans and programs. Finally, he remarked that the Command and General Staff College was “training young majors and senior captains who will go into the force at large and become operations officers, executive officers and commanders of organizations that are currently deployed.”³² He failed, however, to identify the need to develop counterinsurgency doctrine until a readiness exercise months later.

In December 2003, III Corps conducted a corps-level command joint task force mission readiness exercise at Fort Leavenworth as part of its pre-deployment training. Wallace had created a scenario that resembled the situation in Iraq—one that was more of an insurgency than a conventional threat. During the after-action review in February 2004, the unit recognized that it was unprepared to fight an insurgency and that no doctrine existed to help it. Following the exercise, Wallace directed Ancker to develop a counterinsurgency doctrine within six months.³³ Ancker had retired from the military in 1996, but remained the directorate head as a Department of the Army civilian.³⁴

On March 1, Ancker assigned the task to Lieutenant Colonel Jan

32 Kerr, “Meet the Press: New Combined Arms Center Commander.”

33 Ancker, interview by author; and Jan Horvath, e-mail message to author, April 10, 2011.

34 Ancker, interview by author.

Horvath. Horvath had served as the doctrinal representative at the mission readiness exercise and had an intellectual understanding of insurgency and counterinsurgency through his Special Forces training. Years earlier, he had completed the Special Forces Qualifications Course, but had been diverted to another assignment prior to being assigned to a Special Forces position. Ancker gave him one week to see if anything existed in lieu of writing a new field manual. Horvath returned a week later to inform him there was nothing substantial or comprehensive, and the books and booklets that did exist were at best “an inch deep and a mile wide.”³⁵ Horvath found the Army’s *Counterguerrilla Operations* manual, last updated in 1986, to be so out-dated and irrelevant that it was not even useful as a starting point for the new counterinsurgency manual. Since Special Forces appeared to be the proponent for counterinsurgency doctrine, Horvath approached the Commanding General of the U.S. Army’s John F. Kennedy Special Warfare School to see if they wanted to author the manual. But the commander said he wanted nothing to do with it, accordingly the responsibility fell to the Combined Arms Center.³⁶

Failing to find a proponent for the manual, Horvath assumed the role of lead author. Recognizing that he lacked the expertise to author it alone, Horvath leveraged the expertise of others to assist. By this time, the subject of counterinsurgency was being discussed on an e-mail list service by the name of “Warlord Loop,” of which Horvath was a member.³⁷

By late April, Horvath was able to pull together roughly three dozen people—almost exclusively Army officers or Department of the Army civilians—to attend a three-day workshop to help develop the doctrine. The conference’s primary purpose was to determine the contents of the new manual. Horvath assigned sections to different participants to write, but when the sections were returned, Horvath found them seriously deficient and lacking a coherent message. The input for the operations chapter alone totaled more than 150 pages, yet required significant work to be useful. Over a long weekend, Horvath

³⁵ Horvath, interview by author.

³⁶ Horvath, interview by author; and Jan Horvath, e-mail.

³⁷ Ibid.

consolidated the various ideas into a coherent twenty-page chapter, which he augmented with several appendices. Some ideas were new, such as how to use interpreters properly. Other ideas were not, such as the importance of providing security to the population. For new concepts, Horvath often required outside expertise. He turned to institutional experts from the Defense Language Institute and the Department of State to develop the doctrine on effectively utilizing interpreters. For the intelligence chapter, he received assistance from Dr. Tom Marks, an intelligence center representative assigned to the Combined Arms Center. Bob Ulin and Rich Kiper, retired officers who worked at Fort Leavenworth, assisted Horvath with writing and editing the manual. Horvath asked Wallace for additional assistance in areas in which he lacked expertise, but most of his requests went unfulfilled. Wallace, however, did facilitate Horvath's access to corps and division commanders and their staffs who frequented Fort Leavenworth.³⁸

From the beginning, Wallace intended the manual to be an interim document. He wanted to get something out to the troops quickly and then revise it later. It was assigned the number FMI 3-07.22 and entitled *Counterinsurgency Operations*.³⁹ Unlike normal field manuals that have no expiration date, the interim document was set to expire two years from its publication date.⁴⁰ Given the urgency of producing the manual, only a single draft was produced. Horvath sent the draft to individuals and commanders throughout the Army, and then made some edits based on their feedback before sending it to Wallace for approval.⁴¹ General Peter Schoomaker, the Chief of Staff of the Army, signed the manual on October 1, 2004.

Less than seven months after being assigned the task, Horvath had produced an interim manual for the Army. Unfortunately, the manual contained significant flaws. Wallace recognized the manual was far from perfect, but he believed it was better to provide flawed doctrine today rather than the perfect doctrine tomorrow. In reality, he was

38 Ibid.

39 Department of the Army, FMI 3-07.22, *Counterinsurgency Operations* (Washington, DC: Headquarters, Department of the Army, 2004), <https://irp.fas.org/doddir/army/fmi3-07-22.pdf>

40 U.S. Army Training and Doctrine Command, TRADOC Regulation 25-36, 23-24.

41 Ancker, interview by author.

trying to do both, because as soon as Horvath finished the interim manual, Wallace immediately set him to work on the revised manual.⁴² Some of the more substantial critiques were that the manual included only military tasks; that it was geared toward the destruction of enemy rather than the provision of security, services, or basic governance; and that it underplayed the importance that the Department of Defense (DoD) plays in reconstruction despite acknowledging shortfalls in civilian stability operations capabilities.⁴³ The doctrine also assumed that operationally capable and well-resourced civilian agencies would conduct all nonmilitary components of a counterinsurgency campaign.⁴⁴

Counterinsurgency Doctrine in Training

Changes at the Army's combat training centers preceded the publication of the interim counterinsurgency manual. As the Combined Arms Center commander, Wallace was responsible for the combat training centers: the National Training Center at Fort Irwin, California; the Joint Readiness Training Center at Fort Johnson, Louisiana; and the Joint Multinational Readiness Center at Hohenfels, Germany. He was also in charge of the National Simulation Center and the Battle Command Training Program at Fort Leavenworth.⁴⁵ Wallace introduced insurgency scenarios into the exercises, starting with the III Corps mission readiness exercise in December 2003.

At the Joint Readiness Training Center, Wallace increased the number of mock villages from 4 to 18 and added 200 Arabic speakers to roleplay as Iraqi civilians and security forces.⁴⁶ At the National Training Center, he implemented even more sweeping changes by adding 13 mock villages, 7 cave complexes, and 5 forward operating bases.

42 Kaplan, *The Insurgents*, 136-7.

43 Ucko, *The New Counterinsurgency Era*, 68.

44 Ibid.

45 From slide 2, "The Combined Arms Center," of PowerPoint presentation, Combined Arms Center, "An Engine of Change: CAC" (Fort Leavenworth, KS: Combined Arms Center, no date).

46 Ann Scott Tyson, "US Tests New Tactics in Urban Warfare," *Christian Science Monitor*, November 9, 2004, accessed December 21, 2023, <https://www.csmonitor.com/2004/1109/p01s01-usmi.html>.

He populated these places with up to 1,600 role players, of which 250 were Iraqi-Americans who lived in their roles for the entire 14-day training exercise.⁴⁷

Brigadier General Robert Cone spearheaded the changes at the National Training Center. As a colonel, he had served as the director of the Joint Advanced Warfighting Program at the Institute for Defense Analyses. Cone had also deployed to Iraq in 2003 as the director of the U.S. Joint Forces Command's joint lessons learned collection team, for which he was tasked to capture, document, and report lessons learned from Iraq. In these roles, he could see what units were doing all over the country. It provided him with a great understanding of how the enemy was operating. He realized that the existing scenarios were of little use in preparing troops for an upcoming deployment to Afghanistan or Iraq; thus, the scenarios had to change.⁴⁸ Rather than facing a Soviet-era motorized rifle regiment, he changed the scenario to more closely approximate what units would face in Afghanistan or Iraq, with a greater emphasis on full-spectrum combat operations—especially counterinsurgency—and a greater emphasis on cultural awareness.⁴⁹ Wallace called the greater “emphasis on stability and support operations” the “most dramatic” change in training at the National Training Center.⁵⁰

Wallace remarked that “in peacetime, the institutional part of the force leads change, but in wartime it is the operational force that leads change.”⁵¹ Thus, he put a greater emphasis on integrating lessons learned and best practices from the field into the training scenarios by monitoring unit websites, reading the Center for Army Lessons Learned reports, sending combat training center observer-controllers into theater to capture emerging trends, and seeking veterans with recent combat experience to serve as observer-controllers at the combat training centers.

47 Robert W. Cone, “The Changing National Training Center,” *Military Review* 86, no. 3 (2006): 70-79, <https://cgsc.contentdm.oclc.org/digital/api/collection/p124201coll1/id/165/download>.

48 Robert W. Cone, interview by author.

49 Cone, “The Changing National Training Center,” 70-79.

50 Roxana Tiron, “Real-World Missions Shape Army Training,” *National Defense*, March 1, 2004, accessed December 21, 2023, <https://www.nationaldefensemagazine.org/articles/2004/2/29/2004march-realworld-missions-shape-army-training>.

51 Ibid.

In fiscal year 2006, the Army committed over \$12 million to construct a 300-building urban operations facility at the National Training Center.⁵² The Marine Corps implemented similar changes with its pre-deployment training, placing a greater emphasis on urban operations, languages, cultural sensitivity, and explosive ordnance disposal.⁵³ In May 2005, Lieutenant General James Mattis, the Commanding General of the Marine Corps Combat Development Command, established the Center for Advanced Operational Culture Learning at Quantico, Virginia, to help educate the Marine Corps on the cultural dimension of combat.⁵⁴ Thus, by 2006, several significant changes had been made to incorporate counterinsurgency scenarios, even though the Army lacked sufficient doctrine to accompany it.

Counterinsurgency Doctrine in Education

Wallace, however, implemented few changes into the professional military education system, despite his early recognition that training officers at the Command and General Staff College was important to success in Iraq and Afghanistan. As of the 2004–2005 academic year, the curriculum at the Command and General Staff College remained unchanged, with only a single hour of the 555-hour core curriculum devoted to counterinsurgency.⁵⁵ Wallace acknowledged that it could take the institutional Army up to two years to change, which he acknowledged was “unacceptable” for an Army at war. Yet, he failed to make significant strides to revamp the Army’s professional military education.⁵⁶

Wallace did, however, make significant changes to the Army’s professional publication, *Military Review*, for which he was also responsible. He brought in William Darley, a retired public affairs officer who had spent much of his career in special operations forces, to be the journal’s editor.

52 Cone, “The Changing National Training Center,” 70–79.

53 Ucko, *The New Counterinsurgency Era*, 66.

54 Barak A. Salmoni, “Advances in Predeployment Culture Training: The U.S. Marine Corps Approach,” *Military Review* 86, no. 6 (2006): 79–88. For a critique see Ucko, *The New Counterinsurgency Era*, 73.

55 Interview with officer who attended the Command and General Staff College in 2004–2005.

56 Tiron, “Real-World Missions Shape Army Training.”

At Darley's first meeting with Wallace in March 2004, Wallace laid down three rules: (1) articles had to be relevant to the war, (2) the editor would no longer publish articles solely by and for academics, and (3) the editor should not be afraid of controversy. The year prior to Darley's arrival, the journal had only nine articles published with even a slight connection to counterinsurgency; in his first year as editor, he published twenty-nine.⁵⁷

In summary, Wallace made several significant changes as the Combined Arms Center commander. Yet, despite having the authority and resources to force the doctrine's implementation more broadly, he fell short. He implemented changes to training, refocused the Army's professional journal, and produced rudimentary doctrine, but he failed to force its implementation into the Army's professional military education, where it was needed most.

Counterinsurgency Doctrine in Washington

While Horvath attempted to develop counterinsurgency doctrine and a handful of units were experimenting in the field, a small number of officials were pushing similar efforts in Washington, DC. Secretary of Defense Donald Rumsfeld failed to recognize or at least publicly acknowledge that the U.S. was facing an insurgency, instead calling it a "low-intensity war." Others, however, were quicker to recognize it and call it what it was. In July 2003, General Jack Keane, acting Chief of Staff of the Army, remarked that it was "a low-level insurgency that has the potential to grow."⁵⁸ Likewise, only a week after taking command of U.S. Central Command (USCENTCOM) in July 2003, General John Abizaid described it as "a classical guerrilla-type campaign against us."⁵⁹

An analysis of the national strategic documents at the time is revealing. The 2004 *National Military Strategy* stated that "winning decisively will require synchronizing and integrating major combat operations,

57 Kaplan, *The Insurgents*, 106-107.

58 Thomas E. Ricks, *Fiasco: The American Military Adventure in Iraq* (New York: Penguin, 2007), 170-172.

59 History Central, "Abizaid Briefing 7/16/2003," HistoryCentral.com, July 16, 2003, accessed October 25, 2023, <http://www.historycentral.com/freeIraq/Iraqinfo/Abizaid.html>.

stability operations and significant post-conflict interagency operations.”⁶⁰ The document focused almost exclusively on counterterrorism and traditional combat operations and dedicated only two paragraphs of the 27-page document to the subject of stability operations. Additionally, the three priorities listed in the document—“winning the War on Terrorism, enhancing joint warfighting, and transforming for the future”—are, at best, only loosely related to counterinsurgency.⁶¹

The 2005 *National Defense Strategy* also ignored counterinsurgency. It acknowledged a changing security environment in which “irregular challenges come from those employing ‘unconventional’ methods to counter the *traditional* advantages of stronger opponents,” but failed to mention the need for the military to learn how to conduct counterinsurgency and stability operations.⁶² Likewise, the military’s *Capstone Concept for Joint Operations*, a document that “describes how joint forces are expected to operate across the range of military operations in 2012-2025,” failed to mention “counterinsurgency” a single time in the 40-page document.⁶³

In December 2004, an advisory panel of the Defense Science Board completed a nearly 200-page report titled *Transition to and from Hostilities*. The report concluded that the “DoD and the Department of State need to make stability and reconstruction missions one of their core competencies,” and remarked that “DoD has not yet embraced [stability and reconstruction] operations as an explicit mission with the same seriousness as combat operations.” It also urged “greater than usual speed in implementing the recommendations of [the] study.”⁶⁴ The chairman of the task force urged Rumsfeld to issue a DoD directive to put the report’s recommendations into effect. That task fell to

60 Joint Chiefs of Staff, *The National Military Strategy of the United States of America* (Washington, DC: Office of the Chairman, 2004), 14, <https://nssarchive.us/wp-content/uploads/library/nms/nms2004>.

61 Ibid., 70.

62 U.S. Department of Defense, *National Defense Strategy of the United States of America* (Washington, DC: Department of Defense, 2005), 2, <https://history.defense.gov/LinkClick.aspx?fileticket=VRrlZ8A1tNo%3d&tabid=9117&portalid=70&mid=20233>; and Ucko, *The New Counterinsurgency Era*, 70.

63 Joint Chiefs of Staff, *Capstone Concept for Joint Operations, Version 2.0* (Washington, DC: Joint Staff J-7/Director of Operational Plans and Joint Force Development, August 2005), <https://apps.dtic.mil/sti/pdfs/ADA476464.pdf>; and Ucko, *The New Counterinsurgency Era*, 71.

64 Defense Science Board, *Transition to and from Hostilities* (Washington, DC: Department of Defense, 2004), vi and xvii, <https://apps.dtic.mil/sti/pdfs/ADA430116.pdf>.

Jeffrey “Jeb” Nadaner, the deputy assistant secretary of defense for stability operations.⁶⁵ Despite being directed to complete the directive in 60 days, it took a year to produce DoD Directive 3000.05, *Military Support for Stability, Security, Transition and Reconstruction Operations*. The directive stated:

Stability operations are a core U.S. military mission that the Department of Defense shall be prepared to conduct and support. They shall be given priority comparable to combat operations and be explicitly addressed and integrated across all DoD activities, including doctrine, organizations, training, education, exercises, materiel, leadership, personnel, facilities, and planning.⁶⁶

A little more than two months later, the department published its Quadrennial Defense Review. For the first time, the review stressed the importance of irregular warfare, stating, “In the post-September 11 world, irregular warfare has emerged as the dominant form of warfare confronting the United States.”⁶⁷ The review stressed the need to place a “greater emphasis on the war on terror and irregular warfare activities including...counterinsurgency, and military support for stabilization and reconstruction efforts.”⁶⁸ It also stated as part of its vision that “future warriors will be as proficient in irregular operations, including counterinsurgency and stability operations, as they are today in high-intensity combat.”⁶⁹ Little change, however, actually followed.

Following Colonel H.R. McMaster’s success in Tal Afar (discussed in the next section), politicians also began to debate the merits of counterinsurgency. In late 2005, Secretary of State Condoleezza Rice and her counselor, Philip Zelikow, did not believe the war was going well and felt the Department of State was barely relevant. Zelikow dove into the

65 Kaplan, *The Insurgents*, 119.

66 U.S. Department of Defense, DoD Directive 3000.05, *Military Support for Stability, Security, Transition, and Reconstruction* (Washington, DC: Department of Defense), 2, [https://policy.defense.gov/portals/11/Documents/solic/DoDD%203000.05%20SSTR%20\(SIGNED\)%2028NOV05.pdf](https://policy.defense.gov/portals/11/Documents/solic/DoDD%203000.05%20SSTR%20(SIGNED)%2028NOV05.pdf).

67 U.S. Department of Defense, *Quadrennial Defense Review Report* (Washington, DC: Department of Defense, 2006), 36, <https://history.defense.gov/Portals/70/Documents/quadrennial/QDR2006.pdf?ver=2014-06-25-111017-150>.

68 Ibid.

69 Ibid., 42.

Vietnam literature and became a proponent of provincial reconstruction teams in Iraq, a civilian-led effort crudely modeled after the Civil Operations and Rural Development Support program in Vietnam. He was struck by McMaster's success and Sorley's revisionist history of the Vietnam War, which claimed that the U.S. had adopted a "clear and hold" strategy too late. Zelikow injected the concept of "clear, hold, and build" into Rice's congressional testimony in an attempt to overhaul the strategy in Iraq.⁷⁰ Before the Senate Armed Services Committee on October 19, 2005, Rice stated that "our strategy is to clear, hold, and build."⁷¹ This was the strategy they may have wanted, but not the strategy that existed on the ground, and it was opposed by both General George Casey, the senior coalition commander in Iraq, and Secretary Rumsfeld.⁷² Despite discussions in the White House, Casey's strategy remained intact, with true counterinsurgency operations like McMaster's in Tal Afar the exception.⁷³

Experimenting with Counterinsurgency in Iraq

In the summer of 2003, the U.S. had five divisions of military personnel (roughly 150,000) in Iraq, along with about 13,000 from allied countries under the command of Lieutenant General Ricardo Sanchez. Prior to the conflict, the Army and Marine Corps were primarily trained and educated on using rapid maneuver and combined arms to fight a conventional war.⁷⁴ As a result, the U.S. was ill-prepared to face the growing insurgency, and the five divisions and their subordinate brigades reacted differently. Many took a heavy-handed approach, as illustrated by a comment made by Major General Charles Swannack,

70 PBS Online, "Interview: Philip Zelikow," *Frontline*, June 19, 2007, accessed October 23, 2023, <http://www.pbs.org/wgbh/pages/frontline/endgame/interviews/zelikow.html>; and Michael R. Gordon and Bernard E. Trainor, *The Endgame: The Inside Story of the Struggle for Iraq, from George W. Bush to Barack Obama* (New York: Pantheon, 2012), 176-179.

71 Steven R. Weisman, "The Struggle for Iraq: Diplomacy; Rice, in Testy Hearing, Cites Progress in Iraq," *The New York Times*, October 20, 2005, accessed December 21, 2023, <https://www.nytimes.com/2005/10/20/washington/world/the-struggle-for-iraq-diplomacy-rice-in-testy-hearing.html>.

72 PBS Online, "Interview: Philip Zelikow."

73 Gordon and Trainor, *The Endgame*, 176-179.

74 Carter Malkasian, "Counterinsurgency in Iraq: May 2003-January 2010," in *Counterinsurgency in Modern Warfare*, ed. Daniel Marston and Carter Malkasian (Oxford, UK: Osprey, 2010), 288-289.

the commander of the 82nd Airborne Division, “This is war....We’re going to use a sledgehammer to crush a walnut.”⁷⁵

As commander of the 101st Airborne Division, David Petraeus was one of the exceptions. From the onset, he employed a counterinsurgency strategy. Rather than conducting raids based on weak intelligence and liberal firepower, Petraeus considered the population key to effective counterinsurgency operations.⁷⁶ He focused his division on Mosul, the largest city within his unit’s sector. Petraeus had his division operate out of small outposts throughout the city, instead of concentrating them on larger bases as the other divisions did. He focused his unit on collecting intelligence on insurgent leaders.⁷⁷

Petraeus devised a strategy based on three principles: (1) “This is a race against time,” (2) “The real goal is to create as many Iraqis as possible who feel they have a stake in the new Iraq,” and (3) “Will this operation produce more bad guys than it takes off the street by the way it’s conducted?” Instead of cordon and search operations, he conducted “cordon and knock” operations based on intelligence. As a result, he often had more meetings with local leaders than “meeting engagements” (firefights) with insurgents. The division averaged only five daily “hostile contacts” compared with 25 meetings between commanders and local Iraqi leaders.⁷⁸

There was no post-invasion pause in his sector as the coalition moved from the “Liberation of Iraq” phase to the “Transition of Iraq” phase of the war. Rather than waiting for instructions from an undermanned Office for Reconstruction and Humanitarian Assistance, Petraeus went right to work and made jumpstarting the political process and the economy his top priority. He focused on establishing governance and holding local elections to draw Sunnis into the political process. He created the first representative government in liberated Iraq less than two weeks after arriving in Mosul and had a

75 Alissa J. Rubin and Patrick J. McDonnell, “U.S. Gunships Target Insurgents in Iraq Amid Copter Crash Inquiry,” *Los Angeles Times*, November 19, 2003, accessed December 20, 2023, <https://www.latimes.com/archives/la-xpm-2003-nov-19-fg-iraq19-story.html>; and Malkasian, “Counterinsurgency in Iraq,” 289.

76 Malkasian, “Counterinsurgency in Iraq,” 289.

77 Ricks, *Fiasco*, 230–231.

78 Ibid.

popularly elected governor on May 5, 2003.⁷⁹ Ultimately, they would be the last elections for more than a year as the Bush administration barred further elections in the country out of fear that fundamentalists would win.⁸⁰

At the same time, Petraeus attempted to get the Iraqi economy up and running. He opened the border to get trade going, even though he likely lacked the authority. After agreeing with Syrian officials on the trade of oil, he flew to the border and turned the valve to start its flow, joining a Syrian official and the former head of the northern Iraq oil office in the ceremonial event. He aggressively pursued reconstruction projects, secured reconstruction funds, and challenged his brigade commanders to outspend one another. He secured the peaceful surrender of Sultan Hashem Ahmed, Iraq's former defense minister and number twenty-seven on the most wanted list, when most others on the list were being sought and captured with force. He held Baath Party renunciation ceremonies, with more than 2,200 showing up to one ceremony in December 2003.

Unfortunately, the Coalition Provisional Authority's de-Baathification policy made it impossible for Petraeus to offer any real reconciliation, because the Coalition Provisional Authority's reconciliation committee was centrally run from Baghdad and failed to approve any reconciliations. In a few instances, he found ways to circumvent the Coalition Provisional Authority orders. He kept teachers on board by finding a provision in the Geneva Conventions that required occupying powers to ensure the "proper working of all institutions devoted to the care and education of children." But that was the exception rather than the norm. In most cases, the de-Baathification policy offered the former Sunnis little political or economic opportunity.⁸¹ By early fall, his division had spent \$28 million on more than 3,600 Commanders' Emergency Response Program projects.⁸² As a result, a 2004 Army War College study concluded that "the 101st under Maj. Gen. Petraeus

79 Kaplan, *The Insurgents*, 72-73; and Ricks, *Fiasco*, 228.

80 Malkasian, "Counterinsurgency in Iraq," 289-290; and David Cloud and Greg Jaffe, *The Fourth Star: Four Generals and the Epic Struggle for the Future of the United States Army* (New York: Random House, 2009), 119-121.

81 Cloud and Jaffe, *The Fourth Star*, 130-140.

82 Kaplan, *The Insurgents*, 75-76.

is considered most successful in terms of jumpstarting the economy and the political process.”⁸³

Major Ike Wilson, who served as an official Army historian during the initial invasion and later as a strategic planner in Iraq, wrote that while other divisions were conducting “anti-insurgency” operations aimed at killing the enemy, the 101st waged a “counter-insurgency” campaign to undercut support for the enemy. Despite Petraeus’s efforts, the success would not endure. Not understanding that it was amid a growing insurgency, the U.S. military instead focused on withdrawing from Iraq as quickly as possible. Thus, rather than reinforcing the gains that Petraeus had made, they replaced his division with a single brigade. It was simply impossible for a single brigade to employ a counterinsurgency strategy in a city the size of Mosul. Thus, attacks in the region started to climb after his division departed.⁸⁴

After the 101st departed, the next significant attempt to employ counterinsurgency tactics started in March 2004 when Major General Pete Chiarelli arrived in Baghdad with his 1st Cavalry Division. Chiarelli carefully studied what Petraeus had done in Mosul and thought Petraeus’s strategy could be effectively employed throughout Iraq. Chiarelli became famous for his persistent, public championing of providing jobs and rebuilding infrastructure. He believed that armed youths would stop fighting if they could get jobs and the population would reject the insurgents if they saw improvements in their daily lives.⁸⁵ Before deploying, he sent his officers to Austin, Texas, to observe the city’s sewage, trash collection, and power systems. He also flew them to London for briefings from the British to learn from their counterinsurgency experience in Northern Ireland and to Jordan for a weeklong course on Arab culture and society.⁸⁶

One of the first people he wanted to meet after arriving in Iraq was the head of the U.S. Agency for International Development (USAID) mission in Iraq. The coalition reconstruction plans frustrated Chiarelli.

83 Ricks, *Fiasco*, 228.

84 *Ibid.*, 110 and 229.

85 Linda Robinson, *Tell Me How This Ends: General David Petraeus and the Search for a Way Out of Iraq* (New York: PublicAffairs, 2008), 18.

86 *Ibid.*, 18; and Cloud and Jaffe, *The Fourth Star*, 143-146.

Most of the money went to large companies for large projects that would take years to complete and have little impact on the immediate plight of the ordinary Iraqi. Rather than overhauling the sewage treatment plants that served Baghdad, Chiarelli wanted to “start in the guy’s front yard and improve his life” by engaging in projects that would immediately make life more bearable. Chiarelli achieved some limited success. By August 2004, he had 18,000 Iraqis working in the Baghdad slum of Sadr City, building a landfill and laying PVC pipe to remove the ankle-deep sewage that collected in the streets. His commanders reported that attacks were dropping in areas where money was spent, but the larger reconstruction effort was a failure. Chiarelli proposed uniting the civilian and military efforts in Baghdad and fixing the embassy-led reconstruction effort by cutting out American contractors and focusing on smaller projects and jobs for Iraqis.⁸⁷ When he departed in February 2005, he thought that Sadr City was winnable through this approach, but the next commander failed to adopt it, and the violence returned.⁸⁸

As a colonel, H.R. McMaster was another commander who employed counterinsurgency tactics prior to the doctrine’s development. He took command of the 3rd Armored Cavalry Regiment in June 2004. Prior to deploying, McMaster distributed a lengthy reading list to his officers that included studies of Arabian and Iraqi history and most of the classic counterinsurgency texts.⁸⁹ Cultural understanding became a major part of the regiment’s training, and 10 percent of the regiment received a three-week course in conversational Arabic so that even small units would have someone capable of carrying on at least rudimentary conversations. He ensured that his unit understood that counterinsurgency focused on the people, not the enemy, and circulated around his troops to ensure the message sank in. He even relieved one battalion commander who failed to grasp the change.⁹⁰

87 Cloud and Jaffe, *The Fourth Star*, 147-160 and 174-175.

88 Robinson, *Tell Me How This Ends*, 18.

89 H.R. McMaster, interview by author.

90 George Packer, “The Lesson of Tal Afar,” *The New Yorker*, April 3, 2006: 48-65, <https://www.newyorker.com/magazine/2006/04/10/the-lesson-of-tal-afar#:~:text=E2%80%9CTal%20Af%20shows%20that%20when,strategy%20to%20defeat%20the%20terrorists.%E2%80%9D>; and Thomas E. Ricks, *The Gamble: General Petraeus and the American Military Adventure in Iraq, 2006-2008* (New York: Penguin, 2009), 420-421.

Yet, McMaster clearly understood the use of force was still a critical component of counterinsurgency operations. When he was told not to bring his armored vehicles, he brought them anyway.⁹¹

His regiment deployed to Iraq in the spring of 2005 and assumed control of Western Ninewa Province, a sector in northwestern Iraq. Its largest city, Tal Afar, had a population of 200,000 and was less than 50 miles from the Syrian border. It was controlled by hard-core Iraqi insurgents and foreign jihadis who—together with the local Sunni population—controlled and destabilized the city with a campaign of intimidation, including beheadings.⁹²

In May 2005, the regiment launched Operation RESTORING RIGHTS to secure Tal Afar, but it was not until September that the unit finally entered the city. Rather than staging a major raid and then moving back to its operating base as many other commanders would have done, McMaster took a more patient and deliberate approach. It took several months, but it ultimately became extremely effective. Prior to launching operations into the city, he eliminated safe havens in the desert and bolstered security operations along the border to prevent reinforcements from crossing. After clearing small towns, he held them with Iraqi police. Prior to launching the attack into the city, he constructed a dirt berm—nine feet high and 12 miles long—around the city to control vehicular traffic into and out of the city. This allowed his unit to catch many insurgents who attempted to flee before the start of the attack.⁹³

In September, after four months of preparatory work, McMaster launched the attack but only after directing civilians to leave the city so he could use artillery and attack helicopters during the assault. He slowly cleared each block of the city. After clearing the city, rather than retreating to a forward operating base and handing control to Iraqi forces that were incapable of providing security, he positioned his

91 McMaster, interview by author.

92 Packer, “The Lesson of Tal Afar;” and Thomas E. Ricks, “The Lessons of Counterinsurgency,” *The Washington Post*, February 16, 2006, accessed December 21, 2023, <https://www.washingtonpost.com/archive/politics/2006/02/16/the-lessons-of-counter-insurgency-span-class=bankheadus-unit-praised-for-tactics-against-iraqi-fighters-treatment-of-detaineespan/f6f9e43f-5522-4496-9da6-4e8a7f651337/>.

93 Ricks, *Fiasco*, 420–421; and Ricks, “The Lessons of Counterinsurgency.”

unit into 29 outposts throughout the city to hold the gains.⁹⁴ He also replaced the pro-insurgent Sunni mayor and its corrupt Shiite police chief.⁹⁵ From the outposts, his subordinate units conducted frequent patrols within their local neighborhoods. When civilians returned to the city, his unit reduced its use of lethal force. The lack of civilian casualties during the operation won the support of the city's residents. This support was critical, allowing McMaster to build the intelligence necessary to eliminate the remaining insurgents. Their support was also crucial in building a police force necessary to maintain the gains.⁹⁶

Unfortunately, McMaster's approach was not popular with many service members, and the coalition forces failed to widely adopt it.⁹⁷ Marine Lieutenant Colonel Dale Alford was one of the few to adopt McMaster's strategy when he followed a similar approach to regain control of the western city of Al Qaim in late 2005.⁹⁸ Another was Colonel Sean MacFarland.

MacFarland commanded the First Brigade of the First Armored Division. He replaced McMaster in Tal Afar and built on McMaster's success by continuing to operate out of the 29 combat outposts that McMaster had established. Given the relative stability in Tal Afar, Casey moved MacFarland and his unit to Ramadi in June. Ramadi was strategically important to the coalition. It served as the provincial capital and lay at the intersection of highways linking Baghdad with western Iraq, Syria, and Jordan.⁹⁹ It had also long been an insurgent stronghold. There, MacFarland employed a similar counterinsurgency strategy to isolate the insurgents and deny them a sanctuary while at the same time building Iraqi security forces to hold the gains. He engaged local tribal sheiks who were tired of al Qaeda's violence and intimidation and their loss of power and influence, solicited their cooperation to recruit young Iraqis into the Ramadi police or neighborhood watches, and established combined American and Iraqi outposts in the city to

94 Malkasian, "Counterinsurgency in Iraq," 298-299; and Ricks, "The Lessons of Counterinsurgency."

95 Packer, "The Lesson of Tal Afar."

96 Malkasian, "Counterinsurgency in Iraq," 298-299; and Ricks, "The Lessons of Counterinsurgency."

97 Cloud and Jaffe, *The Fourth Star*, 207.

98 Malkasian, "Counterinsurgency in Iraq," 298-299.

99 Niel Smith and Sean MacFarland, "Anbar Awakens: The Tipping Point," *Military Review* 88, no. 2 (2008): 42, https://www.armyupress.army.mil/Portals/7/military-review/Archives/English/MilitaryReview_20080430_art008.pdf.

maintain security.¹⁰⁰

MacFarland's efforts to engage the local sheiks soon paid off as their frustration with al Qaeda's brutal tactics grew. Many of the tribes, however, were too afraid to revolt against al Qaeda without coalition support after witnessing the fate of the Anbar People's Council a year earlier.¹⁰¹ On September 9, 2006, a local sheik organized a tribal council attended by more than 50 sheiks representing 17 local tribes. MacFarland attended the council, where the sheiks pledged their allegiance to the U.S. and against al Qaeda.¹⁰² This change of allegiance soon became known as the Anbar Awakening and the Sunni Awakening.¹⁰³

By mid-December, MacFarland controlled the northern and western portions of Ramadi with the help of the tribes that were providing tribe members to serve in the Iraqi security forces and hold the gains that MacFarland's forces had made. When a sheik called for help to ward off a large al Qaeda attack, MacFarland quickly responded with overwhelming force. By February 2007, attacks in the city had dropped 70 percent from the previous summer. After clearing and holding the city, MacFarland set to rebuild the city with a focus on establishing good governance. He successfully employed carefully focused lethal operations, secured the populace through a forward presence, co-opted local leaders, developed competent host-nation security forces, created a public belief in a rising success, and developed human and physical infrastructure. In short, he employed classic counterinsurgency doctrine.¹⁰⁴

Unfortunately, McMaster, Alford, and MacFarland were exceptions. The Multi-National Force – Iraq campaign plan may have espoused a counterinsurgency strategy, but the command lacked an understanding of the tactics necessary to implement such a strategy since there was

100 Mansoor, "Army," 79–80; and Smith and MacFarland, "Anbar Awakens," 42–46.

101 Al Qaeda in Iraq killed more than half of the Anbar People's Council because council members were unable to secure themselves, nor were coalition forces able to provide the necessary security. See, Stephen Biddle et al., "Testing the Surge: Why Did Violence Decline in Iraq in 2007?" *International Security* 37, no. 1 (2012): 7–40, <https://www.jstor.org/stable/23280403>; and Smith and MacFarland, "Anbar Awakens," 42.

102 Ibid.

103 Gordon and Trainer, *The Endgame*, 252.

104 Smith and MacFarland, "Anbar Awakens," 41–52; Gordon and Trainer, *The Endgame*, 252–263; Liam Collins and John Spencer, *Understanding Urban Warfare* (Havant, UK: Howgate, 2022), 225–245.

no doctrine. In August 2004, the command issued its campaign plan with a new mission statement directing coalition forces to conduct “full spectrum counter-insurgency operations” and to organize, train, and equip Iraqi security forces. This was a significant change from the previous mission statement that focused on conducting “offensive operations” and “stability operations.”¹⁰⁵ Casey believed the key to defeating the insurgency was driving a wedge between the insurgents and the Iraqi people by demonstrating the effectiveness of the new interim Iraqi Government. The plan called for coalition troops to target insurgents’ safe havens, secure Baghdad and 14 other cities, control the borders, and prepare the Iraqi security forces to support the elections.¹⁰⁶

The campaign plan, however, lacked doctrinal backing, and no one understood what counterinsurgency operations were and, not surprisingly, the strategy failed to grasp the basics of effective counterinsurgency doctrine. Casey’s staff recognized this shortcoming, thereupon Colonel William Hix—the officer in charge of developing the coalition strategy—invited Kalev Sepp to help review the campaign plan. Sepp was a professor at the Naval Postgraduate School who had previously served as a Special Forces officer. Following his review, Sepp wrote a paper called “Best Practices in Counterinsurgency.” Hix found it to be so useful that he included it as an annex to the next campaign plan and urged Sepp to publish it in *Military Review*.¹⁰⁷ It was subsequently published in the May-June 2005 issue.¹⁰⁸

In April 2005, following the establishment of the new Iraqi parliament, Casey published the Multi-National Force – Iraq’s new strategy. Capitalizing on the “momentum” of the election, the United States would “diminish” the insurgency and prepare the Iraqi security forces to “begin to accept the counterinsurgency lead.” To work, the plan assumed that the insurgency would remain the same in the Sunni areas and weaken elsewhere.¹⁰⁹ By the summer of 2005, the

105 Donald P. Wright and Timothy R. Reese. *On Point II: Transition to the New Campaign: The United States Army in Operation IRAQI FREEDOM May 2003-January 2005* (Fort Leavenworth, KS: Combat Studies Institute Press, 2008), 163 and 177.

106 Ibid., 177–180.

107 Barno and Bensahel, *Adaptation Under Fire*, 110.

108 Kalev I. Sepp, “Best Practices in Counterinsurgency,” *Military Review* 85, no. 3 (2005): 8–12, <https://www.armyupress.army.mil/Portals/7/PDF-UA-docs/Sepp-May-June-2005-UA.pdf>.

109 On April 29, 2005, Casey published the Multi-National Force – Iraq’s new strategy in the “MNF-I CONPLAN: Transition to

strategy was captured with the slogan: “As they stand up, we stand down.”¹¹⁰ Casey planned to decrease the coalition presence from 160,000 to 91,000 by the end of 2006, consolidating from 109 bases to 86.¹¹¹ In February, the coalition started turning over portions of Baghdad to Iraqi control. The priority remained to build Iraqi security forces. They grew from 100,000 in the late fall of 2004 to over 210,000 by the end of 2005, but the numbers were deceiving, as the capability of many of the units was extremely questionable.¹¹²

In late 2005, Casey established a counterinsurgency academy at Taji and required incoming leaders to attend the eight-day course as a prerequisite for commanding in Iraq.¹¹³ But the strategy that he implemented—drawing down U.S. forces and consolidating them onto fewer bases—made it impossible to implement counterinsurgency tactics. Casey continued to believe that the U.S. presence in Iraq was the primary aggravator of the conflict and that the continuing violence in Iraq was one for Iraqis to settle. Consequently, he believed decreasing the coalition’s presence was the best option.¹¹⁴ Thus, coalition forces continued to consolidate onto fewer bases even though Iraqi security forces were incapable of providing security within the cities and across the country. As a result, violence and insecurity continued to climb.

The Successful Innovation of Counterinsurgency Doctrine (2006-2007)

The doctrine’s successful development started when Petraeus, now a three-star general, assumed command of the Combined Arms Center, and was complete when he implemented it as the commander of the Multi-National Forces – Iraq. General Peter Schoomaker, the Chief of Staff of the Army, had selected Petraeus to take command because

Security and Self-Reliance and Coalition Transformation.” See Gordon and Trainor, *The Endgame*, 137.

110 John D. Banusiewicz, “‘As Iraqis Stand Up, We Will Stand Down,’ Bush Tells Nation,” Armed Forces Press Service, June 28, 2005.

111 Gordon and Trainor, *The Endgame*, 138.

112 The section of Baghdad was turned over on February 21, 2005. See Gordon and Trainor, *The Endgame*, 144-146.

113 Malkasian, “Counterinsurgency in Iraq,” 299.

114 Robinson, *Tell Me How This Ends*, 18-20.

he knew that Petraeus could lead the change that the Army needed. Before taking command, Schoomaker told him, “Shake up the Army, Dave,” and that is what Petraeus did.¹¹⁵

The Development of the Counterinsurgency Field Manual (FM 3-24)

Only weeks after taking command on October 20, 2005, Petraeus traveled to Washington, DC, to attend a conference titled “Counterinsurgency in Iraq: Implications of Irregular Warfare for the United States Government.”¹¹⁶ The conference was co-sponsored by Harvard’s Carr Center for Human Rights Policy and the U.S. Army War College’s Strategic Studies Institute. The Conference was the idea of the Carr Center’s director, Sarah Sewall.¹¹⁷ She had worked as the deputy assistant secretary of defense for peacekeeping and humanitarian assistance in the 1990s. While there, she tried to influence Army policy, arguing that restraint in war—especially “limited” conflict—could be more effective than overt military force. After leaving the Pentagon, Sewall continued to work on similar issues at the Carr Center and had been a counterinsurgency advocate since her time in the Pentagon. The strategic situation in Iraq made the time ripe for holding the conference. During her time in the Pentagon and at the Carr Center, she had developed an impressive network of academics and practitioners who respected her work. Thus, Sewall was able to personally invite many of the attendees who would later play a significant role in the development of Petraeus’s counterinsurgency manual.¹¹⁸

Petraeus served as the keynote speaker at the conference’s lunch. When someone asked him how the Army was adapting to counterinsurgency, he replied that it was not adapting as well as it should, and that was why John Nagl was going to write the Army’s new

115 Peter Wehner, “Web Exclusive: ‘Shake Up the Army, Dave,’” *Commentary*, May 7, 2010, accessed December 12, 2023, <https://www.commentary.org/peter-wehner/web-exclusive-%E2%80%9Cshake-up-the-army-dave%E2%80%9D/>; and David Petraeus, “Military Farewell Retirement Address,” *AmericanRhetoric.com*, August 31, 2011, accessed December 12, 2023, <https://www.americanrhetoric.com/speeches/davidpetraeusretirementspeech.htm>.

116 The conference was held on November 7-8, 2005.

117 Sarah Sewall, interview by author.

118 Ibid.

counterinsurgency field manual.¹¹⁹ Lieutenant Colonel John Nagl was one of the most persistent proponents of new counterinsurgency doctrine and was serving as special military assistant to Deputy Secretary of Defense Paul Wolfowitz.¹²⁰ He was a Rhodes Scholar who had graduated near the top of his West Point class, and had written his doctoral dissertation on the challenge of fighting insurgent forces.¹²¹ His dissertation was later published as a book *Learning to Eat Soup with a Knife*. Petraeus's remark caught Nagl by surprise. As a result, Nagl set off to discuss the idea for the new doctrine with a small group from the conference later that evening. He went to a nearby restaurant with Lieutenant Colonel Richard Lacquement, Jr., a former faculty colleague at West Point who was also working inside the Pentagon; Janine Davidson, who had written DoD Directive 3000.05, *Military Support for Stability, Security, Transition and Reconstruction Operations*; and Erin Simpson, a Harvard graduate student who was teaching a course on counterinsurgency at the Marine Corps University. On the way there, they ran into Major Kyle Teamey, who had been Nagl's intelligence officer in Iraq and was attending graduate school at the Nitze School of Advanced International Studies at Johns Hopkins University. Together, they developed an outline for the new doctrine.¹²²

By November, the first draft of Horvath's revised field manual was ready for review. Petraeus then sent it to some of his trusted colleagues in academe for feedback. Eliot Cohen, a professor at the Nitze School of Advanced International Studies, recommended a complete rewrite and suggested Conrad Crane as the lead author, since Nagl lacked the capacity given his responsibilities as a member of the Deputy Secretary of Defense's staff.¹²³ Cohen had been impressed by a monograph Crane had co-authored just prior to the invasion. The monograph addressed the challenges the Army would face if it was placed in charge of an occupation force after toppling Saddam Hussein.¹²⁴

119 John A. Nagl, interview by author.

120 Conrad C. Crane, "United States," 59-72.

121 Kaplan, *The Insurgents*, 1.

122 Richard Lacquement, interview by author; and Conrad C. Crane, "United States," 59-60.

123 Conrad C. Crane, interview by author; Robinson, *Tell Me How This Ends*, 77; and Crane, "United States," 60.

124 Robinson, *Tell Me How This Ends*, 77-78. The monograph was Conrad C. Crane and W. Andrew Terrill, *Reconstructing Iraq: Insights, Challenges, and Missions for Military Forces in a Post-Conflict Scenario* (Carlisle, PA: U.S. Army War College Press, 2003),

Crane was the director of the U.S. Army Military History Institute within the Strategic Studies Institute at the U.S. Army War College. He had joined the institute in September 2000, after 26 years of military service.¹²⁵ He was a West Point classmate of Petraeus and had overlapped with both Petraeus and Nagl during his multiple teaching assignments at West Point.¹²⁶ Since the Strategic Studies Institute had co-sponsored the conference with the Carr Center, Crane worked closely with Sewall to plan and execute the event.¹²⁷ Petraeus called Crane on November 16 to offer him the lead role in rewriting the manual. According to Crane, he could not turn down such a “big opportunity to make a lasting contribution,” and “Petraeus is a hard man to say no to.”¹²⁸

At this point, the process started to diverge from the normal doctrine development process. The lead author moved from Horvath to Crane. Horvath, however, retained a leading role in the project as Petraeus’s “Counterinsurgency Secretary” and as supervisor of the process from Fort Leavenworth.¹²⁹ Crane reached out to Nagl, who provided him with the outline he had developed at the conference.¹³⁰ From the beginning, Petraeus envisioned a joint and combined effort with the U.S. Marine Corps and the British Army. Lieutenant General James Mattis, as commander of the Marines’ Combat Development Command, was responsible for Marine doctrine. He quickly signed on to the project. Like Petraeus, Mattis had a reputation as a Marine scholar. Unfortunately, the British doctrine writers could not keep pace with the project’s timeline, though they were consulted on a routine basis.¹³¹ Less than two weeks later, Crane flew to Fort Leavenworth to brief Petraeus on his plan. They discussed the outline and the makeup of the writing team. It was clear to Crane that Petraeus was going to be an active participant in the creation of the doctrine, and Crane soon found himself in a pattern of weekly, and sometimes daily,

<https://press.armywarcollege.edu/monographs/807>.

125 Conrad C. Crane, *Cassandra in Oz: Counterinsurgency and Future War* (Annapolis, MD: Naval Institute Press, 2016).

126 Crane, interview by author; and Crane, “United States,” 60-61.

127 Sewall, interview by author.

128 Crane, “United States,” 60.

129 Jan Horvath, e-mail message to author, April 10, 2011.

130 Crane, interview by author; and Crane, *Cassandra in Oz*, 47.

131 David H. Petraeus, interview by author; and Crane, “United States,” 61.

communication with Petraeus.¹³²

To increase the importance of the manual, Petraeus changed the number of the manual from 3-07.22 to 3-24.¹³³ This elevated the manual from a sub-component of stability operations to its own functional field, a level on par with other operations, such as engineer operations, fire support, stability operations, and information operations. By the end of November, the concept for what ultimately became the new counterinsurgency manual was finalized. In November 2005, Petraeus started penning an article that would be published in the January 2006 issue of *Military Review*.¹³⁴ The article, “Learning Counterinsurgency: Observations from Soldiering in Iraq,” discussed 14 observations that became part of the manual’s introduction.¹³⁵

Chiarelli coauthored another influential article in *Military Review*. After his experience in Baghdad, he became convinced that “full spectrum operations were required for success in Iraq.” For him, conducting combat operations and building Iraqi security forces were insufficient. Equally important were restoring essential services, promoting and establishing a legitimate national government, and promoting and establishing economic pluralism. The article described the application of conceptual lines of operation in counterinsurgency.¹³⁶ In addition to analyzing the writings and pronouncements of contemporary leaders, the writing team also relied heavily on the works of respected counterinsurgency scholars, such as Galula, Kitson, and Thompson.¹³⁷

By the end of January, the first draft was ready for review. Veering from the normal doctrinal process once again, Petraeus decided to hold a “Counterinsurgency Field Manual Workshop” at Fort Leavenworth on February 23-24, 2006. Petraeus personally approved the diverse guest list, which included representatives from the CIA, State Department, and USAID; officers from other services and

132 Crane, *Cassandra in Oz*, 48.

133 Crane, “United States,” 61.

134 Ibid. As the Combined Arms Center commander, Petraeus was responsible for *Military Review*.

135 David H. Petraeus, “Learning Counterinsurgency: Observations from Soldiering in Iraq,” *Military Review* 86, no. 1 (2006): 2-12, https://www.armyupress.army.mil/Portals/7/military-review/COIN%20Reader/docs/Petraues_Learning_Counterinsurgency.pdf.

136 Crane, “United States,” 61-62; and Peter W. Chiarelli and Patrick R. Michaelis, “Winning the Peace: The Requirement for Full-Spectrum Operations,” *Military Review* 85, no. 4 (2005): 4-17, https://www.armyupress.army.mil/Portals/7/military-review/Archives/English/MilitaryReview_2006CR1031_art007.pdf.

137 Crane, “United States,” 61-62.

countries; leading academics including Eliot Cohen; veterans of past and current conflicts; and media figures such as George Packer, Linda Robinson, and James Fallows.¹³⁸ At Petraeus's request, Sewall agreed to co-sponsor the event.¹³⁹ Thus, she was able to bring in colleagues from the human rights community and nongovernmental organizations that likely would not have attended if it was solely sponsored by the military.¹⁴⁰ As one attendee described it, how else could you get a "chain-smoking radical lawyer from the UK there?"¹⁴¹

The format was more akin to an academic conference than a military conference. Each author was allowed fifteen minutes to present their chapter. A discussant then critiqued it before opening the discussion to the larger audience, in which Petraeus played an active role. The first discussant was British Brigadier General Nigel Aylwin-Foster, who reiterated the themes from his controversial *Military Review* article about U.S. failures to adapt to the requirements of counterinsurgency in Iraq.¹⁴² His inclusion demonstrated Petraeus's desire to have as diverse a group as possible. A final unique aspect was the fact that Petraeus attended the entire two-day event, a significant amount of time for the Combined Arms Center commander to devote to a single field manual.¹⁴³ Petraeus personally committed so much time to the doctrine's development because he fully expected to be sent back to Iraq, and he wanted to have doctrine that his troops could leverage.¹⁴⁴

Horvath helped collect the comments and critiques and helped Crane incorporate them into the second draft, which was completed by May and posted online for feedback. Unlike other manuals that are typically sent to a select group for feedback, this manual was posted online to solicit feedback from anyone, including those outside the military.¹⁴⁵ This also opened it to public critique. In October 2006, retired Army officer Ralph Peters publicly attacked the manual

138 Ibid., 63.

139 Sewall, interview by author.

140 Crane, "United States."

141 Conference attendee who asked for the quotation to be unattributed.

142 Nigel R.F. Aylwin-Foster, "Changing the Army for Counterinsurgency Operations," *Military Review* 85, no. 6 (2005): 2-15, <https://www.armyupress.army.mil/Portals/7/PDF-UA-docs/Aylwin-Foster-Nov-Dec-2005-UA.pdf>.

143 Horvath and Crane, interviews by author.

144 Crane, *Cassandra in Oz*, 50.

145 Crane, interview by author.

for being too soft in an op-ed for the *New York Post*.¹⁴⁶ To deal with the criticism, Petraeus telephoned Peters to address his concerns and invited him to Fort Leavenworth to debate the issue on November 21.¹⁴⁷

Peters had issues with an earlier draft that he felt did not emphasize the lethal aspects of counterinsurgency enough. Some of the “paradoxes of counterinsurgency” in the earlier draft were described by Petraeus as “nonsensical,” and he remarked that “[Peters] was right to have issue with them.” For example, “Money is the best ammunition” was changed to “Some of the Best Weapons for Counterinsurgencies Do Not Shoot.”¹⁴⁸ As Petraeus rightly pointed out during an interview, “Try throwing dollars at the enemy if he is firing [rocket propelled grenades] at you.”¹⁴⁹ The final version of the manual addressed enough of Peters’ concerns to receive his praise in a subsequent *New York Post* article in which he described the manual as “the most-improved government publication of the decade” and “doctrine that will truly help our troops.”¹⁵⁰ Thus, the final draft of the manual was very different from the February draft.¹⁵¹

Petraeus and Lieutenant General James Amos, who had replaced Mattis as the doctrinal proponent for the Marine Corps, signed the Army and Marine Corps manual in early December. The Army and Marine Corps posted it to their websites on December 15. More than 1.5 million readers downloaded it in the first month, and it received a positive review from Pulitzer Prize-winning author Samantha Power in *The New York Times*.¹⁵² Despite being available for free online, over 50,000 people purchased a version of the manual published by the University of Chicago Press that included a forward by Nagl and

146 Ralph Peters, “Politically Correct War: U.S. Military Leaders Deny Reality,” *New York Post*, October 18, 2006, accessed December 21, 2023, https://web.archive.org/web/20061029042108/http://www.nypost.com/seven/10182006/postopinion/opedcolumnists/politically_correct_war_opedcolumnists_ralph_peters.htm?page=0.

147 Peter Mansoor, Petraeus, and Crane, interviews by author.

148 Department of Army, FM 3-24 *Counterinsurgency*, 1-27.

149 Petraeus, interview by author.

150 Ralph Peters, “Getting Counterinsurgency Right,” *New York Post*, December 20, 2006, accessed December 21, 2023, <https://nypost.com/2006/12/20/getting-counterinsurgency-right/>.

151 Crane, *Cassandra in Oz*, 79.

152 Ibid., 99; and Samantha Power, “Our War on Terror,” *The New York Times*, July 29, 2007, accessed December 21, 2023, <https://www.nytimes.com/2007/07/29/books/review/Power-t.html>.

an introduction by Sewall.¹⁵³ Stories about the new doctrine and the “brain trust” that developed it were featured on the front pages of *The Wall Street Journal*, *The New York Times*, *Los Angeles Times*, *Chicago Tribune*, and *The Washington Post*.¹⁵⁴ Some of the doctrine’s authors appeared on *Charlie Rose*, and Nagl appeared for an interview with Jon Stewart on *The Daily Show*.¹⁵⁵

Counterinsurgency Doctrine in Training

Petraeus expanded the incorporation of counterinsurgency doctrine into training and exercises at the combat training centers and Battle Command Training Program that fell under his command.¹⁵⁶ Wallace had made significant changes, but Petraeus made even more. Petraeus continued to improve the scenarios so that they more closely resembled the insurgency in Iraq by capturing lessons learned by the Army’s new Asymmetric Warfare Group, the Center for Army Lessons Learned, and observer-controllers from the training centers whom he deployed to Iraq. He continued building replica Iraqi villages at the combat training centers, brought in hundreds of native-speaking Iraqi-Americans to role-play local nationals, incorporated civilian counterparts, and used soldiers to replicate terrorists, insurgents, and Iraqi forces.¹⁵⁷ Petraeus met little resistance when incorporating the changes into training, as units were eager to train in scenarios that simulated the situation they were likely to face overseas. They craved doctrine that would make them more effective.¹⁵⁸

Petraeus also made significant changes to the Battle Command Training Program—the office that developed and implemented the

153 By 2012, over 50,000 copies of the manual had been sold. Chicago University Press, interview by author.

154 See articles by David L. Ulin in the *Los Angeles Times* and Robert Bateman in the *Chicago Tribune*. See Cloud and Jaffe, *The Fourth Star*, 220.

155 See Montgomery McFate and Sarah Sewall, “Counterinsurgency Field Manual,” *Charlie Rose*, December 24, 2007; and John A. Nagl, Interview with Jon Stewart, *The Daily Show with Jon Stewart*, August 23, 2007, <https://www.cc.com/video/dt3sbh/the-daily-show-with-jon-stewart-john-nagl>.

156 The Battle Command Training Program is now known as the Mission Command Training Program.

157 Petraeus, interview by author; and Petraeus, “The Surge of Ideas” (speech, American Enterprise Institute, Washington, DC, May 6, 2010), <https://www.aei.org/research-products/speech/the-surge-of-ideas-2/>.

158 Petraeus, interview by author.

readiness exercises for staffs at the brigade, division, and corps level. Wallace changed the readiness exercise scenarios, but Petraeus found the changes had not gone far enough. As late as January 2006, Petraeus found the Battle Command Training Program's seminar for "the road to deployment" still too focused on conventional operations; thus, he overhauled the training by creating a week-long counterinsurgency seminar and adding additional leader and staff training opportunities to help educate units following the seminar. He did not eliminate all conventional operations; he simply rebalanced the seminar to focus more on stability and counterinsurgency operations.¹⁵⁹

Counterinsurgency Doctrine in Education

While Petraeus made significant changes to training, he made even greater changes to the Army's professional military education. He revamped the Command and General Staff College curriculum, created a counterinsurgency center at Fort Leavenworth, refocused the School of Advanced Military Studies on counterinsurgency, and expanded the use of *Military Review* as a vehicle to promote the doctrine.

Petraeus instituted dramatic changes to the Command and General Staff College curriculum. In a course that usually sees curriculum changes occur at glacial speeds, he increased the number of hours dedicated to counterinsurgency-related subjects from less than 10 to 201 of the 555 hours for the core curriculum, and to 40 of the 192 hours assigned for electives.¹⁶⁰ Like Wallace, Petraeus found it difficult to implement the change. He met significant resistance from instructors and told them that he was prepared to have the students teach one another because they had all been to Iraq and understood what needed to be done.¹⁶¹ To help expedite the change, he took the unprecedented move of stopping the course for three weeks and having the students

¹⁵⁹ Petraeus, interview by author; and Petraeus, "The Surge of Ideas."

¹⁶⁰ Volney J. Warner and James H. Willbanks, "Preparing Field Grade Leaders for Today and Tomorrow," *Military Review* 86, no. 1 (2006): 108, <https://cgsc.contentdm.oclc.org/digital/api/collection/p124201coll1/id/1205/download>.

¹⁶¹ Petraeus, interview by author.

help develop the new counterinsurgency curriculum.¹⁶² The idea came to him from the general in charge of the Field Artillery Captains Career Course who similarly closed his school to expedite the revamping of that course's curriculum.¹⁶³ At Fort Leavenworth's School of Advanced Military Studies—where the Army educates planning specialists often referred to as “Jedi knights”—31 out of the 78 student monographs in the 2005-2006 academic year were devoted to counterinsurgency or stability operations. In the previous year, there had been only two.¹⁶⁴

Petraeus expanded Wallace's effort to use *Military Review* to help diffuse the doctrine and implement it across the Army. In his very first issue, Petraeus included the article by British Brigadier General Aylwin-Foster that was critical of U.S. operations in Iraq.¹⁶⁵ In the next issue, he published his own article.¹⁶⁶ Petraeus instituted a counterinsurgency writing contest with prize money that attracted dozens of articles from inside and outside the military.¹⁶⁷ He sought out leading counterinsurgency scholars to pen articles, including David Kilcullen, Nagl, and Cohen.¹⁶⁸ In October 2006, the month before the release of the new counterinsurgency manual, Petraeus released the “Counterinsurgency Reader,” which included the journal's best counterinsurgency articles, including ones by Aylwin-Foster, Chiarelli, Kilcullen, Sepp, and the essay contest winners, as well as his own.¹⁶⁹

Petraeus also institutionalized other learning portals. The Center for Army Lessons Learned went from producing primarily hard-copy publications that few read to producing primarily online publications on a website that averaged more than 15,000 sessions each month. He also increased the number of Center for Army Lessons Learned collection and analysis teams to ensure that they captured the right

162 Todd Schultz, interview by author.

163 Petraeus, interview by author.

164 Ricks, *Fiasco*, 419.

165 Aylwin-Foster, “Changing the Army,” 2-15.

166 Petraeus, “Learning Counterinsurgency,” 2-12.

167 The winning articles, “Producing Victory: Rethinking Conventional Forces in COIN Operations” by Douglas A. Ollivant and Eric D. Chewning and “Unit Immersion in Mosul: Establishing Stability in Transition” by Paul T. Stanton, appeared in *Military Review* 86, no. 4 (2006), <https://cgsc.contentdm.oclc.org/digital/api/collection/p124201coll1/id/414/download>.

168 See, for example, David Kilcullen, “Twenty-Eight Articles: Fundamentals of Company-Level Counterinsurgency,” *Military Review* 86, no. 3 (2006): 134-139, <https://www.armyupress.army.mil/Portals/7/PDF-UA-docs/Kilcullen-May-June-2006-UA.pdf>.

169 *Military Review: Special Edition—Counterinsurgency Reader* (Fort Leavenworth, KS: Combined Arms Center, 2006).

lessons and integrated them into training, doctrine, and education.¹⁷⁰ Finally, he institutionalized web-based virtual communities like CompanyCommand.com, which had sprung up to link those in combat with those preparing to deploy.¹⁷¹

Counterinsurgency Doctrine in Washington

Outside of Petraeus, the most influential member promoting counterinsurgency doctrine was retired General Jack Keane. Despite having retired from active duty in 2003, Keane continued to stay engaged with senior military and policy members. By 2006, he had become frustrated with the lack of progress in Iraq and started arguing for a new strategy. He leveraged his former position to influence senior defense and administration officials behind closed doors. In September, he met with Rumsfeld and General Peter Pace, Chairman of the Joint Chiefs of Staff, to argue for additional troops, but both were unreceptive. Despite this setback, Keane refused to give up.

In mid-December 2006, President Bush found himself in an unenviable position. His party had lost the midterm elections—losing control of both the House and the Senate—and the Democratic majority interpreted its mandate as “Get out of Iraq.”¹⁷² Bush felt significant political and public pressure to decrease the American presence in Iraq. On December 6, the Iraq Study Group released its report, which was critical of the progress made in Iraq. Despite its criticism, the report did not advocate for counterinsurgency doctrine.¹⁷³ Days later, Keane was called in to meet with Bush, along with academics Eliot Cohen and Stephen Biddle, and retired generals Barry McCaffrey and Wayne Downing. Keane argued that additional troops were required, and they needed to employ “proven counterinsurgency practices.” He, along with Cohen and Biddle, advocated for a surge/counterinsurgency strategy, while McCaffrey and Downing argued

170 From PowerPoint brief, Combined Arms Center, “Combined Arms Center—An Engine of Change...Enabling the Road to Deployment” (Fort Leavenworth, KS: U.S. Army Combined Arms Center, 2006).

171 Petraeus, “The Surge of Ideas.”

172 Robinson, *Tell Me How This Ends*, 18–20.

173 James A. Baker III et al., *The Iraq Study Group Report: The Way Forward* (New York: Vintage, 2006).

against it. Despite their differences, they all agreed that the current strategy was not working and that Petraeus should replace Casey.¹⁷⁴

At that time, the public debate focused on troop strength more than strategy. Still, a counterinsurgency strategy was embedded as a critical component of the surge strategy by most of its proponents. Keane left the meeting not knowing the President's stand on the issue, but he would soon find out. Following the meeting, the National Security Advisor to the Vice President John Hannah called Keane to tell him that "The meeting in the Oval Office turned out to be decisive, in terms of your presentation. You did two things in there that I haven't seen. You gave them vision and a way ahead, and you gave them courage. You're going to hear from [National Security Advisor] Stephen Hadley's people."¹⁷⁵ The White House realized this advice was the opposite of public and congressional expectations. Keane was bucking the trend of nearly everyone who favored a drawdown of troops. Some have downplayed his role, but one official said, "We would not have had the surge without General Keane's artful explanations and credibility."¹⁷⁶ In December, Pace came around to favoring the surge strategy after talking to his "Council of Colonels." However, the Army Chief of Staff and the Joint Staff Chief of Operations remained opposed.¹⁷⁷ On December 15, Petraeus's counterinsurgency manual was posted online and, days later, Robert Gates replaced Rumsfeld as the Secretary of Defense.

Despite the pressure to reduce forces in Iraq, the counterinsurgency coalition's efforts proved successful in January 2007 when President Bush announced that Petraeus would be taking over command of the Multi-National Force – Iraq, and he would be implementing a surge strategy. Counterinsurgency doctrine could finally be adopted on February 10, 2007, when Petraeus took command.

174 Ricks, *The Gamble*, 98-101; Robinson, *Tell Me How This Ends*, 27; and Gordon and Trainor, *The Endgame*, 302-4.

175 Robinson, *Tell Me How This Ends*, 34.

176 *Ibid.*, 35-36.

177 *Ibid.*, 27; and Peter Schoomaker, interview by author. He opposed the surge, believing that the additional deployments were too much for the Army to bear and it would "break" the Army.

Implementing Counterinsurgency Doctrine in Iraq

As the Multi-National Force – Iraq commander, Petraeus was able to force the implementation of counterinsurgency doctrine across Iraq. Petraeus immediately instituted a counterinsurgency strategy using the principles captured in the recently published field manual. The strategy focused on securing the population and living among the population.¹⁷⁸ Petraeus ordered units to deploy out of the large bases where many had been since the spring of 2004 and to establish smaller combat outposts throughout the cities. There, they partnered with Iraqi security forces—supported by the local neighborhood watch groups—and provided the security that was needed to protect the population from terrorist, insurgent, and militia violence and intimidation. Instead of launching infrequent vehicular patrols from large bases, they conducted combined foot patrols with Iraqi security forces from combat outposts. This not only provided much-needed security for the populace but also produced better intelligence that resulted from closer contact with the populace.¹⁷⁹

Petraeus brought in an outside group called the Joint Strategic Assessment Team to examine the war, its causes, and the current situation with a fresh set of eyes. He gave the team three months to produce an assessment and then used the assessment to help him revise the campaign plan. McMaster and diplomat David Pearce co-headed the two-dozen member team. Petraeus felt it was important to have the team co-headed by a diplomat and a military officer.¹⁸⁰ The team included a mix of officers, diplomats, and academics. The assessment team provided many recommendations, and while Petraeus did not incorporate all of them, it served to validate the Multi-National Force – Iraq's first formal counterinsurgency guidance, which he published in July.¹⁸¹ Petraeus updated his guidance seven times before leaving command. *Military Review* published his final version in a 2008 article.¹⁸²

178 Petraeus, "The Surge of Ideas."

179 Mansoor, "Army," 81.

180 Petraeus, interview by author.

181 Ibid.

182 David H. Petraeus, "Multi-National Force – Iraq Commander's Counterinsurgency Guidance," *Military Review* 88, no. 5 (2008): 2-4, <https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/MR-Coin-Reader2/COIN2-Petraeus/>.

Petraeus's next priority was to effectively communicate the counterinsurgency strategy and doctrine to anyone with a stake in Iraq. He used just about every venue possible: command letters, presentations at commanders' conferences, briefings to superiors and higher headquarters, press conferences, press releases, meetings with high-level visitors, and even congressional hearings.¹⁸³ He believed that congressional hearings were one of the most important venues to communicate the new strategy.¹⁸⁴ Before taking command, he communicated his new strategy during his Senate confirmation hearing, at which he stated that "the mission of [Multi-National Force – Iraq] will be modified, making security of the population...the focus of the military effort." Petraeus also made it clear that "a persistent presence in...neighborhoods will be essential."¹⁸⁵

He also communicated the new strategy downward to ensure it diffused across the breadth and depth of his organization.¹⁸⁶ On the day that Petraeus assumed command, he sent his first "commander's letter" to the members of his command, emphasizing the importance of providing security to the Iraqi people.¹⁸⁷ In March, he sent a second letter articulating the new "clear, hold, build strategy," stating that "improving security for Iraq's population is...the over-riding objective of our strategy...we will not just "clear" their neighborhoods of the enemy, we will also stay and help "hold" the neighborhoods so that the "build" phase that many of their communities need can go forward." Petraeus went on to make it clear that they would be living among the population.¹⁸⁸ He also wrote letters to the Iraqi people and the family members of Multi-National Force – Iraq personnel.¹⁸⁹ Likewise, rather than looking at press conferences as a necessary evil of the job, Petraeus viewed them as opportunities to get his message out.

183 David H. Petraeus, Princeton University Madison Medalist Alumni Day Lecture, "Strategic Leadership and Old Nassau" (speech, Princeton, New Jersey, February 20, 2010), https://pr.princeton.edu/alumnidaylectures/Petraeus_AlumniDay.pdf

184 Ibid.

185 David H. Petraeus, "Statement of LTG David H. Petraeus, USA, to be General and Commander, Multinational Forces-Iraq," *Nominations before the Senate Armed Service Committee*, 110th Cong. (January 23, 2007), <http://www.gpo.gov/fdsys/pkg/CHRG-110shrg42309/html/CHRG-110shrg42309.htm>.

186 Petraeus, "Strategic Leadership."

187 David H. Petraeus, "Commander's Letter," February 10, 2007.

188 David H. Petraeus, "Commander's Letter," March 15, 2007.

189 David H. Petraeus, "Gen. Petraeus's Letter to the Iraqi People," April 7, 2007; and David H. Petraeus, "Commander's Letter to MNF-I Families," April 13, 2007.

Petraeus managed his implementation strategy through a combination of daily videoconferences, battlefield circulation, and using a team of “informants.” He changed the daily battle rhythm to be more efficient, allowing him to leave his headquarters and visit individual units at least twice a week. He conducted daily videoconferences with major units to ensure that his guidance was transmitted directly to subordinates and not filtered through their staff. Only a small portion of the daily meetings were spent covering “traditional military operations.” Most of the time was spent on “full spectrum operations,” from which he received updates on Iraqi oil production, the Iraqi banking system and the regulations governing it, electrical production, and a wide range of topics that he needed to gain an accurate picture of the country.¹⁹⁰ He circulated the battlefield, often visiting at least two different locations each week, to see for himself if his directives were being followed. During these visits, he would ask questions of battalion commanders and their staff and give clear instructions as to what he wanted. He ate lunch with company commanders—without their battalion commanders present—to solicit feedback at lower levels.¹⁹¹

Like many generals, he brought his own team of experts to help him implement his new strategy, but unlike many of his peers, he also welcomed many nonmilitary members, including academics, think tank members, retired officers, and others. He welcomed anyone who would provide feedback and believed they offered a good “directed telescope” into what he was doing. Some of the more prominent adjunct members of his team included Michael O’Hanlon from the Brookings Institution, Anthony Cordesman from the Center for Strategic and International Studies, and Frederick and Kimberly Kagan from the American Enterprise Institute and the Institute for the Study of War.¹⁹²

Petraeus recognized that his success depended on his staff, and personally selected officers to lead his most critical positions. He prized accomplished, intelligent, and physically fit officers. He brought Colonel Pete Mansoor to be his executive officer. Mansoor had graduated from

¹⁹⁰ Petraeus, interview by author; and Robinson, *Tell Me How This Ends*, 89–93.

¹⁹¹ *Ibid.*

¹⁹² Petraeus, interview by author.

West Point at the top of his class, held a PhD in military history, taught history at West Point, and commanded a brigade in the First Armored Division in Baghdad in 2003-2004. Previously, Petraeus had hired Mansoor to be the inaugural director of his counterinsurgency center at Fort Leavenworth.¹⁹³ Petraeus brought Major Everett Spain to serve as his aide-de-camp in Iraq. Spain had graduated fourth in his West Point class, was the top graduate of his Command and General Staff College class, earned an MBA from Duke University, and had previously taught at West Point.¹⁹⁴

Petraeus selected Colonel Bill Rapp—who had already been selected for promotion to brigadier general—to serve as the head of his commander's initiative group. Rapp was a Ranger, a master parachutist, and an Army strategist who had graduated at the top of his advanced course and ranger school classes. Rapp also held a PhD from Stanford University, had taught at West Point, and had served as a fellow on the Council on Foreign Relations. He had been home for only three months when Petraeus brought him back to Iraq.¹⁹⁵ The commander's initiative groups also included Captain Liz McNally, who was a Rhodes Scholar.¹⁹⁶ Petraeus brought Colonel Mark Martins to be his Staff Judge Advocate. Martins was also a Rhodes Scholar who had previously served with Petraeus.¹⁹⁷ Petraeus's inner circle also included Derek Harvey, a retired Military Intelligence Colonel, who had spent much of his active-duty time in the Defense Intelligence Agency as an Arabist. Harvey held a PhD in Islamic political thought and jurisprudence.¹⁹⁸

Lieutenant Colonel Doug Ollivant led the planning effort for the division that was responsible for developing the new security plan in Baghdad.¹⁹⁹ He had taught in the Social Sciences Department at West Point, held a PhD in political science from Indiana University, had served as a battalion operations officer in Baghdad earlier in the war, and had graduated from the Army's School of Advanced Military Studies.

193 Mansoor, interview by author; and Robinson, *Tell Me How This Ends*, 109.

194 Everett Spain, interview by author.

195 Robinson, *Tell Me How This Ends*, 110-111.

196 Cloud and Jaffe, *The Fourth Star*, 276; and Robinson, *Tell Me How This Ends*, 112.

197 Robinson, *Tell Me How This Ends*, 113.

198 *Ibid.*, 112.

199 *Ibid.*, 120.

He was also the coauthor of the winning essay from the counterinsurgency essay contest that Petraeus had sponsored. After Petraeus was selected to command, Petraeus reached out directly to Ollivant—bypassing normal chain-of-command protocol—to discuss the plan and to feed him ideas.²⁰⁰

Ollivant and his staff developed the plan with the major objectives of securing the population, defeating the armed elements, and promoting the government's legitimacy by supporting governance, economic, and communications programs. The primary objective of securing the population was new, and it brought about a corresponding change in the deployment of forces. Thus, they had to move forces off the large, fortified bases and disperse them throughout the population. They divided Baghdad into ten security districts, with a U.S. battalion and an Iraqi brigade assigned to each district. The U.S. battalions established combat outposts and dispersed into smaller elements scattered throughout their districts and established joint security stations with their Iraqi counterparts.²⁰¹

After conducting shaping operations, combined U.S. and Iraqi forces cleared, controlled, and retained the city—neighborhood by neighborhood—before moving to the build phase to consolidate the gains. The clearing operation in the Mansour district took 36 days and resulted in the death of three insurgents, the detention of 42 more, and the recovery of two kidnap victims. The operation also uncovered 92 weapons caches, which resulted in the destruction of hundreds of rifles, mortars, and rocket-propelled grenades; 147 explosive munitions; three car bombs; two suicide vests; and 143 roadside bombs. The clear operations were critical because battalions had to eliminate enemy strongholds before they could move to the hold phase and establish combat outposts within the neighborhoods.²⁰²

200 Ibid., 123.

201 The joint security stations are also commonly referred to as combat outposts.

202 Robinson, *Tell Me How This Ends*, 123-139.

Analysis

The period of 2003-2005 can be described as a failed innovation. It failed at all three phases of the innovation process. The innovation of counterinsurgency doctrine was successful only when an individual with the right technical expertise moved into the senior military leader position required to (1) develop, adopt, and implement the doctrine into the military's training and education, and (2) implement the doctrine in Iraq.

Formulation

The Army developed counterinsurgency doctrine in response to a recognized performance gap: the U.S. faced an insurgency and lacked the doctrine necessary to defeat it. Some—like Petraeus and Abizaid—recognized the insurgency almost immediately. For others—like Wallace, General Ray Odierno, and Casey—it took several months. For others—like Rumsfeld—seemed to be in denial for years. Thus, units and individuals did not recognize the performance gap at the same time.

Prior to the Army developing and implementing counterinsurgency doctrine, most of the military struggled to combat Iraq's insurgency. The small number of officers who generally performed best employed counterinsurgency tactics to close the performance gap. What set these early experimenters of counterinsurgency doctrine apart from their peers is that each officer had studied counterinsurgency theory during their civilian graduate school education. Thus, when faced with an insurgency, employing counterinsurgency principles was in their potential solution set. By contrast, their peers lacked knowledge of counterinsurgency theory. This theory was not part of their solution set since they had never been exposed to it in their training, education, or experience.

Petraeus's knowledge came from his civilian graduate schooling and his doctoral dissertation on the Vietnam War. This allowed him to anticipate the insurgency, to understand the challenges it posed, and to focus on securing the populace. Thus, there was no post-invasion

lull in his sector. He immediately set out to hold elections, restore governance, and get the economy going. By contrast, the other division commanders did not have this expertise to draw on, so their potential solution set was more limited. They focused on military aspects of the transition and left governance and security functions to a Coalition Provincial Authority that could not fulfil its mandate, since that is what they had learned throughout their military careers.

McMaster decided to implement counterinsurgency principles due to his study of history and the successes of others, most notably Petraeus's 101st Airborne Division.²⁰³ McMaster had earned his PhD in military history from the University of North Carolina at Chapel Hill and had served as an assistant professor of history at West Point from 1994 to 1996.²⁰⁴ Chiarelli had earned a Master of Public Administration from the University of Washington and had served as an assistant professor in the Department of Social Sciences at West Point from 1980 to 1984, departing one year before Petraeus arrived in the same department.²⁰⁵

Mansoor, who implemented counterinsurgency principles as a brigade commander in Baghdad and served the founding director of the Army's Counterinsurgency Center at Fort Leavenworth, had earned his PhD in military history from The Ohio State University and had taught military history at West Point.²⁰⁶ Nagl was a Rhodes Scholar, had written a book on the Vietnam War, and had also taught in the Department of Social Sciences at West Point.²⁰⁷ However, not everyone with a political science or history degree and teaching experience at West Point came to the same conclusions. Gian Gentile had earned a PhD in history from Stanford University, had taught history at West Point, and, like Mansoor, had commanded a battalion in Baghdad. But unlike Mansoor, Gentile did not believe that counterinsurgency doctrine solved the problem and became a vocal opponent. He was, however, the exception.

203 H. R. McMaster, e-mail message to author, March 9, 2013.

204 U.S. Army Combined Arms Center, "Lieutenant General H. R. McMaster, Deputy Commanding General, Futures / Director, ARCIC," USACAC.Army.mil, accessed November 2, 2023, <https://usacac.army.mil/sites/default/files/documents/cact/LtGenMcMasterBio.pdf>.

205 Cloud and Jaffe, *The Fourth Star*, 52-55.

206 Peter R. Mansoor, *Baghdad at Sunrise: A Brigade Commander's War in Iraq* (New Haven: Yale University Press, 2008).

207 Kaplan, *The Insurgents*, 1.

Wallace's expertise was limited to his experiences in the opening weeks of the Iraq War and decades prior in Vietnam, and was reliant on others to develop the doctrine. Likewise, Casey lacked any real expertise in counterinsurgency, so his solution called for transitioning governance and security to the Iraqis as quickly as possible. This strategy might have worked had the U.S. not disbanded the entire Iraqi security structure. Casey established a counterinsurgency academy in Iraq, but by consolidating forces into large bases outside of populated areas, he made it impossible for them to employ counterinsurgency tactics.

MacFarland was one of the few early experimenters of counterinsurgency doctrine who lacked the formal educational expertise in counterinsurgency. Instead of studying history or a social science at graduate school, he had earned a Master of Science Degree in Aerospace Engineering from Georgia Tech.²⁰⁸ He, however, had two advantages. First, he took command of his brigade from Mansoor, which was filled with officers already familiar with counterinsurgency principles from the brigade's tour in Baghdad from 2003 to 2004. Second, having replaced McMaster in Tal Afar, he could draw from the counterinsurgency strategy that McMaster was already executing. As a result, MacFarland did not have to develop the tactics himself. MacFarland acknowledged as much when he remarked, "We decided to employ a tactic we had borrowed from the 3rd Armored Cavalry Regiment and used successfully in Tal Afar: the combat outpost."²⁰⁹ MacFarland, therefore, can be described as an early adopter rather than a developer of the doctrine.

This case also demonstrates that expertise can be learned, but it takes time. Pulitzer Prize-winning journalist and author Tom Ricks argued that Odierno lacked any understanding of counterinsurgency when he commanded the Army's 4th Infantry Division at the start of the war, but that understanding came to him later, and he implemented it fairly well as the Multi-National Corps - Iraq commander in 2007 and as the Multi-National Force - Iraq commander in 2009.²¹⁰

208 Association of the U.S. Army, "Lt. Gen. Sean MacFarland, USA Ret." AUSA.org, accessed November 2, 2023, <https://www.USA.org/people/lt-gen-sean-macfarland-usa-ret>.

209 Smith and MacFarland, "Anbar Awakens," 45.

210 Ricks, *The Gamble*.

As Combined Arms Center commanders, Wallace and Petraeus attempted to develop counterinsurgency doctrine, but only Petraeus succeeded. The primary reason was that Wallace lacked the domain-specific expertise to lead such a significant innovative effort. But this was not the only difference. Petraeus also employed the necessary leader influence tactics to ensure its development.

Through his words and actions, Petraeus made the development of doctrine his top priority. By contrast, it was clear from Wallace's lack of personal engagement that the development of the doctrine was not his top priority. Petraeus also built an effective writing team. Wallace simply directed Clint Ancker to develop a manual, as he would have done for any other manual. Ancker subsequently assigned the project to Horvath, whose expertise lay in his having completed the Special Forces Qualification Course. By contrast, Petraeus expanded his effort to include almost anyone from the entire Army; hence, he selected a more qualified lead author. Petraeus collaborated with the Marine Corps to build a diverse team and attempted to get the British involved as well. While Crane was the manual's lead author, each chapter and appendix had its own author. By contrast, Horvath was both the lead author and author for most chapters, and his pleas for additional help were largely unfulfilled.

Petraeus also provided the intellectual stimulation required to produce the manual and effectively balanced freedom and oversight for his innovators. By contrast, Wallace lacked the domain-specific expertise required to provide the intellectual stimulation necessary to create innovative doctrine. This limitation also prevented him from providing the right level of oversight for innovation to occur. Petraeus took a much more active role. He provided the necessary intellectual stimulation through his interactions with the project team and by bringing in outsiders like Aylwin-Foster and representatives of human rights groups to challenge the manual's authors. Petraeus also conducted a conference where each chapter was thoroughly critiqued by a subject matter expert. He sought out academics like Eliot Cohen for their feedback and brought dissenting views from people like Peters to be heard. Posting the manual online for public critique provided

additional stimulation. Crane summed up how unique the process was, “It can be said that [the counterinsurgency manual] had a dozen primary authors, another dozen secondary authors, and 600,000 editors, because all of the Army and Marine Corps got a chance to provide their suggestions.”²¹¹

Studies find that innovation peaks with a moderate level of freedom.²¹² Petraeus effectively balanced oversight and freedom, as not a single author remarked about having too much oversight, even though Petraeus attended both days of the Leavenworth conference, read and provided detailed comments on multiple drafts for each chapter, and had frequent telephone or e-mail contact with the lead authors. Horvath noted that it was not uncommon to send Petraeus something at one in the morning, only to receive a response within minutes.²¹³ Ultimately, the leader influence tactics that Petraeus employed resulted in effective doctrine.

Yet, the military did not need formal doctrine to start experimenting with counterinsurgency tactics in Iraq. As discussed earlier, some battalions, brigades, and divisions employed counterinsurgency tactics earlier in the war. But four years into the war, most units were not, and it seems reasonable to conclude that wholesale change would not have happened, or would have taken many more years, had Petraeus not developed the doctrine and then forced its implementation in Iraq. Therefore, it is useful to examine why Sanchez and Casey were unsuccessful at facilitating the development of counterinsurgency tactics in Iraq.

By all accounts, Sanchez and his undermanned staff were overwhelmed during his year as the commander of forces in Iraq.²¹⁴ As a result, Sanchez lacked the capacity to provide intellectual stimulation to his subordinate commanders. Thus, each division commander was free to operate as he saw fit. Sanchez also lacked technical expertise in counterinsurgency, so it would have been difficult for him to comprehend Petraeus’s efforts in Mosul and direct large-scale implementation of them even if he had a more capable staff. Nevertheless, his hands-off

211 Crane, interview by author; and Crane, “United States,” 68.

212 See, for example, Trevelyan, “The Paradox of Autonomy,” 495-525.

213 Horvath, interview by author.

214 Multiple interviews and see, for example, Ricks, *Fiasco*.

approach did not hinder Petraeus's creative efforts. While the Coalition Provisional Authority orders clearly hampered Petraeus's efforts, they were not of Sanchez's doing.

Like Sanchez, Casey lacked the technical expertise to facilitate innovative counterinsurgency, but, unlike Sanchez, his actions impeded innovation. Casey recognized that the U.S. was facing an insurgency and created a strategy that claimed to focus on counterinsurgency operations and even created a counterinsurgency academy. But the strategy's execution failed to match its rhetoric. Pulling troops out of the populated areas and consolidating them at the large bases made it nearly impossible for units to implement and experiment with counterinsurgency doctrine without violating his directive to consolidate. It effectively eliminated any plan from the solution set that called for troops to live among the population—a fundamental tenet of counterinsurgency doctrine. While there were some successful efforts under Casey—most notably McMaster's establishment of 29 combat outposts throughout Tal Afar—they were the exception. Most commanders simply did not feel that this was feasible when the strategic plan called for them to do the opposite.

Thus, this case suggests that the leader can play a decisive role in facilitating or impeding innovation. Petraeus was most successful, because he alone among the senior military leaders had the domain-specific expertise required to lead the innovative effort. Wallace attempted innovation but—lacking the appropriate technical expertise—could not provide the stimulation, support, or oversight required to facilitate it. By contrast, Petraeus built a diverse team, provided the right stimulation and support, and effectively balanced oversight and freedom to stimulate the development of the doctrine. Sanchez appears to have been overwhelmed for much of his command and in no real position to facilitate innovation other than letting subordinate commanders operate as they saw fit.

Casey, on the other hand, impeded innovation. Despite directing Multi-National Force – Iraq to conduct “full spectrum counter-insurgency operations,” he lacked the domain-specific expertise as to what this meant, as evidenced by his call to pull units out of the cities and consolidate in large bases even though it was clear that the Iraqi Security

Forces were incapable of providing security.²¹⁵ No doubt, he was being pressured by the Bush administration to consolidate, but the fact that some units—like McMaster’s—were doing the opposite, is an indicator that Casey had some flexibility. Regardless, he eliminated true counterinsurgency doctrine from the possible solution set for most subordinates. This is not an indictment against Wallace or Casey—both recognized the problem and understood that counterinsurgency doctrine was the solution—yet the Army had never provided them the necessary training, education, or experience to develop or implement that doctrine.

Adoption

For the innovation of counterinsurgency doctrine, two senior military leaders were required to adopt it: the Combined Arms Center commander and the Multi-National Force – Iraq commander. The Combined Arms Center commander was necessary because he had the authority to adopt a new doctrine and then implement that doctrine into the training and education of the force. The Multi-National Force – Iraq commander was necessary because he could ensure its implementation in combat. Yet, adopting it in Iraq required a change in strategy and, thus, it also needed the support of civilian policymakers.

The initial attempt to create counterinsurgency doctrine or employ counterinsurgency practices throughout Iraq failed because no innovation champion was actively pursuing the required senior military leader to adopt it. In Iraq, counterinsurgency innovators like Petraeus, McMaster, and Chiarelli were employing effective counterinsurgency tactics, but they did not attempt to build a coalition required to get Sanchez or Casey to adopt their strategy more broadly. They were simply too busy with their own fight to promote a broader strategy.

Real change occurred only when Petraeus—a champion of the doctrine—was given command of the Combined Arms Center. He knew that he could approve a new doctrinal publication and force its

215 Wright and Reese, *On Point II*, 177.

implementation into the training and education that he was responsible for, but Petraeus also knew that it would also be necessary to adopt and implement the doctrine in Iraq. Petraeus's graduate studies in public policy at Princeton University's School of Public and International Affairs gave him a good understanding of the inner workings of the government and the power of public opinion. This informed his choice of strategy for how to pursue the innovation. He understood that simply writing a new manual would not be enough to truly implement it. He needed to elevate the discourse to the highest levels to implement the doctrine operationally. Consequently, he invested time and energy into building a pro-innovation coalition—which some referred to as “COINdinistas”—to influence both the military and civilian policymakers.²¹⁶

In the case of counterinsurgency doctrine, it is difficult to ascertain how significant a role civilian policymakers played in adopting the doctrine. Their support was necessary—Bush had to appoint Petraeus to command U.S. forces in Iraq and provide the surge of forces capable of quelling the violence—but by itself, it was not sufficient. If policymakers simply approved a surge of forces without having the benefit of counterinsurgency doctrine and someone capable of leading it, it is doubtful that anything would have changed. They needed Petraeus to lead that change, and, when presented with the option, Bush seized it against the recommendation of many. Yet, nowhere in the previous four years was there any evidence of policymakers trying to force a reluctant military to develop and adopt the doctrine. Instead, by appointing Petraeus to lead the change, they could best be described as supporters of the military's innovative efforts.

The U.S. Department of State's Zelikow and Rice were proponents of a “clear, hold, and build” strategy as early as 2005, but there is no evidence that they were pushing the military to adopt the strategy. Likewise, appointed officials in DoD published documents—including the 2005 DoD Directive 3000.05, *Military Support for Stability, Security, Transition and Reconstruction Operations*, and the 2006 Quadrennial Defense Review—that stressed the importance of stability operations

216 Thomas E. Ricks, “The COINdinistas,” *Foreign Policy*, November 30, 2009, accessed December 21, 2023, <https://foreignpolicy.com/2009/11/30/the-coindinistas/>.

and irregular warfare. However, the documents amounted to little more than words on paper since these officials made no real effort to force change within the military.

As Petraeus expanded his COINdinita coalition to include people from the human rights community, nongovernmental organizations, and journalists, Keane expanded the pro-innovation coalition to the highest levels. This was needed to overcome the counter-coalition that was gaining strength throughout 2006. The Iraq Study Group report and several senior leaders—including Schoomaker and Doug Lute—continued to argue against a counterinsurgency strategy. As violence in Iraq continued to climb and casualties remained high, popular support for the war continued to fall.²¹⁷ An increasing number of policymakers were calling for the immediate withdrawal of U.S. troops, and the Republican Party's loss in the mid-term elections seemed to support the counter-innovation coalition. Some were even calling for a "soft partition" of Iraq, which was a radical change from the current policy "which envisioned a unitary Iraq ruled largely from Baghdad."²¹⁸

The pro-innovation coalition, however, ultimately won the day. The evidence suggests that Keane's argument to President Bush and Petraeus's public promotion of counterinsurgency doctrine convinced Bush to support a widely unpopular counterinsurgency strategy. The highly publicized release of the manual, combined with other media efforts by Petraeus, provided Bush an option that otherwise likely would have been politically impossible, regardless of how convincing Keane's arguments were.

Clearly Bush's selection of Petraeus to command the Multi-National Force – Iraq was critical to the doctrine's adoption and implementation in Iraq. However, Bush would not have been able to appoint Petraeus to the position had it not been for Keane's efforts and Petraeus's public promotion of the doctrine. There is no evidence that Bush ever pushed a reluctant military to develop the doctrine. Still, once the military had

217 Pew Research Center, "Public Attitudes Toward the War in Iraq: 2003-2008," [PewResearch.org](http://www.pewresearch.org), March 19, 2008, accessed October 23, 2023, <http://www.pewresearch.org/2008/03/19/public-attitudes-toward-the-war-in-iraq-20032008/>.

218 Edward P. Joseph and Michael E. O'Hanlon, *The Case for Soft Partition in Iraq* (Washington, DC: Brookings Institution, 2007), ix, https://www.brookings.edu/wp-content/uploads/2016/06/06iraq_joseph.pdf.

developed the doctrine and the pro-innovation coalition argued on its behalf, it allowed the doctrine to be an option for Bush. Thus, for the case of counterinsurgency doctrine, an innovation champion actively promoting and building an effective horizontal and vertical pro-innovation coalition were required for the doctrine to be adopted.

Implementation

For the innovation to be effectively implemented, counterinsurgency doctrine had to be incorporated into professional military education, training, and overseas operations. Wallace was only partially effective at implementing his rudimentary doctrine in 2005. Casey was ineffective at implementing the doctrine because his strategy precluded it. Petraeus was successful because he understood the challenges of institutional change and how to overcome them.

As commanders, both Wallace and Petraeus controlled the scenarios at the combat training centers. Therefore, ensuring the doctrine was being implemented in training was relatively easy. The principal-agent problem was minimized because units wanted doctrine that helped them perform better in scenarios that simulated the environment in Iraq. Since techniques based on previously existing doctrine were not working, many units were eager to try something different. It was also relatively easy for Wallace and Petraeus to assess whether a unit employed the new doctrine, because the Combined Arms Center controlled the civilian and insurgent role players and the observer-controllers embedded with training units.

However, forcing the implementation of counterinsurgency doctrine into professional military education was much more difficult. Both Wallace and Petraeus met stiff resistance. Both were told that according to U.S. Army Training and Doctrine Command regulations, only 10 percent of a course could be changed each year. Wallace could not overcome the staff's resistance despite it being acknowledged that change was needed. By contrast, Petraeus challenged his staff to produce the regulations they claimed to quote. Realizing change would

never happen quickly if he left it to his instructors to develop a new curriculum on their own, he made the unprecedented move of stopping the course and having the students develop new counterinsurgency curriculum. Petraeus also personally inspected the various professional military schools outside of Fort Leavenworth that fell under his command. On more than one occasion, these visits stimulated curriculum changes. To help facilitate its implementation, he also created a counterinsurgency center at Fort Leavenworth.

As the Multi-National Force – Iraq commander, Petraeus used a combination of tactics to ensure the doctrine was being implemented. He started by communicating the new strategy effectively through letters to his forces, military family members, and the Iraqi people. Petraeus also leveraged a combination of daily videoconferences, battlefield circulation, and his team of “informants” to ensure that the doctrine was being followed. He asked pointed questions during the videoconferences to see if subordinate commanders were implementing his strategy. He circulated the battlefield to see how units were doing with his own eyes and often sought out the opinions of lower-ranking officers who were more likely to be candid with him. Petraeus leveraged a network of officers like Ollivant to provide him with unfiltered feedback and to ensure that implementation was going according to plan. He welcomed anyone who could provide feedback and provided them with the freedom to go anywhere on the battlefield. He also recognized that his success depended on his staff. Accordingly, he personally selected some of his trusted agents for the most important positions. Using all these techniques, Petraeus was able to gain access to unfiltered information necessary to overcome the principal-agent problem and ensure the doctrine’s implementation.

Effectiveness

While debate about counterinsurgency doctrine raged on online forums (including the *Small Wars Journal*, the small wars and insurgency blog *Abu Muqawama*, and Tom Ricks’s *Foreign Policy* blog), professional journals like *Armed Forces Journal*, as well as mainstream

media—evidence strongly suggests that the implementation of counterinsurgency doctrine increased military effectiveness significantly and was a major factor in the reduction of violence in 2007.

Three dominant theories explain the reduction in violence in Iraq. Some subscribe to a “sectarian cleansing” thesis, which argues that sectarian violence had played itself out by mid-2007, and this led to the decrease in violence. Proponents argue that only large, internally homogeneous, and defensible communities were left; hence, the violence decreased. The evidence, however, does not support this thesis since the level of violence was not strongly correlated with the heterogeneity of neighborhoods.²¹⁹

Others argue that violence decreased because of the Sunni Awakening. They argue the Sunni insurgency abandoned al Qaeda in Iraq in exchange for payments of \$300 per fighter per month as “Sons of Iraq” and joined with the coalition.²²⁰ Proponents of the “surge thesis” argue that it was a combination of more troops using new counterinsurgency doctrine that defeated the insurgency.

Through empirical testing, Biddle et al. found that a combination of the surge of additional forces employing counterinsurgency doctrine combined with the Sunni Awakening explains the decrease in violence in 2007. Without the Awakening, the surge would have temporarily improved security but not destroyed the insurgency. The Awakening helped eliminate much of the Sunni insurgency as they turned from opponents to allies. This severely weakened the enemy, as these new allies were able to provide critical intelligence on al Qaeda in Iraq, which significantly increased the coalition’s effectiveness. These effects reshaped Shiite incentives, causing their militias to stand down. The authors’ evidence demonstrates that the surge employing counterinsurgency doctrine and the Awakening were both necessary, but individually insufficient, to explain the decrease in violence.²²¹

Other studies also provide evidence that counterinsurgency tactics improved operational performance. Military experts conducted an

219 Biddle et al., “Testing the Surge,” 7–40.

220 Ibid.

221 Ibid.

internal review of nearly three dozen American brigades, battalions, and similar units operating in Iraq in 2005, and they concluded that of all those units, McMaster's 3rd Armored Cavalry Regiment performed the best.²²² Even critics of counterinsurgency doctrine find it difficult to criticize McMaster's success. Thus, it is reasonable to conclude that counterinsurgency doctrine improved the Army's performance.

Conclusion

The first attempt to develop counterinsurgency doctrine failed because the senior military leaders responsible for its development, adoption, and implementation lacked the domain-specific expertise to lead such an innovative effort. Wallace recognized the need to develop the doctrine, but because he lacked the necessary technical expertise, he could not employ the leadership tactics required to facilitate its development. As such, he failed to create a diverse writing team, he failed to make the manual a top priority, and he failed to provide the team with the simulation and oversight necessary to produce innovative doctrine. As a result, he produced a manual that contained many significant flaws and would not have been effective at reversing the trend in Iraq, even if it had been followed. Likewise, Casey understood the need to employ a counterinsurgency strategy in Iraq but also lacked the domain-specific expertise to conceptualize how to do this. As a result, he continued to espouse a strategy that consolidated U.S. forces on large bases and turned security over to the Iraqis, even though the evidence showed they were incapable of providing the necessary security. Finally, while early experimenters of counterinsurgency in Iraq demonstrated success, they did not attempt to build a coalition to get their tactics adopted and implemented broadly across the country.

The innovation of counterinsurgency doctrine was successful only when an officer with the requisite domain-specific expertise was put into the senior military leader position capable of developing, adopting,

222 Ricks, "The Lessons of Counterinsurgency."

and implementing the doctrine. Petraeus gained the necessary technical expertise through his civilian graduate studies. As the Combined Arms Center commander, he employed the leadership tactics required to lead the development of innovative doctrine. Petraeus made the doctrine his top priority, created a diverse team with the expertise, and provided the team with the intellectual stimulation, support, expectations, feedback, and appropriate oversight. As a result, he produced the innovative doctrine that the U.S. military desperately needed.

Petraeus also understood the need to get the president's endorsement to change the strategy in Iraq. Petraeus made this possible by deliberately promoting the doctrine throughout the media. This made it easier for the pro-innovation coalition to convince Bush to adopt a widely unpopular strategy and appoint Petraeus as the commander of coalition forces so that he could implement the new doctrine in Iraq.

Possessing this technical expertise, as the senior military leader in Iraq, Petraeus implemented a counterinsurgency strategy that forced coalition troops to live among the populace and employ the new doctrine. He successfully overcame potential resistance to the doctrine by selecting trusted officers and placing them into critical positions, communicating the doctrine was a top priority, and obtaining unfiltered information to ensure the doctrine was being implemented. As a result, he was able to significantly degrade the insurgency by the time he departed command on September 16, 2008.

CREATING THE ASYMMETRIC WARFARE GROUP: GENERAL CODY OVERCOMES INSTITUTIONAL RESISTANCE TO CHANGE

4

The development of a new component within the military can be described as an organizational innovation if it brings with it some new, previously unaddressed concept or capability distinguished from a minor restructuring. General Richard “Dick” Cody’s creation of the Asymmetric Warfare Group (AWG) was unique enough to be considered an organizational innovation. The AWG was an operational force, an intelligence collector, a researcher and developer, a doctrine developer, and a future threat assessor, all in one. Its primary mission was to provide “operational advisory support globally and rapid solution development to the Army and Joint Force commanders to enhance Soldier survivability and combat effectiveness, and enable the defeat of current and emerging threats in support of Unified Land Operations.”¹ When it was created, there was no similar entity within the U.S. Army.

Cody devised the idea of the Improvised Explosive Device (IED) Task Force as an immediate solution to address the IED problem in Iraq. However, as a senior military officer, he lacked the capacity to develop the idea independently. He had to rely on subordinates to advance the concept. Cody employed the right leader tactics to ensure these subordinates effectively developed his idea. Within two months, they had built and deployed the IED Task Force to Iraq. Shortly thereafter, Cody realized that not only were IEDs likely to remain a threat but were just one of many asymmetric threats facing the U.S. Thus, Cody transformed and institutionalized the IED Task Force into the AWG—a standing Army unit with a broader asymmetric threat

1 “U.S. Army AWG,” AWG.Army.mil, last modified October 5, 2017, accessed October 6, 2017, <http://www.awg.army.mil/index.html>.

mandate—and the Joint IED Defeat Organization—a joint organization with a narrow counter-IED mandate. Cody played an active and instrumental role throughout the development of both organizations, ensuring their effective implementation.

Creating a New Unit in the U.S. Army

Creating a new unit in the U.S. Army is generally a slow, bureaucratic process. The decision to create a new organization may occur quickly but establishing it can take years. It is beyond the scope of this chapter and unnecessary to cover every detail. It is, however, important to discuss the three basic requirements needed to create a new organization within the Army: a structure document, a policy document, and funding.

The first requirement is a structure document. The U.S. Army Manpower Analysis Agency and the U.S. Army Force Management Support Agency are the organizations that develop and document organizational structures for the Army. The Manpower Analysis Agency develops and validates the manpower requirements, and the Force Management Support Agency documents Army force structure to include manpower and equipment requirements and authorizations.² Together, they play a significant role in determining the manning and equipment that are required for a unit to complete its assigned mission. A structure document—either a Table of Organization and Equipment or a Table of Distribution and Allowances—lists what a unit is authorized in terms of personnel, weapons, and equipment.³ The Army's end strength—its total authorized military personnel—is limited by Congress; hence, whenever one personnel billet is created, another must be eliminated. Thus, the Force Management Support

2 "U.S. Army Manpower Analysis Agency," last modified June 26, 2023, accessed November 1, 2023, https://www.army.mil/article/220877/u_s_army_manpower_analysis_agency; and Christopher Garito, "U.S. Army Force Management Support Agency Welcomes New Leader," Army.mil, July 22, 2022, accessed November 1, 2023, <https://home.army.mil/belvoir/about/Garrison/public-affairs/digital-belvoir-eagle/us-army-force-management-support-agency-welcomes-new-leader>.

3 U.S. Army Center of Military History, "History of Tables of Distribution and Allowances (TDA) Units," History.Army.mil, accessed October 25, 2023, <http://www.history.army.mil/html/forcestruc/tda-ip.html>.

Agency manages any changes to ensure that the Army's end strength remains within congressionally mandated limits.

The second requirement is a policy document or a charter. A charter can be as short as a single page, or more than a dozen pages. At a minimum, a charter will typically include the organization's date of establishment, position within the Department of the Army hierarchy, mission, critical tasks, functions and/or responsibilities, and physical location. Within the Army, the Secretary of the Army has the authority to charter a new organization.⁴

The final requirement is funding. In many cases, the Army and DoD cannot simply reallocate funds internally; they must go to Congress, which authorizes funds through its annual appropriation bill. This bill tells the Army where it is authorized to spend its appropriated funds. The Army could approve the establishment of a new unit, but without the consent of Congress and the appropriation of funds, the Army would not be able to physically create the new unit. Funds must be authorized and approved before the Army can spend them. In times of war, the military may also receive special or supplemental funding—in addition to its base budget—to support the war effort. In recent times, this has been called overseas contingency operations funds. While these funds often have fewer restrictions, they are typically required to be spent on items directly related to the war effort. Thus, they could be spent to stand up a temporary task force to support the war, but not to establish or sustain a permanent unit.

The Officers

The development of the AWG started in the summer of 2003, only a few months after the fall of Baghdad. The three officers who championed the AWG were General Cody, the Army's Operations Officer; Lieutenant Colonel Chris Hughes, a member of the Army Initiatives Group; and Brigadier General Joe Votel, who would become the IED Task Force's first director. Army Chief of Staff Peter Schoomaker played

4 Office of the Director of Administration and Management, "Chartering DoD Directives," ODAM.Defense.gov, accessed February 15, 2013, <http://odam.defense.gov/OMP/Functions/OrganizationalPortfolios/CharterDirectives.aspx>.

a significant role as well. Schoomaker operated at the strategic level: he provided strategic direction and the vision for the Army and delegated the responsibilities to execute that vision to his subordinates. Cody operated at the operational level within the Pentagon, while Votel and Hughes operated at the tactical level.⁵

Cody arrived at the Pentagon in June 2002 as the Deputy Chief of Staff, G-3 (also referred to as the Operations Officer for the Army).⁶ He was the son of a Chevy dealer in Montpelier, Vermont, a Lebanese American, and a West Point graduate.⁷ He was the Army's senior aviator, having flown just about every aircraft in the Army's inventory. In addition, he had commanded at just about every level in the Army, including an aviation battalion in the 101st Airborne Division, the 160th Special Operations Aviation Regiment, Task Force Hawk in Kosovo, and the 101st Airborne Division. He was known throughout the Army for firing the first shots of the Gulf War in 1991. Cody had a reputation as a "Soldier's Soldier," an "aviator's aviator," and for "cutting through BS" and "fixing what needed to be fixed."⁸

It did not take long for Cody to demonstrate that his reputation was well-earned. Only two months after arriving at the Pentagon, he created the Army Strategic Planning Board following a meeting with division commanders preparing for the Iraq War.⁹ He established the board to quickly prioritize resources within the Army to support the impending war. Cody felt that the Army's acquisition process was too slow for combat. Cody found legal ways to make the system work and get the deploying or deployed soldiers the equipment they needed.¹⁰

Cody also created the Rapid Equipping Force to rapidly purchase commercially available off-the-shelf items—something that was extremely difficult for the Army at the time. Its mission was to "harness current and emerging technologies to provide rapid solutions to

5 Schoomaker, interview by author.

6 Christopher P. Hughes, *War on Two Fronts: An Infantry Commander's War in Iraq and the Pentagon* (Philadelphia: Casemate, 2007), 211.

7 Rick Atkinson, "Left of Boom Part 1," *The Washington Post*, September 30, 2007.

8 Army Aviation Association of America, "GEN Richard A. Cody," Quad-A.org, accessed November 2, 2023, <https://www.quad-a.org/Public/Awards/Awardees/CodyRA.aspx>; and Hughes, *War on Two Fronts*, 207-208.

9 The Army Strategic Planning Board was created in August of 2002. See, Hughes, *War on Two Fronts*, 210-211.

10 Hughes, *War on Two Fronts*, 210-211.

the urgently required capabilities of U.S. Army forces employed globally.”¹¹ Cody brought in Colonel Bruce Jette, an army scientist, to head the small team. Jette understood the antiquated acquisition process and how to legally bypass a bureaucracy that was unresponsive to the speed required during times of war.¹²

In August 2003, Hughes found himself in the Pentagon for the second time in his career when Cody redirected him from the Army War College to the Army Initiatives Group. The Army Initiatives Group was a select group of officers who worked on new concepts and new initiatives for the Chief of Staff of the Army and the Army’s operations officer.¹³ Cody brought Hughes to the Pentagon because he had worked with Hughes in the past and was impressed by him. Cody also wanted to fill his staff with former battalion and brigade commanders who had recent combat experience in Iraq and Afghanistan.¹⁴ Just prior to arriving in the Pentagon, Hughes had commanded a battalion of the 101st Airborne Division in Iraq under General Petraeus.¹⁵

Hughes’s recent combat experience and his antiterrorism experience from a previous tour at the Pentagon made him ideally suited for the task.¹⁶ On his first tour at the Pentagon, Hughes had served in the Combating Terrorism Directorate of the Joint Staff Operations Center from 1999 to 2001, leaving the office in the summer of 2001 to take command of a battalion in the 101st Airborne Division. While there, he studied and worked with IEDs in laboratory and field conditions to understand their effects and develop countermeasures. In that role, he captured the lessons the British and Israelis had learned from their conflicts with the Irish Republican Army, Hezbollah, Hamas, and Islamic Jihad. His work resulted in the merging of several similar offices inside the Pentagon responsible for “rapidly purchasing off-the-shelf force protection equipment, rapidly prototyping anti-IED technology, and developing tactics,

11 This was the Rapid Equipping Force Mission as listed on their website on March 12, 2014. The Army discontinued the organization in 2022.

12 Richard Cody, interview by author; and Hughes, *War on Two Fronts*, 211-212.

13 Hughes, *War on Two Fronts*, 206-207.

14 Cody, interview by author.

15 One June 16, 2003, Hughes turned over his battalion to Lieutenant Colonel James Johnson. See Hughes, *War on Two Fronts*, 191-192.

16 Ibid., 207-208.

techniques and procedures” to help ground forces safely identify and combat IEDs.¹⁷ His previous experience would soon prove invaluable.

Votel, newly selected for promotion to brigadier general, arrived in the Pentagon in September 2003 for his assignment as the Director of Information in the Army Operations Center.¹⁸ He came to the Pentagon following two years in command of the 75th Ranger Regiment. His Rangers had deployed to Iraq and Afghanistan. Some of his Rangers had been killed by IEDs in Iraq in 2003. Three Rangers had been killed near Haditha in April when a pregnant woman detonated a suicide bomb, and two more Rangers died that same month from a roadside blast near Baghdad International Airport.¹⁹

For the IED Task Force to have any real power, it had to be the respected authority on IEDs within the Pentagon. Cody’s decision to select Votel as its director was critical in this regard. When assigned, Votel knew little about IEDs, but he was a strong leader who knew how to take charge, run an organization, and effectively navigate a tough bureaucratic environment. He had the rank, reputation, experience, and interpersonal skills required to transform the fledgling IED organization into *the* IED organization within the Pentagon.²⁰

Schoomaker was sworn in as the 35th Chief of Staff of the Army on August 31, 2003. He was born in Michigan and raised by an Army family. He graduated from the University of Wyoming in 1969 and was commissioned as an Armor officer. Over the next 31 years, he spent much of his career in special operations forces, starting with his first command as a captain in 1978. He would spend 17 of his 31 years in special operations, with much of it in command. Schoomaker commanded nearly every Army and joint special operations forces organization, including the U.S. Army Special Operations Command, Joint Special Operations Command (JSOC), and U.S. Special Operations Command (USSOCOM). He retired in December 2000 after commanding USSOCOM.²¹

17 Ibid., 214-215.

18 Joseph Votel, interview by author.

19 Votel, interview by author; Atkinson, “Left of Boom Part 1;” and Hughes, *War on Two Fronts*, 217-218.

20 Cody, interview by author.

21 U.S. Army Center of Military History, “Peter Jan Schoomaker,” accessed November 2, 2023, <https://history.army.mil/books/cg&cscs/schoomaker.htm>.

Schoomaker had a disdain for much of the Army's bureaucracy and arrived with an unusual amount of power and influence because many of the senior political appointee positions had yet to be filled, including the Secretary of the Army and three of the five assistant secretary of defense positions. This provided Schoomaker direct access to the Secretary of Defense.²² Schoomaker had the challenging task of transforming the Army while fighting a war at the same time. Shortly after taking the post, he developed 16 focus areas to channel Army efforts to win the Global War on Terrorism and increase the relevance and readiness of the Army.²³ When the list of focus areas was first published in August 2003, IEDs had just started to emerge as a concern, accordingly, he added IEDs as a focus area on the subsequent list.²⁴

Building the IED Task Force (2003–2004)

U.S. forces in Iraq suffered their first IED fatalities on March 29, 2003, when the driver of a taxi cab killed four soldiers from the Army's 3rd Infantry Division after detonating the 100 pounds of plastic explosive he was carrying inside his car's trunk.²⁵ On July 18, Specialist Joel Bertoldie became the first soldier in Iraq to be killed by a roadside bomb when an IED struck his vehicle in Fallujah.²⁶ By the end of July, the enemy had conducted 64 IED attacks, killing seven (including Bertoldie) and injuring 81 more. But this was just the beginning, as attacks continued to climb. In August, the enemy conducted 146 IED attacks, killing eight and wounding 142. In September, the enemy conducted 193 IED attacks, killing seven and wounding 172.²⁷

22 Peter J. Schoomaker, interview by author.

23 Peter J. Schoomaker and Anthony W. Vassalo, "The Way Ahead," *Military Review* 84, no. 2 (2004): 2–16, <https://cgsc.contentdm.oclc.org/digital/api/collection/p124201coll1/id/177/download>; and Department of the Army, *The Way Ahead: Our Army at War... Relevant and Ready* (Washington, DC: U.S. Army Strategic Communications, 2003), 15, <http://purl.access.gpo.gov/GPO/LPS53826>.

24 Mark D. Roche and David P. Fitchitt, *Establishing Strategic Vectors: Charging a Path for Army Transformation* (Arlington, VA: Association of the U.S. Army, 2007).

25 Atkinson, "Left of Boom: 'The Single Most Effective Weapon Against Our Deployed Troops,'" *The Washington Post*, September 30, 2007.

26 Gary Berntsen, *Human Intelligence, Counterintelligence & National Leadership: A Practical Guide* (Washington, DC: Potomac, 2008).

27 Anthony H. Cordesman et al., *IED Metrics for Iraq* (Washington, DC: Center for Strategic & International Studies, 2010),

Schoomaker received the daily reports and grew increasingly concerned as the casualties continued to climb. Many of the IED attacks occurred along the road that ran from Baghdad International Airport to the “Green Zone” in downtown Baghdad, where the American effort was based. Schoomaker thought it should be the safest road in Iraq. In late September, he told Cody, “I want it to be the Yellow Brick Road. I want Dorothy and Toto to walk down the road without getting blown up.”²⁸ He directed Cody to use Army resources to put together a task force to solve the problem. Cody had many responsibilities as the Army’s operations officer; hence, he turned to Hughes to develop the tactical solution.

Although IED use had been limited during the “major combat” phase of the war, their use escalated in the “post-conflict” period. In Hughes’s mind, their use was an indicator that the conflict was entering a new phase with the enemy transforming from a conventional military into a terrorist group, an insurgency, or both.²⁹ Hughes went to see what his old office was doing about the IED threat and found the organization had “atrophied” and was “dormant” after it had lost its general officer and was now under the command of a retired Air Force colonel.³⁰ Even though the U.S. had suffered the Beirut barracks bombing in Lebanon in 1983, the East Africa Embassy bombings in 1998, the USS *Cole* bombing in 2000, and numerous IED attacks in Afghanistan in 2002, the war effort had apparently diverted away what little attention the military had been dedicating to IEDs at a time when its efforts were needed most. Hughes reported back to Cody and stated “if we want to take the IED fight to the enemy, we have to do it without much help from the Joint Staff.”³¹ As a result, a clear capability gap existed at the onset of invasion and continued throughout the year.

IEDs were relatively unsophisticated in the summer and fall of 2003, but Cody and Hughes expected them to grow increasingly complex as the enemy would likely adapt to U.S. countermeasures. In 2003,

https://csis-website-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/101110_ied_metrics_combined.pdf.

28 Schoomaker, interview by author.

29 Hughes, *War on Two Fronts*, 214.

30 *Ibid.*, 214-215.

31 Christopher P. Hughes, interview by author.

the most common IEDs were constructed using 155 mm artillery shells or mortar rounds that were concealed in trash, under rock piles, in the carcasses of dead animals, or buried. Finding artillery shells, mortars, and other explosives was not difficult for the enemy. There had been no comprehensive plan during the invasion to secure the thousands of munitions caches, now estimated to have held at least 650,000 tons and possibly more than one million tons of explosives.³² The president's quarterly report to Congress in April 2004 stated that "only 40% of Iraq's pre-war munitions inventory was secured or destroyed by April 2004."³³ Analysts estimated that "tens of thousands of tons probably were pilfered."³⁴ In the summer of 2003, most IEDs were hardwired, so U.S. forces learned to look for the wire and follow it to the person at the other end. The enemy, however, quickly adapted. By winter, half of the bombs were remote-controlled—set off by cell phones, car alarm transmitters, or toy car controllers.³⁵

The use of vehicle-borne IEDs increased during the fall and winter of 2003, and they were a tactic of choice for Abu Musab al-Zarqawi, the leader of al Qaeda in Iraq. Zarqawi's bombing campaign started in earnest in August 2003 with his attack on the Jordanian embassy. That attack killed 11 and wounded more than 65. His attack on the United Nations (UN) headquarters that same month killed 23, including the chief of the UN's mission, and injured more than 100.³⁶ General Chiarelli described the bombs as "driving a psychological wedge between people and their protectors."³⁷ Due to the media attention that accompanied the high casualty attacks, vehicle-borne IEDs remained a weapon of choice throughout the war for al Qaeda in Iraq against

32 Atkinson, "Left of Boom Part 1."

33 *A Report Consistent with the Authorization for the Use of Military Force Against Iraq*, 108th Congress, 2nd Session. Document No. 108-180, April 21, 2004, <https://www.govinfo.gov/app/details/CDOC-108hdoc180>; and Steve Bowman, CRS Report RL31701, *Iraq: U.S. Military Operations* (Washington, DC: Congressional Research Service, 2005), 7-8, https://www.everycrsreport.com/files/20050518_RL31701_974416e86e4b4f396e4b1f4fd85582e7b4b756c2.pdf.

34 Atkinson, "Left of Boom Part 1."

35 Ricks, *Fiasco*, 217-218.

36 Dexter Filkins and Robert F. Worth, "11 Die in Baghdad as Car Bomb Hits Jordan's Embassy," *The New York Times*, August 8, 2003, accessed December 21, 2023, <https://www.nytimes.com/2003/08/08/world/after-the-war-iraq-11-die-in-baghdad-as-car-bomb-hits-jordan-s-embassy.html>; and Dexter Filkins and Richard A. Oppel Jr., "Truck Bombing," *The New York Times*, August 20, 2003, accessed December 21, 2023, <https://www.nytimes.com/2003/08/20/world/after-war-truck-bombing-huge-suicide-blast-demolishes-un-headquarters-baghdad.html>.

37 Chiarelli and Michaelis, "The Requirement for Full-Spectrum Operations," 5.

coalition and Iraqi targets.

Cody understood the Army could not armor its way out of the problem. No matter the armor's thickness, an adversary could always build a bigger bomb to defeat it. To defeat IEDs, he believed the Army had to move to the "left of boom" and attack the IED networks before they could emplace and detonate the IEDs. This approach was fundamentally different from the traditional one. While almost everyone else was focused on the IED—the physical munition—Cody was focused on the IED cell—the people behind the munition. Cody recognized the IED for what it was: both a weapon and a tactic. Rarely was an IED the work of a single individual. In most cases, it was the work of a cell, with everyone serving a unique role. A typical IED cell consisted of six to eight people: financier, bomb maker, placer, trigger person, spotter(s), and camera operator.³⁸ They often filmed the attacks for learning and propaganda.

Focusing on the IED was like a doctor focusing on the symptom but not the cause. Just as there was no "silver bullet" to defeat bullets or artillery shells, there was no silver bullet to defeat IEDs. Armor offered some protection, but fundamentally, it came down to defeating the enemy, not the weapon. Cody believed that a holistic approach was required to mitigate this threat. The U.S. needed to understand better how IEDs were built, triggered, and hidden so it could develop technical solutions to counter them, develop tactics, techniques, and procedures to find and avoid them, and gain a better understanding of the IED cell so it could attack the enemy network. Thus, he tasked Hughes to develop a task force to understand the threat, develop technical and tactical solutions to mitigate the threat, disseminate solutions across the force, and train and educate the force.³⁹ They had to capture as much information about each IED as quickly as possible, disseminate the information to deployed units, and integrate lessons into the training of units that would soon be deploying.⁴⁰

38 Greg Grant, "Anatomy of an IED," *Army Times*, August 15, 2005; and Clay Wilson, CRS Report RS22330, *Improvised Explosive Devices (IEDs) in Iraq and Afghanistan* (Washington, DC: Congressional Research Service, 2006), 2, <https://digital.library.unt.edu/ark:/67531/metacrs10213/>.

39 Cody, interview by author.

40 Ibid.; and Hughes, *War on Two Fronts*, 216–217.

Hughes immediately set to work building an initial concept for the organization by reaching out to retired Army Colonel Hank Kinnison, a former boss and friend, who was heading a branch of the Wexford Group in Columbus, Georgia. Wexford was a security consultant based in Vienna, Virginia, with whom Hughes had previously worked with. He considered their role crucial, stating, “Without them, we would never [have found] the former operators we needed to build the field teams.”⁴¹ Hughes turned to contractors to build the IED Task Force because “just about everyone on active duty who possessed the required skills was deployed and fighting” and Wexford retained many former special operations soldiers.⁴² Kinnison understood the urgency and quickly pulled together what Hughes described as a “first class field team” to develop a timeline and feasible solution. Hughes sent Kinnison his draft mission, intent, and manning diagram. Within hours, Kinnison returned it with his recommendation, which included a feasibility statement and a potential implementation timeline. It was sufficient for Hughes to go to Cody for a desk-side decision brief.⁴³

Hughes briefed Cody and told him they had the potential “to tackle the IED issue within forty-five days.”⁴⁴ The plan called for teams to deploy to Iraq with a command element located at the joint headquarters in Baghdad. Hughes felt a command element co-located with the coalition headquarters was required to ensure the field teams would have freedom of movement on the battlefield and unfettered access to local commanders. The team also needed connectivity with the Center for Army Lessons Learned to disseminate what the field teams were learning to Army and Marine units preparing to deploy. Thus, some experts needed to be located at the Center for Army Lessons Learned and dedicated exclusively to analyzing and disseminating information about IEDs. Hughes argued that “they had to be credible former officers and noncommissioned officers who would travel across the Army

41 Hughes, *War on Two Fronts*, 215.

42 Ibid.

43 Eric and Brian, Wexford contractors who helped design the IED Task Force, interviews by author; and Hughes, *War on Two Fronts*, 215. Brian is an alias; the individual asked not to be identified by name.

44 Richard A. Cody, interview by author; and Hughes, *War on Two Fronts*, 215-216.

and teach IED defeat procedures.”⁴⁵

After being briefed on the plan, Cody said, “Perfect. I know just the man to lead the task force—Joe Votel.”⁴⁶ The real work began, as Hughes and Votel had to turn the idea into a reality in less than 45 days. Kinnison sent a planning team to Washington only two days after his initial discussion with Hughes. The planning team consisted of two former special operations operators, “Brian” (pseudonym, individual asked not to use his real name) and Eric (individual requested to use only his first name), who had more than 40 years of special operations experience between them. Brian took the lead on finding the right people to populate the teams using his “black Rolodex” of former special operations operators, which he had built over 25 years of service. Eric was the skunkworks and weapons expert who determined the equipment requirements. If the Army did not have it, Eric would buy or build it. He had contacts within the defense industry, and with the help of the Rapid Equipping Force, Eric was able to get the team what it needed in amazingly short order.⁴⁷ Together, the four worked from office 2D468 of the Pentagon for three days developing the task force’s organization and deployment plan.⁴⁸

Eric and Brian identified several distinct skills the field team needed to analyze an IED incident: sniper, combat tracker, explosives, communications, combat medicine, and infantry/special operations forces tactics. They did not require the technical expertise of an Explosive Ordnance Disposal technician on the field team, since the teams could leverage that expertise from the headquarters. With each person on the team having multiple skills, they determined five or six members to be the ideal size, with six preferable because it allowed the team to form three, two-person buddy teams for onsite exploitation. The concept called for the team to conduct a forensic analysis of every IED blast site to reverse engineer the incident to determine what happened. After arriving at the incident, the operators would quickly assess the ambush site and establish security. The explosives

45 Ibid.

46 Hughes, *War on Two Fronts*, 217.

47 Eric, Brian, and Hughes, interviews by author; and Hughes, *War on Two Fronts*, 217-219.

48 Atkinson, “Left of Boom Part 1.”

expert would examine the blast and conduct a forensic analysis. The tracker would try to determine how much time the emplacer had spent emplacing the IED, his approach and exit, and his potential observation point. The team's communicator would send technical data and pictures to the headquarters element in Baghdad for immediate assessment and exploitation. If all went well, the medic would do little more than provide security.⁴⁹

After being briefed, Cody immediately approved the plan. However, the concept still required funding and people to turn the idea into a reality. Votel and Hughes secured the funds while Eric and Brian started to hire and resource the team members. Even though Cody chaired the Army Strategic Planning Board, he still required Hughes to argue the concept through the rigor of the board.⁵⁰ Two days later, the board approved \$1.5 million for the IED Task Force, of which a sizable portion went to Wexford to fund the field team members. Usually, it would take the Army several months to award a contract of this magnitude, but Votel was able to leverage the Rapid Equipping Force to establish a sole source contract with Wexford and get the task force established in a matter of days.⁵¹ Concurrently, Eric and Brian built the task force. The pair stayed at the Pentagon through Christmas, often working 18-hour days, five to six days each week.⁵² They hired 16 former special operations soldiers as contractors to form the nucleus of the field teams. Some of the former soldiers had retired only days before joining.⁵³ Two years later, 15 of the original 16 were still supporting the task force after conducting multiple combat deployments.⁵⁴

Eric and Brian had to construct the teams from scratch. They had to purchase or borrow every piece of equipment since the Pentagon office had no equipment. They armed the teams with rifles from the Old Guard stationed at Fort Myer, purchased Glock pistols for the team

49 Brian, interview by author.

50 Hughes, *War on Two Fronts*, 219.

51 Votel, interview by author.

52 Eric, interview by author.

53 Eric and Votel, interviews by author.

54 Votel, interview by author.

to carry, and drafted “permission slips” for the Wexford contractors to carry weapons in Iraq.⁵⁵ Getting the equipment was not always easy, despite Votel’s support. At one meeting, Votel asked if the team had any problems procuring the necessary equipment. Brian said that one of the impediments was a member of Votel’s staff who was sitting next to him. Votel turned to him and immediately instructed, “Anything that he wants on the list get it for them.”⁵⁶

As they solved one problem, they encountered another. To get radios, they went to the radio officer in the Pentagon. The contractors, however, could not carry the radios because they contained classified encryption, and contractors were forbidden from carrying encryption. Consequently, Votel had to go to the Secretary of Defense to get a waiver for them to carry the radios.⁵⁷ Normally, a Secretary of Defense waiver would be hard to obtain, but Votel had quick access through Cody and Schoomaker, who fully supported Votel’s efforts. The task force gathered as much information as possible before deploying. Cody even sent members of the IED Task Force to Walter Reed Hospital to interview soldiers who had been injured by IEDs to get a better understanding of how prepared or unprepared the soldiers had been for the threat they had encountered.⁵⁸

Cody sent Votel and Hughes to Baghdad in late November to secure a headquarters and to explain the purpose of the IED Task Force to senior officers in Iraq. Cody knew from experience that if the field commanders did not buy into the concept, the task force would be ineffective.⁵⁹ One skeptical general asked, “Why are you bringing me a 7,000-mile screwdriver to fix this from DC? Nothing good ever comes from Washington.”⁶⁰ Most commanders, however, welcomed the task force.⁶¹ Votel found Lieutenant General Ricardo Sanchez, commander of coalition forces in Iraq, overwhelmed but supportive and coordinated with his operations officer. They spent most of the visit searching

⁵⁵ Eric, interview by author; and Atkinson, “Left of Boom Part 1.”

⁵⁶ Former IED Task Force member, interview by author.

⁵⁷ Brian, interview by author.

⁵⁸ Cody, interview by author.

⁵⁹ Ibid.

⁶⁰ Atkinson, “Left of Boom Part 1.”

⁶¹ Ibid.

for a physical location for the headquarters element and eventually found space with an Explosive Ordnance Disposal battalion at Camp Victory, which was also the base of the coalition headquarters.⁶²

Votel and Hughes found the coalition headquarters struggling to come up with solutions to the IED problem. It had, however, established the Combined Explosives Exploitation Cell. As the number of IED attacks grew in the summer of 2003, JSOC sent Navy Lieutenant Commander Joseph “Digger” DiGuardo to Iraq to see what he could do to help. He was an Explosive Ordnance Disposal officer by trade and had led the Explosive Ordnance Disposal detachment in Bahrain during its response to the USS *Cole* attack. In the summer of 2002, he focused his efforts on countering the radio-controlled IEDs that were being used in Afghanistan. Still, he failed to gain much traction with his efforts.⁶³ When he arrived in Iraq, DiGuardo found a small conglomeration of British and American civilians and service members, Explosive Ordnance Disposal technicians, and intelligence analysts already studying the problem and looking for ways to combat IEDs. DiGuardo brought focus to the organization and obtained formal sponsorship from the coalition headquarters, the FBI, and other interagency partners to create what became the Combined Explosives Exploitation Cell. He served as its first officer in charge.⁶⁴ Votel and Hughes immediately recognized how well the IED Task Force and the Combined Explosives Exploitation Cell complemented one another. The task force could leverage the exploitation cell’s forensic exploitation capability, and the exploitation cell could leverage the task force’s ability to quickly gather data from attacks.⁶⁵

Votel met Cody’s deadline of having the task force operational within 45 days when the first two field teams departed the U.S. on December 12, 2003, and arrived in Baghdad the next day.⁶⁶ The task force established its small command center at Camp Victory. The field

62 Votel, interview by author.

63 Stephen Phillips, “The Birth of the Combined Explosives Exploitation Cell,” *Small Wars Journal*, April 20, 2008, accessed June 10, 2012, <http://smallwars.org/jrnl/art/the-birth-of-the-combined-explosives-exploitation-cell>.

64 Ibid.

65 Hughes and Votel, interviews by author; and Phillips, “The Birth of the CEXC.”

66 Hughes, *War on Two Fronts*, 219; and Brian, interview by author.

teams were initially based out of Camp Victory but soon moved to bases in Mosul and Tikrit to be closer to where most of the attacks were occurring. The teams drove around Iraq using unarmored Chevy Suburbans and Toyota trucks.⁶⁷

The field teams operated independently of coalition units for the first six months. When a catastrophic IED incident took place, the six-person field team would drive to the site to conduct a forensic investigation. Upon reaching the site, the team members would investigate the immediate site for debris and try to determine the size and composition of the explosive, the method of detonation, and the trigger location. They quickly discovered that the insurgents almost always used aiming stakes to detonate the charge at the optimal time. When a vehicle passed the aiming device, the trigger man would detonate the charge. Knowing the location of the charge and the aiming device, the team could determine likely trigger locations. They would also interview civilians to gather information on the IED cell. If they recovered any forensic material, they brought it to the exploitation cell.⁶⁸ The cell would then conduct a forensic analysis of the trigger mechanisms to try to find ways to defeat them.⁶⁹ After returning to base, the team would write a detailed report on the incident. If they discovered something new, they quickly disseminated it across the force.

During one of the forensic investigations, they discovered that a doorbell had been used as the initiation device. Since the IED Task Force headquarters was co-located with the coalition headquarters, it was easy to share the information. The coalition headquarters immediately sent out a FLASH message (an “all-points bulletin”) to look for doorbells, which was now added to the troops’ priority intelligence requirement list. Soon, the troops reported picking up cars with doorbell-filled trunks coming across the Syrian border. The task force also pushed the information back to its team member at the Center for Army Lessons Learned. Within 72 hours, the center disseminated the information to the combat training centers, home

⁶⁷ Former IED Task Force and AWG member, interview by author.

⁶⁸ Ibid.

⁶⁹ Phillips, “The Birth of the CEXC.”

station training teams, pre-deployment schools, and interagency partners, including the FBI.⁷⁰ It took time, however, to get to this level of sophistication. When the task force first deployed, it lacked the satellite communications equipment required to rapidly send data back to the U.S., and had to mail their reports back on compact discs and digital video discs. After the first reports came back, Votel was impressed and called it “graduate level work.”⁷¹ Votel was amazed at the task force’s ability to discuss both the tactical and strategic issues at play.⁷²

Over the winter of 2003-2004, the U.S. conducted the largest rotation of troops in modern history. Hence, members of the task force educated these deploying units on the IED threats, which they were ill-prepared to face.⁷³ The plan from the onset was to use the Center for Army Lessons Learned to disseminate important lessons.⁷⁴ The IED Task Force, however, quickly determined that the Center was not performing adequately. There was no vetting process. The center was disseminating “lessons” that it received from deployed units, but many of the “lessons” were simply wrong or had more to do with luck than effective tactics.⁷⁵ Regardless of whether the information was good or bad, it often failed to get disseminated down to the soldier level. Thus, the task force came up with the idea of creating Training Advisory Teams to educate deploying units on the IED threat prior to arriving in Iraq.⁷⁶

Many of the units rotating into Iraq were unaware of the IED threat until the Training Advisory Team briefed them in Kuwait just prior to continuing to Iraq. Much like a church revival, a task force member would assemble the unit into a large tent and use a loudspeaker with a projection screen to show the unit pictures of IEDs and blast sites, and videos of IED attacks that insurgents had filmed and posted online. They also provided tactics, techniques, and

70 Hughes, interview by author.

71 Ibid.

72 Brian, interview by author.

73 Kaplan, *The Insurgents*, 76.

74 Former AWG member, interview by author.

75 Brian, interview by author.

76 Former IED Task Force and AWG member, interview by author.

procedures on how to spot and avoid IEDs. After the brief, the unit received handouts and compact discs to reference later. After this first large troop rotation, the task force started flying out to deploying units' home stations to conduct the briefs so units could integrate the information into their pre-deployment training. A typical brief lasted three hours and provided the most current IED information, as well as tactics, techniques, and procedures to mitigate the threat. The time required to travel and conduct these briefings was taxing on the small task force. For one last-minute request from a unit in Baumholder, a single member provided four briefs a day for two days as the entire unit cycled through an auditorium.⁷⁷

The field teams assessed that many attacks in the first year were avoidable. One problem was how units were operating. Often, they failed to vary the time and the routes used for their patrols from the large bases. Therefore, it was easy for insurgents to predict the time and location of patrols. At night, patrols often drove using their headlights, as opposed to driving blacked out and using their night vision goggles. Insurgents easily exploited these and other vulnerabilities.⁷⁸ The IED Task Force teams mitigated these vulnerabilities by serving as a forward skunkworks for IED-defeat devices, educating soldiers on how to spot IEDs and how to react to IED attacks, and showing soldiers how to effectively employ jammers as they were fielded. Cody sent members from the Rapid Equipping Force to work alongside the IED Task Force field teams to test and field new jammers that they were developing.⁷⁹

While the number of IED incidents continued to grow, reaching nearly 100 each week by February 2004, the casualty-per-blast ratio was starting to drop as troops were learning counter-IED skills. In February, the number of U.S. fatalities caused by IEDs dropped to 11, half the number in January and the fewest number since September 2003.⁸⁰ This one-time drop caused some—including the USCENTCOM Deputy, Air Force Lieutenant General Lance Smith—to become overly

⁷⁷ Ibid.

⁷⁸ Brian, interview by author.

⁷⁹ Former AWG member, interview by author.

⁸⁰ Cordesman et al., *IED Metrics for Iraq*.

optimistic. Smith told Abizaid, “It looks to me like we’re winning this thing. We’re kicking ass.” Abizaid was less optimistic, and he soon asked for a “Manhattan Project” to counter IEDs.⁸¹ Votel had expected the IED Task Force to be a short-term fix to address the IED threat and did not expect it to last more than six months, but it soon became clear that the six-month Wexford contract would have to be extended and expanded.⁸²

Cody Approves the Development of the AWG (January–June 2004)

The idea of the Asymmetric Warfare Group started as an offshoot of the IED Task Force. During a meeting with Votel, Hughes, and Brian in late 2004, Cody remarked, “Every time we have a crisis, we start a task force because we didn’t see it as a threat.”⁸³ He stated that the Army needed a unit to focus on the threats that it does not recognize, develop countermeasures to the threats, and then teach the Army so it is “not caught short and building a new task force every time.”⁸⁴ Cody recognized that IEDs were only a symptom of a larger problem: the U.S. military was primarily trained, manned, and equipped to fight conventional militaries; however, asymmetric threats—including suicide bombers, assassinations, kidnappings, infrastructure attacks, dirty bombs, bioweapons, mortars and rockets, and other emerging threats—were becoming more common.⁸⁵ He thought a new unit was necessary because “no conventional Army organization is totally focused on the prosecution of asymmetric warfare, which has resulted in capability gaps.”⁸⁶

Cody saw how the Combating Terrorism Directorate had atrophied.

81 Atkinson, “Left of Boom Part 1.”

82 Votel and former AWG member, interviews by author.

83 Brian, interview by author.

84 Ibid.

85 Office of the Deputy Chief of Staff, G-3, *Operational and Organization (O&O) Concept for the Asymmetric Warfare Group (AWG)* (Washington, DC: Office of the Deputy Chief of Staff, G-3, March 2, 2005), 2.

86 Burdeshaw Associates, “The Asymmetric Warfare Group (AWG) Operational and Organizational (O&O) Concept,” Power-Point Presentation to the Vice Chief of Staff of the Army, the Pentagon, Arlington, VA, January 6, 2005.

He did not want that to happen again, so his solution was to create a standing organization within the Army to study asymmetric threats and to close asymmetric warfare capability gaps. Consequently, the new unit needed a broader scope than the IED Task Force.⁸⁷ Cody had the vision for the “ends” of the organization but lacked clarity on the “means” and “ways” to get there. Cody clearly wanted an organization focused on asymmetric threats. He did not know, however, if it should be an Army unit or a joint unit, where it should fall in DoD organizational hierarchy, or if it should be a single organization focused on all asymmetric threats or two organizations: one focused on IEDs and one focused on all other asymmetric threats.

Thus, almost from the beginning, Cody sought to institutionalize the IED Task Force concept. A task force, by definition, is a temporary organization that is created under a commander for a specific purpose, operation, or assignment. It is easier to create a temporary organization than a permanent unit, but it is also not enduring. Cody had bypassed the Joint Staff to get the IED Task Force teams deployed, but to secure the long-term funding required for the concept to endure, he needed to work with the Joint Staff or Army Staff and the Office of the Secretary of Defense or the Secretary of the Army to make the task force a standing organization.⁸⁸

Cody, Hughes, and Votel understood all too well that they had to build an institutional solution that would live on well past their departures to subsequent assignments. If it just remained a “good idea” within the G-3, the next G-3 might have its own “good ideas.” If the IED Task Force and the AWG were not part of the next G-3’s vision, the organizations would wither, as resources would be diverted elsewhere. Cody realized his team had to take the lead for IED efforts within DoD to ensure the capability endured. As a result, Cody pursued two concurrent paths, one within the Army to institutionalize the concept into a standing organization and the second within the Joint Staff to make it a joint entity.

On the Army front, Cody became convinced he needed to create a

⁸⁷ Ibid.

⁸⁸ Hughes, interview by author.

standing IED Command; therefore, he directed the U.S. Army Training and Doctrine Command to reconvene the Chemical, Biological, Radiological, Nuclear, and high-end Explosive (CBRNE) integrated concept team on February 17, 2004, to determine the requirements for the “IED command.”⁸⁹ An integrated concept team is a vehicle designed to brainstorm concepts to determine if they are practical and affordable. It is cross-functional, and it may include users, academia, industry, research and development centers, battle labs, and members of the test community.⁹⁰ Cody gave minimal guidance, but he directed the integrated concept team to determine if the unit should “plug within CBRNE command or if it should be a new subordinate unit that is task organized under the command.”⁹¹ He also directed that the unit be capable of (1) “planning and coordinating IED countermeasures by establishing policies, procedures, and guidance;” (2) “responding to operational needs by assessing a mission, determining the best mix of forces, and executing the mission with assigned field teams;” and (3) providing “Army-level oversight of IED counter-measure training.”⁹² The integrated concept team was given five weeks to make a recommendation with the goal of having the new capability operational by July 1, 2004, and the new unit effective by January 1, 2005.⁹³ At this point, Cody was focused only on creating a single standing organization to deal with IED threats as opposed to a variety of asymmetric threats.

Cody believed that IEDs belonged to the Explosive Ordnance Disposal community, because they had the requisite skills to understand and diffuse IEDs.⁹⁴ Hughes, however, disagreed. To Hughes, this was an operational requirement that could not simply be pushed to the Explosive Ordnance Disposal community. He felt the Explosive Ordnance Disposal community viewed IEDs from a technical perspective of how to disarm or detonate a bomb, not from an operational

89 Office of the Deputy Chief of Staff, G-3, Memorandum, “Organizational Development of IED Command” (Washington, DC: Office of the Deputy Chief of Staff, G-3, February 17, 2004).

90 Jeffery Patten, “Integrated Concept Team Utilization in the Requirements Determination Process” (Monterey, CA: 1996), 11-12, <https://apps.dtic.mil/sti/tr/pdf/ADA327644.pdf>.

91 Office of the Deputy Chief of Staff, G-3, “Organizational Development of IED Command.”

92 Ibid.

93 Ibid.

94 Votel, interview by author.

perspective of how to destroy the cell. Hughes realized that an IED command had to be more operationally focused than technically focused; thus, who the IED command worked for mattered greatly.⁹⁵ As a result, there was initial disagreement about who should command the proposed unit.

On April 4, 2004, the CBRNE integrated concept team briefed Cody on its recommendation for an “IED/asymmetric warfare” unit and presented three viable courses of action.⁹⁶ The relevant Army units at the brief included U.S. Army Combined Arms Support Command, U.S. Forces Command, Army Materiel Command, Maneuver Support Command, and the Office of the Chief of Army Reserve. They all supported the recommendation of assigning the mission to the CBRNE operational headquarters. The IED Task Force was the lone dissenter. Instead, it recommended creating a new permanent stand-alone joint organization. The idea of a stand-alone organization, however, had been ruled out because it violated Cody’s initial guidance of having the unit subordinate to CBRNE command.⁹⁷ At this time, Cody supported the majority recommendation.⁹⁸

The integrated concept team’s analysis and presentation focused almost exclusively on IEDs. The IED Task Force was the lone contributor which argued that this new organization needed to focus on broader threats and tried to convince Cody of this. To convince Cody, Votel was able to change some of the key wording in the brief. He changed “Threat IED [Task Force] Mission” to “Asymmetric Warfare Task Force Mission.” This changed the mission of the proposed organization from “IED threats” to “full spectrum asymmetric warfare.”⁹⁹ Even though members of the IED Task Force lost the initial fight as to who should command and control the proposed unit, they were successful in giving the unit a name—the Asymmetric Warfare

⁹⁵ Hughes, interview by author.

⁹⁶ CBRNE ICT, “COA Recommendation for Threat (IED) Task Force Under CBRNE Command,” PowerPoint presentation to the Deputy Chief of Staff, G-3, the Pentagon, April 3, 2004. The ICT briefed six courses of action but three were discarded because they did not meet the critical requirements from the G-3’s guidance.

⁹⁷ Ibid.

⁹⁸ Bowman, Michael, “AWG History,” Asymmetric Warfare Group Memorandum (Fort Meade, MD: Asymmetric Warfare Group, November 10, 2009).

⁹⁹ CBRNE ICT, “COA Recommendation.”

Regiment—that projected a broader mission.

They further codified this broader mission when Cody provided written guidance to the CBRNE integrated concept team a few days after the brief. In this memorandum, Cody stated the mission of the proposed unit:

[Asymmetric Warfare Regiment] integrates, coordinates, deploys and provides trained and ready forces, and exercises command and control of assigned forces in support of Joint and Army Force Commanders full spectrum asymmetric warfare operations. Observes, collects, develops, validates, and disseminates emergence Tactics, Techniques, and Procedures (TTPs) to [U.S. Training and Doctrine Command] and Joint Warfare Fighting Center, [U.S. Joint Forces Command]. Provides Advisory Training Teams to conduct pre-deployment Train-the-Trainer training on counter asymmetric threats. Conducts and provides prediction modeling, forensics, and trend analysis on asymmetrical threats to the supported commander.¹⁰⁰

While the focus of the proposed unit during the brief had been IEDs, the IED Task Force was already pursuing a broader asymmetric mandate.

While the CBRNE integrated concept team was developing the Asymmetric Warfare Regiment concept, Schoomaker testified before the House Armed Services Committee. There, he openly credited the IED Task Force for facing the threat on the ground and coordinating the IED efforts within DoD. A member of Congress asked Schoomaker if he had a plan to institutionalize the task force, since IEDs were not going away. Schoomaker replied that he was preparing to make the IED Task Force a standing Army organization.¹⁰¹

Three days later, Abizaid sent a message to DoD asking for a “Manhattan-like Project” for IEDs, which he called his “number one

100 Office of the Deputy Chief of Staff, G3, Memorandum, “Asymmetric Warfare Regiment (AWR) Organizational Design” (Washington, DC: Office of the Deputy Chief of Staff, G3, April 12, 2004).

101 Hughes, *War on Two Fronts*, 222-223.

threat in Iraq.”¹⁰² Cody told Abizaid that he already had a task force working on the problem.¹⁰³ With the House testimony and Abizaid’s message, interest from the Joint Staff grew. The next day—at the behest of the Chairman of the Joint Chiefs of Staff, Air Force General Richard Myers—Cody, Votel, and Hughes briefed the Chairman on the Army’s efforts.¹⁰⁴ Cody realized the IED threat was a threat to all the services and not just the Army, and used this as an opportunity to make it a joint effort.¹⁰⁵ Myers started the meeting by stating that he had read Abizaid’s message and had heard of the IED Task Force but lacked a complete understanding of its workings and wanted to know if it could meet Abizaid’s request. Votel provided a summary, and the Chairman noted the three critical factors that Cody knew were needed: funding, authority, and jointness. The Chairman said he would support the Army’s efforts, and he would recommend to the Secretary of Defense that the Army become the executive agency within DoD for counter-IEDs.¹⁰⁶ If the Army became the executive agent, it would mean a significant expansion of the Army’s authority, as the other services would have to relinquish funds, personnel, and bureaucratic control to the Army for counter-IED efforts.¹⁰⁷

Based on the meeting’s success, Hughes expected the brief to Deputy Secretary of Defense Paul Wolfowitz and the Senior Office of the Secretary of Defense Staff to go well. Hughes, however, was in for a major disappointment as he described the briefing as “the single greatest disappointment in human character I’ve witnessed in my entire military career.”¹⁰⁸ As Votel started the briefing, Secretary of the Air Force James Roche continued to talk loudly with another civilian. Hughes described what unfolded next, “As respectfully as possible, General Cody leaned toward the Secretary to let him know the briefing had started. I was shocked when the Secretary waved Cody off like a

¹⁰² Ibid., 223.

¹⁰³ Cody, interview by author.

¹⁰⁴ Hughes, *War on Two Fronts*, 222–224.

¹⁰⁵ Cody, interview by author.

¹⁰⁶ Hughes, *War on Two Fronts*, 222–224.

¹⁰⁷ Atkinson, “Left of Boom Part 1.”

¹⁰⁸ Hughes, *War on Two Fronts*, 224–225.

mere peasant.”¹⁰⁹ Votel, nonetheless, continued briefing despite Roche’s constant interruptions. Hughes described how “on three separate occasions, the Chair of the meeting regained control of the discussion and asked intelligent and thoughtful questions, only to be interrupted and challenged by Secretary Roche who was now advocating something called an [integrated product team]. I didn’t even know what an [integrated product team] was, or at least what the secretary wanted it to be.”¹¹⁰

It was Hughes’s opinion that Roche viewed the formalization of the task force as a threat to his service and, thus, argued that there was no need for an executive agency for IEDs. Roche argued that the “services were already working together to solve the problem and consolidating their efforts would only act to slow the incredible progress that ‘we’ had already realized.”¹¹¹ Wolfowitz tabled the issue until the Army had time to research the difference between an integrated product team and an executive agency.¹¹² An integrated product team is an ad hoc, temporary organization, with the lead service having little control over the other services. It is a mechanism to coordinate an effort across the services, but the lead service lacks any actual authority. An executive agent, by contrast, is a construct that establishes a lead service that has control over related funds. Despite Roche’s efforts, the Secretary of Defense assigned the Army the integrated product team lead for IED efforts in July 2004 and the executive agent for IEDs in January 2006.¹¹³

The Army’s role grew as it became the lead service, but it had not started this way. The Army had not been invited to early meetings relating to IED program priority, funding, and decision-making within DoD. For the first few months, Votel and Hughes had to push their way into the various meetings led by uncoordinated forums or offices within the Pentagon. At the time, the IED Task Force was one

¹⁰⁹ Ibid.

¹¹⁰ Ibid.

¹¹¹ Votel, interview by author; and Hughes, *War on Two Fronts*, 224–225.

¹¹² Hughes, *War on Two Fronts*, 224–225.

¹¹³ Office of the Deputy Secretary of Defense, Memorandum, “Joint Integrated Process Team (IPT) for Defeating Improvised Explosive Devices” (Washington, DC: Office of the Deputy Secretary of Defense, July 17, 2004); and Office of the Deputy Secretary of Defense, DoD Directive 2000.19E, *Joint Improvised Explosive Device Defeat Organization (JIEDDO)* (Washington, DC: Department of Defense, February 14, 2006), <https://www.hsdl.org/?view&did=771397>.

of more than 27 elements within the government focused on IEDs.¹¹⁴ Hughes assessed that many of these organizations deliberately avoided the IED Task Force to protect their turf, which often involved millions of dollars. He remarked, “All of these fiefdoms were more than willing to discuss, analyze, study, and debate IEDs; yet none of them seemed to show any urgency in getting solutions to our soldiers in combat.”¹¹⁵

The IED Task Force’s ability to provide the best and most current information from the field, combined with Votel’s leadership, quickly changed its status from what Hughes described as going from pushing their way into the room to “sitting at the head of the table and controlling the agenda” of the disparate efforts.¹¹⁶ No other organization had IED information that was as current and as detailed. After obtaining satellite communications, the task force sent reports back in less than 24 hours and provided lessons and recommended solutions within 72 hours. No one else was even close.¹¹⁷ Early on, Votel came out of meetings wondering why his task force seemed to be portraying a picture different from that of everyone else. He soon realized that his staff was the only one which had an accurate understanding of the situation in Iraq because of the information that his teams were providing.¹¹⁸

As the IED Task Force gained recognition, the various IED organizations within the government began to seek out their advice, information, and embed with their teams in Afghanistan and Iraq. Votel even hosted the first ever IED forum, though neither Votel nor the Army had the authority to direct other organizations to do anything.¹¹⁹ Votel also began to coordinate and share information with interagency partners, including the FBI, the Secret Service, and the CIA. Their stature grew because their information exceeded everyone else’s in terms of quality, quantity, and recency. Cody’s solution of resourcing and empowering his team paid off and eventually resulted in his team

114 Rex Douglass, “Only in War: Military Innovation and the American Response to Improvised Explosive Devices during the Iraq War” (unpublished paper, Princeton University, May 20, 2008), 10; and Hughes, *War on Two Fronts*, 222.

115 Hughes, *War on Two Fronts*, 220–221.

116 *Ibid.*, 221.

117 *Ibid.*

118 Votel, interview by author.

119 Hughes, *War on Two Fronts*, 222.

leading the counter-IED effort within the Pentagon.¹²⁰

While Votel was trying to pull together the disparate IED efforts within the Pentagon, work continued on designing what was being called the Asymmetric Warfare Regiment. Brian, the Wexford contractor who was instrumental in building the IED Task Force, was busy determining the organization's manning structure. Frustrated that no one on the IED Task Force staff could develop a design for Cody's organization, Brian returned to his hotel one night and drew a line and block chart for the unit. He loosely modeled it on a previous unit to which he had been assigned and laid it out in seven slides. The next day, he brought the slides to a meeting with the IED Task Force staff. Votel asked everyone what they thought. Everyone seemed to like it, with one staff member commenting, "It sounds like this guy knows what he's talking about."¹²¹

Cody approved the initial concept. Then he sent Brian and a retired Army officer named Michael to Fort Belvoir to work with the Force Management Support Agency to build the organization's Table of Distribution and Allowances (its structure document). Michael had retired after twenty years of service as an Army Field Artillery officer. He remained in the Pentagon after retiring and was responsible for much of the legwork required to establish the AWG.¹²² He understood the bureaucratic process required to create a new organization and had the interpersonal skills to effectively navigate the Army's complex bureaucracy. The AWG was a completely new concept that the Force Management Support Agency did not understand. When the agency provided him with a draft Table of Distribution and Allowances that was well off the mark, Brian knew that he would have to look elsewhere for the required expertise. He tracked down the officer from the U.S. Army Special Operations Command who was responsible for managing the structure documents of various special operations units. Brian described the new unit, provided the slides, and asked for help. Two days later, the officer provided Brian with the Table of Distribution and

120 Votel, interview by author.

121 Brian, interview by author.

122 Michael, interview by author.

Allowances that he needed.¹²³

On June 23, 2004, Cody signed a memo approving the new unit's organizational design. This allowed Votel to start building the new unit. Instead of being subordinate to CBRNE command, Cody changed his mind and directed that it be a direct reporting unit to the Army Staff headquarters.¹²⁴ Most units within the Army fall under an Army command such as U.S. Army Forces Command; however, a handful of units—such as the United States Military Academy, the U.S. Army Intelligence and Security Command, and the U.S. Army Medical Command—report directly to the Army Staff.¹²⁵ This was a significant change considering only two months prior Cody had directed the unit to be subordinate to CBRNE command. Cody was afraid that adding a layer of command—CBRNE—would slow the momentum to create the new unit; hence, he made it report directly to him. This change gave him greater control over the unit as it was being established. Cody also now envisioned this unit having a broader mandate—the asymmetric mission that Votel had inserted only two days before the April briefing—as opposed to an IED-centric mission, meaning it no longer made sense to subordinate it under CBRNE command.¹²⁶

With the memorandum's publication, the new unit's name changed from Asymmetric Warfare Regiment to Asymmetric Warfare Group.¹²⁷ There is no real difference between a group and a regiment, but when they briefed the concept to Schoomaker, he said it was more of a group than a regiment; therefore, they changed the name.¹²⁸ Cody also directed that “initial stationing will be in the [National Capital Region]” with permanent stationing remaining within U.S. Forces Command.¹²⁹ The memorandum also included the Table of Distribution and Allowances that Brian had developed.

123 Brian and Michael, interviews by author.

124 Office of the Deputy Chief of Staff G-3/5/7, Memorandum, “Approved AWG Organizational Design,” (Washington, DC: Office of the Deputy Chief of Staff G-3/5/7, June 23, 2004).

125 Department of the Army, Army Regulation 10–87, *Army Commands, Army Service Component Commands, and Direct Reporting Units* (Washington, DC: Headquarters, Department of the Army, 2017), 1, https://armypubs.army.mil/cpubs/DR_pubs/DR_a/pdf/web/ARN2541_AR10-87_WEB_Final.pdf.

126 Cody, interview by author.

127 Office of the Deputy Chief of Staff G-3/5/7, “Approved AWG Organizational Design,” June 23, 2004.

128 Schoomaker and Votel, interviews by author.

129 Office of the Deputy Chief of Staff G-3/5/7, “Approved AWG Organizational Design,” June 23, 2004.

Cody also directed AWG to be a “Special Mission Unit with a Priority One manning designation” and the top priority for equipment fill. Similar to other elite units, he directed that “selected positions will be documented with authorization for hazardous duty pay and Special Duty Assignment Pay.”¹³⁰ Unlike most units that have little to no control over who the Army assigns, he directed that the AWG would “use a nominative process and modified personnel management procedures to select and retain specified duty positions” and “a significant deviation in grade structure is required to execute [its] complex, hazardous mission.”¹³¹ Schoomaker, Cody, and Votel all came from the special operations community, and they understood how critical it was to have the right people, especially for a new organization.¹³² Cody was also able to reallocate funds to get it up and running by securing approximately \$60 million per year over the next five years for a total of \$300 million.¹³³

Building the Asymmetric Warfare Group (June 2004–March 2006)

In July 2004, Cody was promoted to Vice Chief of Staff of the Army when Casey moved from the position to take command of the Multi-National Force – Iraq. Despite being replaced by Lieutenant General James Lovelace as the Army’s G-3, Cody remained actively involved with the AWG until he retired in 2008.¹³⁴ Cody fully trusted Lovelace, but his interest in the organization was so strong that he did not want to let it go, even to a trusted colleague. Signing the memorandum approving the AWG’s organizational design was one of Cody’s last acts as G-3. It was important to him to lock in the organization’s future path before departing. To retain control, Cody directed that future decision briefs relating to the AWG continue to go to him.¹³⁵ Likewise, the field

¹³⁰ Ibid.

¹³¹ Ibid.

¹³² Schoomaker and Votel, interviews by author.

¹³³ Office of the Deputy Chief of Staff G-3/5/7, “Approved AWG Organizational Design,” June 23, 2004.

¹³⁴ Cody, interview by author.

¹³⁵ Burdeshaw Associates, “The AWG O&O Concept.”

teams continued to brief Cody after redeploying from Iraq.¹³⁶

After returning from each three-month deployment, team members reported to the Army operations center in the Pentagon to personally debrief Votel. Rather than having all six team members redeploy at the same time, Brian staggered their deployments so that every few weeks, one or two members redeployed.¹³⁷ Votel made the debriefs a top priority and personally received each one during his two years as director.¹³⁸ Every two to three months, a returning team member would also brief Cody at Cody's behest.¹³⁹ In addition to the debriefs, Cody kept a pulse of what was going on in Iraq by having the teams send daily reports back to Votel and his staff. It was very unorthodox to have a tactical asset being maneuvered from the Pentagon, but Cody believed it was the only way to ensure it was implemented effectively.¹⁴⁰

Concurrent with his effort to create the AWG, Cody successfully transformed the Army's IED Task Force into a joint task force. Cody was not worried about Secretary Roche's efforts at resistance. For Cody, the meeting demonstrated that service rivalries remained, and many mistakenly thought the war would end soon. Cody intentionally withheld some of his cards at the meeting. If the other services knew how fast he was moving to build the IED-defeat organization, he believed they would have put up even stiffer resistance. Cody simply bypassed Roche by going straight to Deputy Secretary Wolfowitz.¹⁴¹ Both Cody and Schoomaker were convinced that IEDs were a problem that required a team effort from all the services; thus, Schoomaker persuaded Wolfowitz that it needed to be a joint organization.¹⁴² They were successful and on July 17, 2004, Wolfowitz signed a one-paragraph order that transformed the Army's IED Task Force into the Joint IED Task Force and made the Army the lead service for the joint integrated product team.¹⁴³

¹³⁶ Cody, interview by author.

¹³⁷ Brian, interview by author.

¹³⁸ Ibid.

¹³⁹ Former IED Task Force and AWG member, interview by author.

¹⁴⁰ Cody, interview by author.

¹⁴¹ Ibid.

¹⁴² Schoomaker, interview by author.

¹⁴³ Office of the Deputy Secretary of Defense, "Joint IPT for Defeating IEDs."

Wolfowitz assigned the team the responsibility to coordinate “the multiple efforts underway within the services, seeking interagency assistance, and identifying innovative near-term solutions” and report to a senior steering group chaired by the deputy secretary.¹⁴⁴ The creation of the integrated product team—and the designation of the Army as the lead—transformed the Army’s IED Task Force into the Joint IED Defeat Task Force. This provided Votel with additional authorities and resources, and the budget for the task force grew from \$100 million in fiscal year 2004 to \$1.3 billion in fiscal year 2005. However, it also meant that Votel now reported to Wolfowitz instead of Cody. As the Office of the Secretary of Defense’s interest grew, Cody’s influence did not waver. He wanted to be sure he remained in control and told Votel, “Don’t forget where you came from.”¹⁴⁵

Operations in Iraq also affected the development of the new organization. Abizaid recognized that IEDs were a strategic issue because they were eroding public support for the war.¹⁴⁶ In May 2004, for the first time, a majority of Americans polled said the war was not going well.¹⁴⁷ The mounting IED casualties were the major factor contributing to the change in the public’s opinion. In August, Abizaid told Votel that he wanted any creative solution and would accept what became known as the “51% solution.” If the solution had a greater than even chance for success, he would welcome it in Iraq. He told Votel, “If you have something that’s greater than 51%, then get it forward. I’ve got the greatest testing ground in the world in Iraq.”¹⁴⁸ Potential solutions were put to the test on August 24, with the kickoff of Operation IED Blitz.¹⁴⁹ The operation saturated a 20-kilometer IED-infested stretch of road between Balad and Baghdad with as many forms of surveillance as possible. Still, the coalition lacked the assets required for persistent surveillance along the entire route.¹⁵⁰ In the end, the Army’s Rapid Reaction Technology Office

144 Ibid.

145 Atkinson, “Left of Boom Part 1.”

146 John Abizaid, interview by author.

147 Pew Research Center, “Public Attitudes Toward the War in Iraq: 2003-2008,” [PewResearch.org](http://www.pewresearch.org), March 19, 2008, accessed October 23, 2023, <http://www.pewresearch.org/2008/03/19/public-attitudes-toward-the-war-in-iraq-20032008/>.

148 Votel and Abizaid, interviews by author; and Rick Atkinson, “Left of Boom Part 2,” *The Washington Post*, October 1, 2007.

149 Atkinson, “Left of Boom Part 2.”

150 Benjamin Riley, “Testing & Experimentation: How to Better Support the Need for Quick Reaction Capabilities in an Irregular Warfare Environment,” PowerPoint slideshow (Washington, DC: Rapid Reaction Technology Office, April 6, 2009), slide 19.

assessed the multimillion-dollar IED Blitz as a failure.¹⁵¹ The operation demonstrated that the U.S. was still too focused on the planted bombs and those who buried them, not the more critical cell members—its leader, financier, and IED-maker, for example.

By the summer of 2004, the security situation in Iraq had progressed to such a point that it was no longer safe for the field teams to operate unilaterally. When they first arrived, they could launch to the IED site in their unarmored civilian vehicles. However, as the size of insurgent groups that conducted the attacks increased—sometimes groups numbering in the dozens for a single ambush—it was no longer safe for the field teams to travel alone. At this point, the teams started embedding with units out of necessity for force protection.¹⁵² This also changed the composition and the function of the teams. Since the team did not need to provide its own security, they decreased the size of the team to a pair. This had the added benefit of immediately tripling the task force's capacity, allowing it to embed in more units and to spend more time within each unit. Rather than the larger team basing at the brigade headquarters and moving out whenever an IED incident occurred, the teams now embedded within a company or battalion and stayed with the unit 24 hours a day for several weeks before moving to the next unit.¹⁵³ By embedding within units, their role as trainers and their ability to develop tactics, techniques, and procedures greatly expanded. As Votel and his team in the Pentagon developed the Table of Distribution and Allowances for the AWG, the two-man team concept quickly became the way forward—pairing a contractor (the retired special operations senior non-commissioned officer) with an active-duty soldier.¹⁵⁴ This pairing allowed the contractor with 20 to 30 years of experience to mentor the non-commissioned officer with 10 to 14 years of experience.¹⁵⁵

Lovelace approved the refined Table of Distribution and Allowances on November 19, 2004. He also stipulated that the unit

¹⁵¹ Ibid.

¹⁵² Brian, interview by author.

¹⁵³ Ibid.

¹⁵⁴ Pete and Brian, interviews by author.

¹⁵⁵ Brian, interview by author.

would “require temporary stationing at Fort Meade accompanied by continued utilization of current space at Fort Leavenworth, Fort Belvoir, and the Pentagon,” with its permanent station being addressed later. He directed the AWG to “develop the Asymmetric Warfare Training Center of Excellence at Fort A.P. Hill” and remained committed to an initial operating capability for the new unit in January 2005 and full operating capability in January 2007.¹⁵⁶

After finding a suitable location at Fort Meade, Maryland, they started the hiring process for the new unit. Brian convinced Votel that a formal assessment and selection course was required to select and train the right people since the Army did not train its soldiers on the skills that the AWG required.¹⁵⁷ While a lengthy selection and training process would delay the initial operating capability of the unit by nearly a year, Cody realized the delay was worth it given the importance of having the right personnel.¹⁵⁸ In late 2004, Brian asked Joe, another former special operations operator, and current Wexford contractor, to develop an assessment and selection course, and Brian brought in another contractor to develop the training course.¹⁵⁹ The three-week selection and assessment course put candidates through challenging situations that they were likely to face overseas and evaluated them on their performance. It concluded with a formal board that included behavioral interviewing. Contractors ran the first four courses, after which the AWG had the personnel to run it themselves.¹⁶⁰

They conducted the first assessment and selection course at Fort Walker, Virginia, in November 2004 and selected four non-commissioned officers.¹⁶¹ The training course that followed focused on preparing the soldiers for overseas operations and included subjects such as how to win friends and influence people. Possessing interpersonal skills was critical since operators often had to embed within units in

156 Office of the Deputy Chief of Staff G-3/5/7, Memorandum, “Approved AWG Organizational Design,” (Washington, DC: Office of the Deputy Chief of Staff G-3/5/7, November 19, 2004). At the time, Fort Walker was known as Fort A.P. Hill.

157 Brian, interview by author.

158 Cody, interview by author.

159 Brian, interview by author.

160 Ibid.

161 Former IED Task Force and AWG member, interview by author.

which they might not know anyone; they would have to win the trust of the command team and provide feedback in a tactful way.¹⁶² As a culmination exercise for its first training course, students conducted an operational deployment to El Salvador.¹⁶³

In late 2004, Cody recommended that Votel use Burdeshaw Associates—a strategic consulting firm—to help develop the AWG. By this time, they had developed a Table of Distribution and Allowances for the unit and had a basic understanding that the unit would be focused on asymmetric threats, but Cody and Votel lacked the capacity to develop the concept much further. Hughes had also moved on to other projects within the Pentagon, which meant they lost one of their key planners.¹⁶⁴ With only a skeleton staff, Votel could not develop the AWG and run the Joint IED Defeat Task Force, so he took Cody up on his recommendation. This allowed Votel to have retired generals at Burdeshaw work for him, and they provided him with the intellectual capital that he required.¹⁶⁵

In January 2005, Burdeshaw provided Cody with an initial brief that articulated the need, goal, and mission of the AWG. They specified that the AWG's goal would be to facilitate "U.S. conventional units that are faster to adapt, and more capable of identifying and attacking critical enemy vulnerabilities."¹⁶⁶ Its mission would be to "conduct operations in support of joint and Army force commanders to mitigate and defeat specified Asymmetric Threats."¹⁶⁷ Burdeshaw understood that the AWG was designed to be an engine of innovation within the Army to close asymmetric warfare capability gaps including IEDs, suicide bombings, assassinations, kidnappings, infrastructure attacks, dirty bombs, bio-weapons, mortars and rockets, and other emerging threats.¹⁶⁸

By March 2005, the AWG was taking shape as the slides from the January decision brief were expanded into a 70-page concept paper.¹⁶⁹ The document defined asymmetric warfare for the first time:

162 Brian, interview by author.

163 Former IED Task Force and AWG member, interview by author.

164 Hughes, interview by author.

165 Votel, interview by author; and Office of the Deputy Chief of Staff, G-3, "EXSUM VCSA Asymmetric Warfare Group Briefing 6 January 2005" (Washington, DC: Joint IED Defeat Task Force, January 6, 2005).

166 Burdeshaw Associates, "The AWG O&O Concept."

167 Ibid.

168 Ibid.

169 Office of the Deputy Chief of Staff, G-3, *O&O Concept for the AWG*.

Operations conducted by terrorists, guerrillas, militias, and paramilitaries to limit US military effectiveness while achieving their political objectives. The operations are conducted at the strategic, operational, and tactical levels to attack military and civilian targets. Objectives of these operations are to undermine US/Allied political, military, economic, and psychological strengths, and the will to win.¹⁷⁰

The initial organization called for a staff of 222, consisting of officers, warrant officers, enlisted soldiers, civilians, and contractors, and laid out the organization and functions of the various sections or subunits within the group.¹⁷¹

Complicating the establishment of the AWG was the existence of the Joint IED Defeat Task Force. Cody and Votel wanted to have the AWG assume control of many of the Joint IED Defeat Task Force functions, including the Center for Army Lessons Learned element and deployed teams, but they needed to figure out how best to seamlessly grow the AWG without negatively impacting combat operations. Votel directed Burdeshaw to develop courses of action on how to transition the deployed teams to the AWG. The retired generals briefed Votel in April 2005, but Votel did not feel comfortable making a decision at that time.¹⁷²

On June 27, 2005, only six weeks after replacing Wolfowitz, acting Deputy Secretary of Defense Gordon England signed DoD Directive 2000.19, establishing the Joint IED Defeat Task Force as the lead DoD agency to coordinate counter-IED efforts. It empowered the director of the task force with the authority formerly placed in the integrated product team.¹⁷³ It stipulated that the director would report directly to

170 Ibid.

171 Ibid.

172 Burdeshaw Associates, "Asymmetric Warfare Group Transition Plan: Kickoff Meeting with the Joint IED Defeat Task Force," PowerPoint briefing to Joint IED Defeat Task Force Commander (Washington, DC: Burdeshaw Associates, April 2005); and Bowman, "AWG History."

173 Office of the Deputy Secretary of Defense, DoD Directive 2000.19, *Joint IED Defeat* (Washington, DC: Office of the Deputy Secretary of Defense, June 27, 2005).

the deputy secretary of defense.¹⁷⁴ Additionally, it directed the services and the Joint Staff to fill sixty positions on the Joint IED Defeat Task Force for one year.¹⁷⁵

While the directive's content was similar to the memorandum that Wolfowitz had signed a year earlier, a DoD directive carries a significantly higher level of authority. As a result, it was more difficult for other services to ignore. It provided Votel the ability to approve purchases up to \$25 million, which was an enormous increase in power and authority.¹⁷⁶ The directive also forced the other services to support the task force with personnel, stipulating the number, rank, and specialty that each service needed to provide. England, as the former Secretary of the Navy, forced the Navy to provide dozens of desperately needed electronic warfare officers, despite steep resistance from the Navy. The Joint IED Defeat Task Force was joint in name only until England forced the other services to provide support.¹⁷⁷ Votel described the Navy as "saviors" because it was the only service with specialists who truly understood the electromagnetic spectrum.¹⁷⁸

The DoD directive was a significant step toward the creation of what would become the Joint IED Defeat Organization (JIEDDO), but it was a distraction to Votel in his efforts to establish the AWG. Running the Joint IED Defeat Task Force was a full-time job in which Votel reported to England, but at the same time, he continued to work for Cody to build the AWG and figure out how to transition the field teams. Votel still envisioned that the AWG would assume control of the forward deployed teams, but the full assumption of the teams could be years away because England's directive ensured that the Joint IED Defeat Task Force would remain for the duration of the conflict. In August, Votel's staff presented him with two options for transitioning the field teams, but Votel delayed his decision once again because he still lacked clarity as to the future of

174 Office of the Deputy Secretary of Defense, Memorandum, "Joint IED Defeat" (Washington, DC: Office of the Deputy Secretary of Defense, June 27, 2005).

175 From the "Staffing Requirements for the Joint IED Defeat Task Force" section of DoD Directive 2000.19. Of the 60 positions, the Army was directed to provide 33, the Air Force 9, the Marine Corps 9, the Navy 8, and the Joint Staff 1.

176 Office of the Deputy Secretary of Defense, DoD Directive 2000.19, *Joint IED Defeat*, 7.

177 Votel, interview by author.

178 Ibid.

both the Joint IED Defeat Task Force and the AWG.¹⁷⁹

Despite the importance that Cody placed on standing up the AWG, funding remained an issue. Creating the ad hoc task force was easier because it was temporary. Redirecting money from one part of the Army's budget to another for a permanent organization, however, was much more challenging. Votel realized the only way for the AWG to obtain funding was for Congress to amend the 2006 Appropriations Bill. Thus, Cody had to go to Congress to get the Appropriations Act amended. Congress amended the bill later in the year with section 8043 para (c)(2) authorizing the Secretary of the Army to form and fund "an Army field operating agency [the AWG] established to eliminate, mitigate, or counter the effects of improvised explosive devices, and, as determined by the Secretary of the Army, other similar threats."¹⁸⁰ This provided the legal requirements to make the AWG a reality.

In August, the Force Management Support Agency approved the AWG's Table of Distribution and Allowances.¹⁸¹ The approved manning had grown to 377 with a mix of officers (70), warrant officers (4), enlisted soldiers (157), civilians (47), and contractors (99). Votel planned to grow the unit to full capacity over the next four years, starting with 295 in fiscal year 2006.¹⁸² The agency also established the effective date for the unit as October 4, 2005, meaning the unit could start filling its billets almost immediately but well past the January 1, 2005, date that Cody originally desired for the unit's initial operating capability. Thus, by October 2005, the most significant bureaucratic hurdles had been overcome: the AWG had approved funding, an approved Table of Distribution and Allowances, and a physical location to occupy.

On January 31, 2006, the final bureaucratic hurdle was crossed when Secretary of the Army Francis Harvey signed General Order

179 Bowman, "AWG History;" and Joint IED Defeat Task Force, "JIEDD TF / AWG transition plan," PowerPoint slideshow to the Joint IED Defeat Task Force Commander, the Pentagon, Washington, DC, July 11, 2005.

180 DoD Appropriations Act, Public Law 109-148, U.S. Statutes at Large 119 (December 30, 2005), <http://www.gpo.gov/fdsys/pkg/PLAW-109publ148/pdf/PLAW-109publ148.pdf>; and Bowman, "AWG History."

181 Director of Force Management, Memorandum, "Concept Plan for AWG" (Washington, DC: Office of the Deputy Chief of Staff, G-3/5/7, August 11, 2005).

182 Ibid.

#2 establishing the AWG as a “field operating agency under the operational control of the Office of the Deputy Chief of Staff, G-3/5/7, Headquarters, Department of the Army” with an effective date of January 6, 2006. The order directed the AWG to “execute missions, responsibilities, and functions required to eliminate, mitigate, or counter the effects of improvised explosive devices and, as determined by the Secretary of the Army, other similar threats.”¹⁸³ The order also established the AWG’s location at Fort Meade.¹⁸⁴ On March 8, 2006, the AWG was officially established during its activation ceremony in the auditorium of McGill Training Center at Fort Meade. Cody presided over the ceremony in which Lovelace presented the unit’s colors to AWG’s first commander.¹⁸⁵

Establishing JIEDDO & the Army Asymmetric Warfare Office (January 2006-April 2006)

In Iraq, the enemy continued to innovate at a rapid pace. On August 3, 2005, a deeply buried IED detonated beneath a 26-ton amphibious assault vehicle, killing all 14 Marines inside.¹⁸⁶ The attack demonstrated the limitations of attempting to defeat IEDs with armor alone, as the bomb obliterated one of the military’s most heavily armored vehicles. Lieutenant General James Mattis, commander of the Marine Corps Combat Development Command, was disappointed with science’s inability to defeat the roadside bomb, remarking that for “a country that can put a man on the moon in 10 years, or build a nuke in 2½ years of wartime effort, I don’t think we’re getting what we need from technology.”¹⁸⁷ Like many others, he was expecting a technical solution to defeat IEDs.

183 Office of the Secretary of the Army, General Orders No. 2, *Establishment of the United States Army Asymmetric Warfare Group* (Washington, DC: Headquarters, Department of the Army, January 31, 2006).

184 Ibid.

185 K.P. Rowe, “Asymmetric Warfare Group Comes to Fort Meade,” *Soundoff!* March 16, 2006.

186 Dexter Filkins and Eric Schmitt, “14 U.S. Marines Killed in Iraq When Vehicle Hits a Huge Bomb,” *The New York Times*, August 3, 2005, accessed November 15, 2023, <https://www.nytimes.com/2005/08/03/international/middleeast/14-us-marines-killed-in-iraq-when-vehicle-hits-a.html#:~:text=BAGHDAD%2C%20Iraq%2C%20Aug.,invasion%20here%20in%20March%202003>.

187 Rick Atkinson, “Left of Boom Part 3,” *The Washington Post*, October 2, 2007.

As the desire for a technical solution continued to grow, so did the Joint IED Defeat Task Force's budget, which nearly tripled from \$1.3 billion in fiscal year 2005 to \$3.6 billion for fiscal year 2006, with 80% of the budget going to "defeat-the-device" technologies designed to foil the bomb or mitigate the blast.¹⁸⁸ IED attacks were occurring at a rate of more than one attack every hour in 2005, nearly twice the rate of 2004.¹⁸⁹ Abizaïd told Votel, "This thing could unravel on us by wearing down the American public with these IED casualties."¹⁹⁰

Early counter-IED efforts focused on providing better protection. Being the targets of IEDs, soldiers realized their thin-skinned vehicles did not offer adequate protection. Not wanting to wait for up-armored kits to arrive, soldiers developed "hillbilly armor" for their vehicles by salvaging metal from waste piles and landfills in Iraq to fabricate new steel doors, higher sides, and deflecting roofs that they welded onto their unarmored vehicles.¹⁹¹ Units and industry also manufactured Gypsy racks (steel-plated cages) to protect the exposed gunner. At the end of 2004, Humvees with hillbilly armor and add-on kits still outnumbered up-armored Humvees by a ratio of three to one.¹⁹² Despite the rising casualties, the production of up-armored Humvees was operating at 22 percent below capacity.¹⁹³

Other solutions were aimed at finding and defeating the devices. Some experimental solutions failed in testing, such as harnessing bees to smell explosives. Dogs proved more effective, and the Army fielded 48 explosive-sniffing dog teams in 2005 and another 48 in 2006.¹⁹⁴

Some solutions were simply fielded too late to be effective. When Representative Duncan Hunter (R-CA) learned that there were no person-portable jammers for dismounted soldiers, he became personally involved. Hunter had a personal interest in the war. Not only was he a Vietnam veteran, but also had a son in the Marine Corps.

188 Atkinson, "Left of Boom Part 1;" and Atkinson, "Left of Boom Part 3."

189 Cordesman et al., *IED Metrics for Iraq*.

190 Atkinson, "Left of Boom Part 3."

191 Martha Raddatz and Mike Cerre, "Soldiers Must Rely on 'Hillbilly Armor' for Protection," ABC News, December 8, 2004, accessed October 23, 2023, <http://abcnews.go.com/WNT/story?id=3129598&page=1#Uae6Sdi8NEI>.

192 Michael Hirsch et al., "Hillbilly Armor," *Newsweek*, December 20, 2004.

193 Ibid.

194 Atkinson, "Left of Boom Part 2."

His son, Duncan Hunter, Jr., quit his job after 9/11 and joined the Marines as an artillery officer, ultimately serving three combat tours overseas, two in Iraq and one in Afghanistan. Hunter grew frustrated with what he viewed as the Army's slow response to IEDs. Consequently, he sent his staffers to industry to speed up the production of heavy plates for up-armored Humvees.¹⁹⁵

Sometimes, Hunter's efforts ran counter to those of Votel. In the spring of 2004, the IED Task Force established a jammer strategy: "Get as many systems into theater as possible." Jammers quickly proliferated both in number and variety. At this time, the U.S. military had over 500 mobile jammers in Iraq, yet many more were needed, accordingly, variants named Warlock, Cottonwood, and Ironwood were shipped to Iraq as quickly as they could be built.¹⁹⁶ This was an effective strategy at the beginning, but it was not sustainable. Votel realized that having so many different jammers was not efficient from an operator or logistical perspective; therefore, he sought to develop and field a single, powerful jammer named Duke that would cover as much of the radio-controlled spectrum as possible. On December 1, 2004, he notified industry that he intended to phase out the production of the Warlock, which cost nearly \$100,000 per device to produce.¹⁹⁷

At this point, Votel nearly lost control of his efforts. When the company that manufactured the Warlock announced that it would have to lay off workers, Hunter became so concerned that he blocked the Army's request to reprogram two billion dollars until it agreed to produce more Warlocks. After losing an argument about jammer policy with Robert Simmons, the staff director of the House Armed Services Committee, Votel turned to Cody for help. Cody tried to convince Wolfowitz to go back to Hunter to argue for the jammers that Votel wanted, but Wolfowitz did not think it was worth the fight and agreed to keep producing Warlocks. Having lost the battle, the Army placed a \$56 million order for 1,440 more Warlocks in January 2005. Unfortunately, the Warlocks were mostly ineffective

¹⁹⁵ Atkinson, "Left of Boom Part 1."

¹⁹⁶ Ibid.

¹⁹⁷ Atkinson, "Left of Boom Part 2."

by the time they were delivered. Due to the success of the Warlock and other jammers, the enemy had moved to using high-power radio-controlled devices, and low-power devices declined to only six percent of all IEDs by the summer of 2005. The new Warlocks joined the more than 4,200 portable electronic jammers in Iraq that were ineffective against 94% of the IEDs.¹⁹⁸

While the U.S. was pursuing outdated solutions, the insurgents continued to innovate. On July 6, 2005, the enemy started using explosively formed penetrators that combined a passive infrared trigger with a radio-controlled telemetry module (electronic circuitry that allowed the triggerman to be selective about what they attack). Previous explosively formed penetrators would fire at the first warm object to pass, but the telemetry module allowed the insurgent to arm the IED with a radio signal. Thus, they could leave it disarmed when civilian vehicles passed and arm it when a military vehicle approached. The radio frequency was outside the spectrum of most U.S. jammers; thereupon, Votel turned to the Israelis for help. Despite the significant investment in counter-IED technologies over the past two years, the U.S. still lagged behind the Israelis. The Israelis helped by sending a pair of vehicle-mounted “Dragon Spike” microwave devices to Iraq.¹⁹⁹

The Joint IED Defeat Task Force was not alone in trying to develop innovative solutions. Soldiers in the field who were experiencing the IEDs firsthand were trying to develop their own countermeasures. Much like the hillbilly armor that soldiers fabricated to provide better protection, they came up with their own solutions to try to defeat the infrared-triggered IEDs. Since they were triggered by heat, one soldier proposed mounting a giant hair dryer on a bumper, while another took a toaster that he had purchased at a bazaar, plugged it into his Humvee, and hung it from a long pole welded to the front of the vehicle.²⁰⁰ These were innovative but hardly practical solutions. One practical countermeasure became known as the “Rhino” because the device—a hot glow plug attached to the end of a ten-foot

198 Ibid.

199 Atkinson, “Left of Boom Part 3.”

200 Ibid.

rod that was affixed to the front of a vehicle—looked like a rhinoceros horn.²⁰¹ The heated can decoyed the infrared sensor, which triggered the explosively formed penetrators prematurely. This countermeasure was only effective for six weeks before insurgents countered by aiming the explosively formed penetrator at an angle to strike ten feet behind the decoy heat source. The Army, in turn, created the Rhino II, which placed the Rhino on a telescoping pole so that the distance between the glow plug and the vehicle could be varied. This low-cost countermeasure, costing less than \$2,000, remained a standard feature, with more than 16,000 being deployed overseas in just thirty months.²⁰² Despite these efforts, more than 800 service members had been killed by IEDs in Iraq by the end of 2005.²⁰³

This growing death toll convinced officials to create a standing organization to study the IED threat. What started as an ad hoc Army task force and still existed as a joint integrated concept team—the Joint IED Defeat Task Force—had already spawned the AWG and would soon transition to become the Joint Improvised Explosive Device Defeat Organization (JIEDDO). In January 2006, England established the JIEDDO as a permanent Office of the Secretary of Defense activity with the mission “to lead, advocate, and coordinate all Department actions in support of the Combatant Commanders and their respective Joint Task Forces’ efforts to defeat Improvised Explosive Devices as weapons of strategic influence.”²⁰⁴ In the short two-page memo, England justified its creation:

In the last two years, the Department initiated several organizational process improvements to provide timelier, integrated solutions to the urgent operational needs of our warfighter. These initiatives include the establishment of the Joint Improvised

201 Glenn Zorpette, “Countering IEDs,” *IEEE Spectrum* 45, no. 9 (2008): 26-35; and Adam Higginbotham, “U.S. Military Learns to Fight Deadliest Weapons,” *Wired*, July 28, 2010.

202 Higginbotham, “U.S. Military Learns to Fight Deadliest Weapons.”

203 Cordesman et al., *IED Metrics for Iraq*.

204 Office of the Deputy Secretary of Defense, Memorandum, “Establishment of the JIEDDO” (Washington, DC: Office of the Deputy Secretary of Defense, January 16, 2006), 1. In 2015 JIEDDO was transitioned from a jointly manned activity under the Deputy Secretary of Defense to a Defense Agency under the Under Secretary of Defense, Acquisition, Technology, and Logistics. Deputy Chief Management Officer Memorandum, “Organizational Realignment of the Joint Improvised Explosive Device Defeat Organization,” March 2, 2015.

Explosive Device Defeat Task Force. The scope of the Task Force is now being expanded with a permanent organizational structure to execute the IED Defeat mission more effectively. Accordingly, effective today, I am establishing the Joint IED Defeat Organization (JIEDDO) as a joint entity and jointly manned activity of the Department of Defense.²⁰⁵

The memorandum transferred “all authorities, responsibilities, functions, and resources previously assigned to the Director, [Joint IED Defeat Task Force]” to the JIEDDO director.²⁰⁶ Schoomaker brought in recently retired General Montgomery Meigs to serve as its first director.²⁰⁷ Meigs had retired in 2003 but had combat experience in Vietnam and the Persian Gulf and had commanded the NATO peacekeeping mission in Bosnia. In addition to his command experience, he had the academic credentials for the task. In his doctoral dissertation, he scrutinized the management of the Manhattan Project and he wrote a book on the methods used to defeat German submarines during World War II. Cody needed to replace Votel, since the Army had reassigned him to Fort Liberty to serve as an assistant division commander for the 82nd Airborne Division.²⁰⁸

There was still confusion about who would control the field teams since they performed both AWG and JIEDDO functions. Some members of the AWG thought the AWG would run all the tactical elements and that JIEDDO would be the headquarters element. Meigs, however, wanted his own field capability; therefore, most of the IED-specific functions were transferred to the newly created Joint Expeditionary Teams that JIEDDO controlled. They continued to perform site investigations and forensic analyses, and develop, test, and field new IED defeat devices. The remaining functions remained with the unit-embedded AWG field teams, which continued to assess threats other than IEDs, develop materiel and non-materiel solutions to mitigate these threats, and help train and educate deployed and deploying units. A vast majority of the field

205 Ibid.

206 Ibid., 2.

207 Schoomaker, interview by author.

208 Atkinson, “Left of Boom Part 3.”

team members remained with the AWG teams, but a few moved over to the newly formed Joint Expeditionary Teams.²⁰⁹

While the establishment of JIEDDO was a win for Cody and the counter-IED effort, it left the Army without a lead agency or an asymmetric warfare proponent at the Army's headquarters. The JIEDDO director reported to the deputy secretary of defense, not the Army. While this command relationship had not changed since July 2004 when Wolfowitz transformed the Army's IED Task Force into the Joint IED Defeat Task Force, Cody's ability to influence it had. As Joint IED Defeat Task Force director, Votel may have reported to Wolfowitz, but he worked from Cody's office. Additionally, assuming Votel wanted to get promoted, it is safe to assume that the Vice Chief of Staff of the Army maintained some level of influence over him. But JIEDDO was now being run by a retired general from an office outside the Pentagon, so Cody's ability to influence had decreased significantly. The AWG provided the Army the capability to deal with asymmetric threats, but the unit was based out of Fort Meade; therefore, Cody was left without an asymmetric warfare capability on his staff.²¹⁰

Thus, Cody established the Army Asymmetric Warfare Office in April to "proliferate [asymmetric warfare] policy, programs, and resourcing and prioritization of the Army position, strategy and way ahead" in coordination with JIEDDO.²¹¹ What started as a small task force in October 2003 that was anticipated to last no more than six months had grown into two standing units—the Army's AWG and DoD's JIEDDO—and an office on the Army staff: the Army Asymmetric Warfare Office.

The Asymmetric Warfare Group Matures (2006-2008)

209 Joint IED Defeat Organization, "Fiscal Year (FY) 2013 Budget Estimates" (Washington, DC: Joint IED Defeat Organization, 2012).

210 Votel and Cody, interviews by author.

211 Department of the Army, "HQDA EXORD 158-06 ISO Army Asymmetric Warfare Program Implementation" (Washington, DC: Army Operations Center, April 13, 2006). The official charter establishing the AAWO followed a month later; Office of the Vice Chief of Staff, Memorandum, "Army Asymmetric Warfare Office (AAWO) Charter" (Washington, DC: Department of the Army, May 24, 2006).

When the AWG was established on March 8, 2006, it had only three of its four operational squadrons, and none was close to being fully staffed. Despite missing Cody's goal of initial operating capability in January 2005, the unit nearly met his goal of reaching full operating capability by January 2007.²¹² As the AWG matured over the next decade, its mission and core functions remained basically unchanged from what Cody envisioned back in early 2004.²¹³ A decade later, its mission was to "provide operational advisory support and develop rapid operational solutions to the Army and Joint Forces to defeat current and emerging threats, enhance combat effectiveness, and inform Army future requirements."²¹⁴ While the wording of the AWG's mission changed from "asymmetric threats" to "current and emerging threats," this was more of a cosmetic change than a substantive one.²¹⁵ A decade later, the group's four core functions remained virtually unchanged: (1) operational advising, (2) identify capability gaps, (3) solution development, and (4) assist [doctrine, organization, training, materiel, leadership and education, personnel, and facilities] integration.²¹⁶

In 2005 and 2006, the AWG grew its first three operational squadrons through the assessment, selection, and training courses that it ran twice yearly. The unit gained most of its contractors when it absorbed the Joint IED Defeat Task Force field teams in early 2006. The process of absorbing the contractors was fairly easy, as they were able to use the same contracting mechanism.²¹⁷ In March 2006, Eric, who played a critical role in designing and building the IED Task Force, returned to the AWG to help build its fourth squadron.²¹⁸ The first three squadrons provided operational advisors that focused on the unit's first two core tasks: operational advising and identifying capability gaps. The fourth squadron—the concepts integration squadron—concentrated on the other core tasks: solution development and assistance in doctrine,

212 Office of the Deputy Chief of Staff G-3/5/7, "Approved AWG Organizational Design," November 19, 2004.

213 Votel, Hughes, and Brian, interviews by author.

214 This was the AWG's mission as listed on their website on October 3, 2017. The Army deactivated the AWG in 2021. The unit's final mission statement can still be found at <https://www.awg.army.mil/About-Us/Mission-Core-Functions-Priorities/>.

215 Ibid.

216 Ibid.

217 Former AWG member, interview by author.

218 Eric, interview by author.

organization, training, materiel, leadership and education, personnel, and facilities integration.²¹⁹ When Eric arrived, there were only three people in the squadron. He was still a Wexford contractor, which meant Army regulations prohibited him from serving in a leadership position. Therefore, he took the role of senior technical advisor and helped grow the squadron to 60 personnel by the time he left in April 2007.²²⁰

Initially, the operational advisors focused exclusively on the field team and training advisory team missions in Iraq and Afghanistan, but as the group's capacity grew and the commitments in Iraq decreased, the unit started to send these "global scouts" around the world to identify other emerging threats. The operational advisors served in advisory roles by helping train and educate conventional units against various asymmetric threats. They also identified emerging threats and capability gaps. When a unit member identified a capability gap, one of the line squadrons would work with the concepts integration squadron to develop materiel and non-materiel solutions to the problem, with the concepts integration squadron responsible for managing the solution development process within the unit. Sometimes, the solution was as simple as getting a product approved and disseminated across the Army. In other cases, a materiel solution was required. The concepts integration squadron rarely developed materiel solutions internally and instead worked with the Rapid Equipping Force and other materiel developers.²²¹ They were able to help speed the development of the materiel solution by prioritizing the development of needed capabilities and by working with scientists to ensure that the equipment they were developing was user-friendly and worked in an operational environment. After developing a solution, the group evaluated the implemented solution to assess its effectiveness at mitigating the gap and then refined the fielded solution or developed new ones.²²²

An example of how the AWG shifted from IEDs to asymmetric threats can be demonstrated with its support to countering sniper attacks. In early 2006, Eric and other members of the AWG anticipated

219 Former AWG squadron commander, interview by author.

220 Eric, interview by author.

221 Other materiel developers include the Program Executive Office Soldier.

222 Former AWG squadron commanders, interviews by author.

that sniper attacks in Iraq would increase. In June, he brought together a small group to examine the sniper problem. Later that summer, when sniper attacks increased, Army leadership became concerned. Hearing that the AWG had already been studying the problem, Secretary of the Army Francis Harvey brought in Eric, the AWG commander, and the Rapid Equipping Force commander to brief him. After the brief, Harvey gave the AWG an order to solve the problem. For the counter-sniper problem, the solution was primarily non-materiel, meaning the solution was primarily education and tactics, techniques, and procedures, rather than equipment.²²³ Within weeks, the AWG produced a tactical pocket reference—a one-page reference that could be folded and placed in a pocket—that included tips and tactics, techniques, and procedures on how to avoid becoming the target of a sniper and how to eliminate a sniper.²²⁴ At the same time, the counter-sniper reference was distributed throughout Afghanistan and Iraq, the field teams educated units in Iraq, and the Training Advisory Teams helped incorporate counter-sniper training into the pre-deployment training of units that would soon be deployed overseas.

The Army had similar references called graphical training aids, but the AWG could not call its products graphical training aids because those were doctrinal items that could be produced only after a lengthy approval process through the U.S. Army Training and Doctrine Command. Units in the field; however, could not wait for a lengthy approval process, therefore, the AWG had to call their reference cards by another name to field them quickly.²²⁵ The AWG conducted legal, operational security, public affairs, and a peer-review before publishing any new tactical pocket references. Thus, they followed a similar approval process to the graphical training aid, but they did it in a matter of days or weeks as opposed to months or years.²²⁶

223 Eric, interview by author.

224 Ibid. The Tactical Pocket Reference was updated in 2007, see Asymmetric Warfare Group, Tactical Pocket Reference, "Sniper Awareness and Counter-Sniper Tips" (Fort Meade, MD: Asymmetric Warfare Group, 2007), <https://www.scribd.com/document/75654078/Asymmetric-Warfare-Group-Sniper-Awareness-and-Counter-Sniper-Reference-Card>.

225 Former IED Task Force and AWG member, interview by author. Earlier, it was pointed out that the Center for Army Lessons Learned would publish un-vetted lessons learned. U.S. Army Training and Doctrine Command has a review process in place to minimize the likelihood of bad doctrine being adopted, implemented, and diffused; however, the cost associated with the review process is the time it takes.

226 Former AWG members, interviews by author.

In terms of a materiel solution to the sniper threat, the AWG helped expedite the development and fielding of the Lethal Miniature Air Munitions System (LMAMS).²²⁷ The LMAMS was a person-portable uncrewed aerial vehicle the size of a model airplane that carried an explosive charge. An operator could launch it from a tube and control it using a handheld controller while receiving real-time video of the LMAMS's flight path. The operator could use its camera to find a target and then guide the uncrewed aerial vehicle into the target, where it would detonate. It had a large enough explosive charge to kill a person in the open or in an unarmored vehicle, yet a small enough charge to minimize collateral damage. If the controller failed to identify a target, then they could detonate the munition in the air where it would not cause any collateral damage.²²⁸ Working with the developers and the testers, the AWG expedited the testing and fielding of the new capability.²²⁹ In a counter-sniper scenario, a unit could launch the uncrewed aerial vehicle to look for snipers and eliminate them. Without the LMAMS, even if a unit determined a sniper's location, it was sometimes difficult to respond due to the risk of collateral damage to civilians or property. The LMAMS reversed the asymmetrical advantage of the sniper by allowing the target to be the hunter and search for the sniper from a position of concealment.

In some cases, the AWG played a leading role in developing the solution. In other cases, they took an existing solution, refined it, and then diffused it across the force. The "Company Intelligence Support Team" is an example of the latter. The Army is organized primarily to fight against a conventional ground force; therefore, there is no need for an intelligence section at the company level of combat units. When fighting an insurgency, however, most of the intelligence is developed at the lower level, so the company needs its own intelligence capability

²²⁷ Ibid.

²²⁸ Gary Mortimer, "Lethal Miniature Aerial Munitions System (LMAMS) to be deployed soon?" *sUAS News*, January 1, 2011, accessed February 17, 2013, <http://www.suasnews.com/2011/01/lethal-miniature-aerial-munition-system-lmams-to-be-deployed-soon/>; Spencer Ackerman, "Army Wants Tiny Suicidal Drone to Kill From 6 Miles Away," *Danger Room*, September 10, 2012, accessed October 25, 2023, <http://www.wired.com/dangerroom/2012/09/suicidal-drone-6-miles-away/>; and Spencer Ackerman, "U.S. Troops Will Soon Get Tiny Kamikaze Drone," *Danger Room*, October 25, 2023, accessed February 17, 2013, <http://www.wired.com/dangerroom/2011/10/tiny-kamikaze-drone/>.

²²⁹ Former AWG members, interviews by author.

to understand the enemy and the population. However, the battalions and brigades lacked the capacity to push their small number of intelligence analysts to the company level. Realizing this shortfall, some units started to develop their own Company Intelligence Support Teams by taking some of their brightest noncommissioned officers who had been trained in other military specialties such as infantry, artillery, armor, or chemical warfare, and put them into a section within the company headquarters to help run the company's intelligence efforts.²³⁰

Due to the robust number of teams and their rotation pattern, the AWG field teams could observe the practices of dozens of companies throughout Iraq. They observed companies that had developed and used Company Intelligence Support Teams effectively. They captured the best practices, diffused them across the force, and helped institutionalize the concept into doctrine. Using their interpersonal skills rather than coming into a unit and telling its members, "Here is what you need to do," they would plant the seeds for a Company Intelligence Support Team in the head of the commander or first sergeant and then help them execute the idea.²³¹ To institutionalize the concept, they produced a tactical pocket reference that was later adopted as a graphical training aid.²³² The Intelligence Center of Excellence at Fort Huachuca, Arizona, became the doctrinal component for the Company Intelligence Support Team that was taught for many years at the intelligence and maneuver schools.

Over the next few years, the AWG continued to produce several other tactical pocket references to help educate troops on skills they lacked. They created a reference on how to conduct tactical site exploitation.²³³ The Army may have published its first manual on "Sensitive Site Operations" in April 2007, but the AWG realized that many units still failed to effectively perform this critical function even after the manual's

230 Phil Sussman, "COIST staffs play a crucial role on today's complex battlefield," Army.mil, June 19, 2009, accessed October 25, 2023, http://www.army.mil/article/23048/COIST_staffs_play_crucial_role_on_today_039_s_complex_battlefield/.

231 Former IED Task Force and AWG member, interview by author.

232 Asymmetric Warfare Group, GTA 90-01-22, "Company Intelligence Support Team (ColST)" (Fort Meade, MD: Asymmetric Warfare Group, 2010), <https://info.publicintelligence.net/USArmy-COIST-SmartCard.pdf>.

233 Asymmetric Warfare Group, Tactical Pocket Reference, "Tactical Site Exploitation" (Fort Meade, MD: Asymmetric Warfare Group, 2008).

publication.²³⁴ In a combat environment, seizing, marking, and tracking captured materiel is important from a military intelligence perspective, but it became even more critical because this captured materiel served as evidence that was required to convict captured individuals in Iraqi courts. Without effective site exploitation, captured individuals were more likely to be released and would continue to pose a threat to the coalition, the Iraqi government, and the Iraqi population. Realizing that units systematically failed to conduct effective site exploitations—they overlooked critical information or marked it and tracked it so poorly that it was either useless or lost—the AWG created a tactical pocket reference to help. The field teams disseminated the references and conducted classes on how to conduct effective site exploitations. Because they were embedded within units, they could see how the units were operating and make the necessary recommendations when units failed to conduct site exploitations effectively.

The AWG supported the counterinsurgency campaign in Afghanistan with several other publications. In October 2008, the AWG produced a tactical pocket reference on “vehicle registration plates of Afghanistan.” This was useful because it told troops how to read the Pashto plates and identify the province of registration, the registration number, and the type of vehicle.²³⁵ They also produced references on “Understanding [Counterinsurgency],” “Integrating Information Operations with [Find, Fix, Finish, Exploit, Analyze, and Disseminate] Targeting,” and how to conduct an Afghan Key Leader Engagement.²³⁶ Despite the counterinsurgency manual having been published in 2006 and counterinsurgency scenarios being incorporated into training scenarios, the AWG discovered that many soldiers and units still lacked the understanding of how to conduct an effective key leader engagement.

234 Department of the Army, FM 3-90.15, *Sensitive Site Operations* (Washington, DC: Headquarters, Department of the Army, 2007).

235 Asymmetric Warfare Group, Tactical Pocket Reference, “Vehicle Registration Plates of Afghanistan,” (Fort Meade, MD: Asymmetric Warfare Group, 2008).

236 Asymmetric Warfare Group, Tactical Pocket Reference, “Understanding Counterinsurgency (COIN)” (Fort Meade, MD: Asymmetric Warfare Group, 2010); Asymmetric Warfare Group, Tactical Pocket Reference, “Integrating Information Operations with F3EAD Targeting” (Fort Meade, MD: Asymmetric Warfare Group, 2010); and Asymmetric Warfare Group, Tactical Pocket Reference, “Afghan Key Leader Engagement (KLE)” (Fort Meade, MD: Asymmetric Warfare Group, 2008), <https://publicintelligence.net/ufouo-asymmetric-warfare-group-afghan-key-leader-engagement-kle-smart-card/>.

The AWG created books or manuals for more complex tasks that could not be simplified to a double-sided, 8½-by-11-inch piece of paper that could be folded into a tactical pocket reference. In 2010, they produced an 88-page booklet in conjunction with the counter-threat finance intelligence training program of the Defense Intelligence Agency to help battlefield units understand how counter-threat finance applied to their level.²³⁷

As the Concepts Integration Squadron grew, it expanded its understanding of threats outside Afghanistan and Iraq. These nontraditional threats often required an approach that synchronized joint, interagency, and multinational efforts regarding diplomacy, intelligence, information operations, economics, finance, and law enforcement. In 2007, the AWG partnered with the Johns Hopkins University Applied Physics Laboratory and began a collaborative initiative to foster an inter-organizational methodology to counter complex problems. Together, they created the Asymmetric Operations Working Group with the explicit purpose of applying the “Vulnerability Assessment Method to assess the critical vulnerabilities of actors within an operational environment and then to identify friendly element actions across the spectrum of the elements of national power to better apply a whole-of-government response.”²³⁸ The working group published eight vulnerability assessment workbooks that focused on a variety of complex threats.²³⁹

In October 2020, the Army announced that it would be deactivating both the AWG and the Rapid Equipping Force due to “the U.S. Army’s transition from counterinsurgency operations to focus on multi-domain operations and large-scale combat operations.”²⁴⁰ The announcement also stated, “To ensure the value of the organization’s work over the past 14 years is not lost, all lessons learned will

237 See Asymmetric Warfare Group and Defense Intelligence Agency, “AWG Tactical Counter-Threat Finance” (Fort Meade, MD: Asymmetric Warfare Group, March 15, 2010).

238 This was the group’s purpose as listed on the “Asymmetric Operations Working Group Portal” of the Johns Hopkins Applied Physics Laboratory webpage on June 17, 2013. The working group and the group’s webpage no longer exist.

239 See, for example, Asymmetric Warfare Group, “Al Qaeda and Associated Networks: Vulnerability Assessment Workbook Volume 1” (Laurel, MD: Johns Hopkins University Applied Physics Laboratory, June 1, 2008).

240 U.S. Army, “Army to discontinue Asymmetric Warfare group and Rapid Equipping Force,” Army.mil, October 2, 2020, https://www.army.mil/article/239622/army_to_discontinue_asymmetric_warfare_group_and_rapid_equipping_force.

be maintained by the U.S. Army Combined Arms Center (CAC), via the Center for Army Lessons Learned (CALL), Centers of Excellence (COEs), and other [Training and Doctrine Command] enterprise stakeholders.”²⁴¹ Hopefully this is the case, but the Army has not done well with maintaining these types of lessons in the past. Thus, when the AWG was officially deactivated on March 13, 2021, it may have lost some ability to rapidly adapt in the future.²⁴² Cody’s vision may have not lasted in perpetuity, but the AWG was effective for its 14-year lifespan and served a valuable role for the Army.

Analysis

The innovations of the AWG and the JIEDDO were successful because Cody could apply the right leadership tactics to develop the concepts quickly and then employ an effective strategy to overcome bureaucratic resistance and establish both. There were many other attempts to create organizations to solve the IED problem—at least 27 within the U.S. government—yet Cody rose to the top because of the decisions he made and his ability to understand, navigate, bypass, and influence the Pentagon bureaucracy.

Formulation

Cody developed the idea for the IED Task Force in response to a clearly recognized performance gap: the inability to counter IEDs that were killing U.S. service members. Knowledge accumulation occurred quickly and at all levels of the Army almost simultaneously since casualties from IEDs were being reported daily to the highest levels. Even General John Abizaid, the commander of USCENTCOM, could see the problem. In June 2003, he declared IEDs his “Number 1 threat.”²⁴³

²⁴¹ Ibid.

²⁴² Madison Bonzo, “End of an Era: Asymmetric Warfare Group Cases its Colors,” Army.mil, May 18, 2021, https://www.army.mil/article/246529/end_of_an_era_asymmetric_warfare_group_cases_its_colors.

²⁴³ Christopher J. Lamb et al. “MRAPs, Irregular Warfare, and Pentagon Reform,” *Joint Force Quarterly* 55, no. 4 (2009): 77.

Thus, the time it took for individuals to identify this capability shortfall was short. Casualties were immediately reported up the chain of command; hence, it was recognized as a problem at both the bottom and top of the organization almost simultaneously.

While the focus of this case study was the AWG, the chapter also introduced adaptations, including hillbilly armor, strap-on armor, rhinos, jammers, dogs, and even bees. Of these various solutions, the AWG and the JIEDDO were the only innovative solutions since they involved “developing new military technologies, tactics, strategies, and structures,” while the other solutions were simply adaptations that involved “adjusting existing military means and methods.”²⁴⁴

Why did Cody develop the IED Task Force to solve this problem when others did not? His experiences largely shaped the solution. Cody, by nature of his special operations background, had experience in manhunting and pursuing nontraditional military threats. This experience provided him with a fundamentally different understanding of the problem. He did not view this as a new tactic or munition that had to be defeated—mines had been around for decades—he viewed it as an enemy that had to be defeated. Thus, he focused on defeating the enemy network instead of trying to defeat a munition. Due to his position as the Army’s G-3 and later as Vice Chief of Staff, he was much less constrained in his search for a solution than others because he had the entire Army at his disposal. Thus, creating a new organization and spending millions of dollars were feasible options for him. As a result, his potential solution set to the problem was much larger than anyone else’s. If it had not been for Cody, it would have been difficult to imagine how the AWG or the JIEDDO could have been established. As with the previous case about counterinsurgency doctrine, this case demonstrates that the senior military leader matters.

Schoomaker and Votel, likewise, had spent many years in special operations; hence, they had a similar view on the solution to the problem. Hughes lacked special operations experience but understood the threat from his time in the Combating Terrorism Directorate within

<https://apps.dtic.mil/sti/pdfs/ADA515185.pdf>.

244 The definitions for innovation and adaptation come from Farrell and Terriff, “The Sources of Military Change,” 6.

the Pentagon. Therefore, the innovators concluded that they needed to focus on defeating the enemy to the “left of boom” instead of focusing on the enemy’s tactic.

A vast majority of the force was trained to fight against a conventional enemy; therefore, they lacked the knowledge of and intelligence capability necessary to identify, let alone dismantle, an insurgent cell that hid among the civilian population. Thus, for commanders at lower echelons, the solution focused on defeating or mitigating the effects of IEDs instead of defeating an enemy they could not locate. Soldiers developed hillbilly armor because they believed it offered at least some level of additional protection, and they could implement it at their level. Others focused on trying to defeat the IED using jammers.

While Cody may have come up with the innovative idea, he had to rely on others to develop the concept. Ideas often wither during the formulation phase, but Cody ensured the development of his idea through his successful employment of various leadership tactics. First, he brought the right people onto his team: Hughes and Votel. Second, Cody facilitated an innovative culture, as demonstrated by his earlier creation of the Rapid Equipping Force and Strategic Planning Board. This sent the message that bureaucracy would not stand in the way of progress. Third, Cody provided clear output expectations: he wanted the IED Task Force to be operational within 45 days and the AWG to be operational within a year. Fourth, he provided the necessary support: monetary support through the Strategic Planning Board, and ideational support through the Wexford and Burdeshaw contractors. Perhaps most importantly, Cody made his idea a top priority and allowed his team to use his name to fight through the Pentagon bureaucracy. Finally, he effectively balanced oversight and freedom. Cody ensured all critical decision briefings went directly to him, even after getting promoted to Vice Chief of Staff. He also made the AWG a direct reporting unit to the Pentagon to maintain control. Yet, at the same time, he allowed Votel and his team a good amount of freedom to design both the IED Task Force and AWG.

Adoption

In the case of the AWG, Schoomaker was the senior military leader who could adopt the innovation—creating a new unit that reported to the Pentagon could be approved only by the Chief of Staff of the Army—but it still required the support of civilian policymakers to authorize the necessary funding. Because Cody had direct access to and the support of Schoomaker, he did not need to build a coalition to get his approval.

Within the Army, Cody experienced some resistance to his idea, but it was not significant, nor could it be described as a counter-coalition. Since the AWG was designed to perform a new function that did not appear to belong to anyone else, no Army entity viewed the AWG as a threat to its rice bowl. While CBRNE command believed that the IED function fell under its purview, once Votel changed the mission from IEDs to asymmetric threats. This fell out of CBRNE's area of expertise, and they were more than content to let the AWG become a direct reporting unit to the Army Staff.

This case demonstrated the necessity of a coalition. Cody's relationship with Congress, Cody's relationship with Schoomaker, and Schoomaker's relationship with the senior executive appointees made coalition building unnecessary, but only because Cody could leverage a network—or coalition—that he had already built. Thus, during the adoption phase, Cody's efforts were directed primarily at leveraging this network instead of building it. Because he could leverage these existing relationships, he found it relatively easy to get the required policymaker support to implement the innovation.

For the creation of the AWG, civilian policymakers played a crucial role in its adoption, but it was more of a supporting than a leading role. No policymakers pushed the military to create anything that resembled the AWG. Instead, their role can best be described as steadfast supporters of the military's innovative efforts. They signed the charter and DoD directives that Cody wanted and authorized the required funds. Rarely, if ever, did they refuse the Army's requests.

Air Force Secretary Roche stands out as one opponent who

attempted to hamper Cody's progress. It showed that interservice rivalries remained, even in war. Roche slowed Cody's efforts, but Cody was able to bypass him due to his strong relationship with Deputy Secretary Gordon England. In only his sixth week on the job, England signed the DoD directive establishing the Joint IED Defeat Task Force as the lead agency to coordinate DoD counter-IED efforts.

Likewise, Cody's relationship with Congress made it relatively easy for him to get the AWG authorized in the annual appropriations bill. This coalition/civilian policymaker network was critical to the AWG's success, but Cody did not have to build it from scratch. He only had to cultivate what he had previously built. He had monthly meetings with Senators Mark Warner (D-VA), Carl Levin (D-MI), and Harry Reid (D-NV) from the Senate Armed Services Committee, and Representatives Ike Skelton (D-MO) and Duncan Hunter (R-CA) from the House Armed Services Committee. Cody described his relationship with these members and their committees as excellent and said they were very supportive of the Army's efforts to combat IEDs. He remarked that when the annual budget was produced, the Army always got "plussed-up" for even more.²⁴⁵ Votel also found them to be supportive, remarking that Congress encouraged him to be "extremely risk tolerant" with his research and development efforts, recognizing a great deal of money might be spent on projects that would not come to fruition.²⁴⁶

Representative Hunter is the policymaker who played the most active role. Even though his efforts did not always align with Votel's, such as when he forced the military to purchase outdated Warlock jammers, Duncan could still be described as an avid supporter of the military's efforts.

Hunter's disagreements had more to do with the fielding of specific equipment at the tactical level than with the direction of the broader innovative efforts at the strategic level. Votel described his relationship with Hunter as "very good" and "positive" and remarked that, overall, Hunter and his committee were very supportive of the

²⁴⁵ Cody, interview by author.

²⁴⁶ Votel, interview by author.

task force's efforts.²⁴⁷

Implementation

Cody understood the importance of effective implementation and knew that even the best ideas die if they fail to be implemented effectively. He anticipated potential resistance and developed strategies to mitigate this resistance. Cody was effective because he selected trusted subordinates for critical positions, empowered them, and cut out needless layers of bureaucracy to ensure that subordinates could provide him with unfiltered assessments. Finally, he understood that the early stage of an organization is the most critical; therefore, he implemented several measures to increase its likelihood of success.

Cody used a team of trusted advisors to ensure the implementation of his ideas outside of the normal military chain of command. He appointed Hughes as his "scout" to tell him what was really going on within the Pentagon, which gave Hughes the ability to attend any meeting. As part of this role, Hughes was responsible for identifying what he describes as "obstructionists in the Pentagon who had their knives out waiting for a chance to destroy [Cody's] team." Hughes described how "the internal enemy was everywhere, wearing both civilian clothes and uniforms, and I had to resort to unconventional means to identify them" and how "it was strikingly similar to finding the *Fedayeen* hiding amongst the rioting crowds in Najaf."²⁴⁸ Hughes described his access to Cody as "unprecedented....All I had to do was walk to the entrance of his door, look at him, and he would stop what he was doing and ask me in."²⁴⁹ Ultimately, Hughes said that over the year, "we either converted the naysayers or removed them."²⁵⁰ Thus, Cody effectively removed many of those who opposed his efforts by leveraging Hughes to identify them.

From the onset, Cody understood the importance of cutting out needless layers of bureaucracy. Within the headquarters, it was clear

²⁴⁷ Ibid.

²⁴⁸ Hughes, *War on Two Fronts*, 212.

²⁴⁹ Ibid., 215.

²⁵⁰ Ibid., 212.

that the AWG was Cody's pet project, which minimized potential opposition. No one wanted to be viewed as openly opposing one of the general's priorities. However, this did not prevent him from running into the usual bureaucratic hurdles. The biggest challenges came primarily from lawyers asking about authorities and personnel folks worried about where the billets would come.²⁵¹ Cody's solution to their concerns was getting the AWG added to the Appropriations Bill and having the Force Management Support Agency help develop the AWG's Table of Distribution and Allowances.

Having previously created the Strategic Planning Board and Rapid Equipping Force, Cody had already developed an expeditious mechanism to establish the task force. Thus, when Votel needed \$1.5 million to get the IED Task Force started, he went to the board to request the money. He had to go through the formal process, but Cody controlled the board.²⁵² This allowed Votel to get the funds he needed in days, not months, and then use the Rapid Equipping Force to help expedite the contracting. Without these mechanisms, Votel would never have been able to send the first field teams to Iraq in 45 days.

Another measure Cody instituted was having the team members personally brief him and Votel on their way out of Iraq. This allowed them to get information that multiple layers of command had not filtered. While serving as the G-3, Cody remarked to one of the task force members, "I thought all generals were stupid until I became a general and then realized the staff was stupid because they told me what they thought I wanted to hear."²⁵³ Brian witnessed this firsthand after leaving a meeting with Cody and hearing a senior officer say, "Now here's what he really meant," which was 180 degrees out from what Brian had heard the general say in the meeting.²⁵⁴ Thus, Cody clearly recognized this information asymmetry of the principal-agent problem and developed measures to overcome it. While deployed, Votel had the task force send its reports to the operations center to ensure that he and Cody kept a pulse on what was happening in Iraq.

²⁵¹ Harold Fields Jr., interview by author.

²⁵² Hughes, interview by author.

²⁵³ Former IED Task Force and AWG member, interview by author.

²⁵⁴ Brian, interview by author.

It was very unorthodox to have a tactical asset being maneuvered at the Pentagon level, but Cody believed it was the only way to implement an important change.²⁵⁵

Rather than directing a subordinate command to develop the concept for the AWG, Cody kept the planning effort within the G-3. This ensured that he received periodic updates, allowing him to provide the necessary guidance to keep his idea on track. Cody also recognized that the organization's early years were critical—if the organization failed to demonstrate value quickly, it would fade away. As a result, despite the early recommendation for the IED Task Force to fall under CBRNE command, Cody ultimately decided to have the AWG fall under the G-3 as a direct reporting unit. He feared that subordinating it any lower would slow the effort and be a death blow.²⁵⁶ He also retained control even after turning over the G-3 position to a trusted colleague—it was yet another measure to ensure its effective implementation.

He knew that getting the right people on the teams was critical. Thus, he turned to Wexford to find the mature, experienced individuals they needed. These individuals were in extremely short supply—only a handful existed in and out of the military. Getting the right teams out first to demonstrate their value to the units they were supporting was the best way to ensure effective implementation would continue. Finally, he was wise enough to realize that effective assessment, selection, and training programs were critical to getting the right people. Thus, he agreed to delay the establishment of the AWG by one year to acquire and train the right people.

Cody ensured he did not lose control as the Joint Staff's and the Office of the Secretary of Defense's interest grew. When Wolfowitz transformed the Army's IED Task Force into a joint task force in July 2004 and made the Army the lead for the joint integrated product team, it meant that Votel now reported to Wolfowitz rather than Cody.²⁵⁷ Cody made it clear that Wolfowitz was not Votel's only boss,

255 Hughes, interview by author.

256 Cody, interview by author.

257 Office of the Deputy Secretary of Defense, "Joint IPT for Defeating IEDs."

when telling him, “Don’t forget where you came from.” When the Joint IED Defeat Task Force transformed into the JIEDDO in January 2006, Cody created the Army Asymmetric Warfare Office within the G-3 to retain his visibility and ability to influence. He did not want to rely solely on the Joint Staff or the Office of the Secretary of Defense to address the Army’s needs. Ultimately, the AWG and the JIEDDO—and their predecessor, the IED Task Force—became realities because of Cody’s effective implementation strategy.

Effectiveness

Hughes believed that “the data collected, and lessons derived from [the AWG’s] efforts influenced in-country and pre-deployment training, helped units formulate new and innovative tactics, fine-tuned search techniques, improved targeting procedures, and drove the rapid development of improved body and vehicle armor by the defense industries.”²⁵⁸ Yet this was based more on observation than quantifiable data. Throughout its history, the AWG constantly struggled to develop good measures of effectiveness.²⁵⁹

There are, however, indirect ways to determine if the group was effective. One measure is to look at the feedback from units and individuals who worked with the AWG field teams. Another is to look at the demand for the teams. Yet another measure is to analyze data related to IED attacks. A final method is to examine the AWG’s impact on doctrine, training, and education. By all these measures, the AWG improved Army performance and, therefore, was effective.

The feedback from soldiers who worked with the AWG field teams in Iraq and Afghanistan was overwhelmingly positive.²⁶⁰ There was also a constant demand by units to have the Training Advisory Teams brief them on the current IED threat during their pre-deployment training. Thus, it is reasonable to conclude that units believed the AWG helped

258 Hughes, *War on Two Fronts*, 220.

259 Votel, former AWG officer, and former AWG squadron commander, interviews by author.

260 Based on dozens of interviews conducted in Afghanistan and the United States.

them mitigate IEDs to some extent.

It is difficult to know for certain how effective the AWG's predecessor, the IED Task Force, was at mitigating the IED threat. Looking at the number of casualties resulting from IEDs is a poor metric because the number of casualties is more strongly correlated with the total number of IED attacks than it is with any countermeasure. Casualties resulting from IEDs peaked in the fall of 2006 and the spring of 2007, but the number of IED attacks had grown even more during this time.

A better metric is to look at the number of casualties per IED attack, which peaked from November 2003 to April 2004 at more than one casualty per IED attack. Over the next 16 months, however, this number steadily decreased until it reached a rate of 0.42 casualties per IED attack, a rate that remained stable for much of the remainder of the war.²⁶¹ The rate clearly decreased from April 2004 to September 2005, but it is difficult to determine how much of this drop can be attributed to the actions of the IED Task Force and how much can be attributed to adaptations by troops in the field, the fielding of armored vehicles and strap-on armor, and the fielding of jammers.²⁶² Anecdotal evidence, however, indicates that the task force did contribute to this drop, even if the exact impact cannot be determined.²⁶³

Another metric that might be helpful to examine is the rate of effective IED attacks over time. JIEDDO defined an effective IED as one that causes a casualty. An ineffective IED is one that detonated but did not cause a casualty; it does not include IEDs that were recovered prior to detonation or an attempted attack in which a device failed to detonate. Before the teams arrived in Iraq, 42 percent of IED attacks resulted in casualties. By the end of 2004, the effectiveness rate had decreased to 22 percent. By the end of 2005, the effectiveness rate was below 18 percent, a rate at which it hovered around for much of 2006-2008 before dropping to 15 percent for 2009-2010.²⁶⁴ Based on the

261 Cordesman et al., *IED Metrics for Iraq*.

262 As of March 13, 2013, the JIEDDO website stated that the IED Task Force "drove down casualty rates per IED attack despite an increased in-theater use." The JIEDDO website no longer exists. In 2016, the JIEDDO was rebranded as the Joint Improvised-Threat Defeat Organization (JIDO) and moved under the Defense Threat Reduction Agency (DTRA).

263 Based on dozens of interviews conducted in Afghanistan and the United States.

264 "Percent Effective IED Attacks" is the number of effective IED attacks divided by the total number of IED attacks. For data see Cordesman et al., *IED Metrics for Iraq*.

testimony of soldiers, it appears likely that the IED Task Force contributed to at least some of the decrease, but, again, it is difficult to know for certain the magnitude of its contribution. One observation is clear: the trend was consistently downward. Accordingly, despite advancements made by the enemy with different charges and initiation systems—such as explosively formed penetrators and telemetry modules—the coalition was able to improve at a faster rate.

With the establishment of the AWG and JIEDDO, the focus of the AWG field teams shifted from an almost exclusive focus on IEDs to more of an operational advisory role in which they assisted in countering other threats. Once again, it is difficult to quantitatively determine the AWG's impact on operations in Iraq and Afghanistan, but several metrics indicate that it was valued. Deputy Defense Secretary Gordon England believed the efforts of the IED Task Force and the AWG “probably saved five or ten times [the number of people that were killed] by preventing attacks, or capturing and killing [insurgents], or getting caches of weapons and disabling them.”²⁶⁵

The strongest testimonial to their utility comes from General Cone. Cone served as the III Corps commander and Deputy Commanding General of U.S. Forces—Iraq from March 2010 to February 2011. Cone described the AWG as a key resource that understood the enemy and the corresponding gaps in the conventional force. The AWG could come from the perspective of an “outsider” and see the unit in ways that it could not see itself. This perspective, combined with its understanding of the enemy and years of operational experience, allowed the AWG personnel to identify gaps and provide solutions. As commander, Cone routinely conducted monthly meetings with the AWG's leadership in Iraq, and gave them his most challenging problems to solve. Cone attributes the AWG with providing recommendations on how to counter several threats his unit faced.²⁶⁶

Likewise, Petraeus found the AWG to be an asset. While commanding the Combined Arms Center, Petraeus found the AWG to

²⁶⁵ Atkinson, “Left of Boom Part 3.”

²⁶⁶ Cone, interview by author.

be a “quick-fire channel for lessons learned.”²⁶⁷ Initially, the AWG was very good at capturing discreet lessons and passing them back to discrete units. Over time, they got better at disseminating lessons learned across the Army and institutionalizing advancements into doctrine. In Afghanistan, the AWG played a vital role in the fielding of biometric technologies and the tactics, techniques, and procedures associated with effectively implementing the new technology into the combat mission.²⁶⁸

General McChrystal also saw value in the unit when he commanded a special operations task force in Iraq and later when he commanded U.S. forces in Afghanistan. He took command in Iraq just before the establishment of the IED Task Force; therefore, he could see how the field team’s focus changed over time. He found that as time went on, the teams became much less technically oriented and looked much more like combat advisors, like the “advise and assist” role that Special Forces often serve for partner forces.²⁶⁹ In Afghanistan, he leveraged the AWG to help conventional forces learn how to kill or capture high-value targets.²⁷⁰

The AWG also contributed to several doctrinal changes. To expand on the example introduced earlier in the chapter, the AWG helped incorporate the Company Intelligence Support Team into U.S. Army doctrine. A brigade developed the concept in Iraq, but the AWG played a critical role in refining the concept, diffusing it across the force, and ultimately capturing it in doctrine.²⁷¹ The AWG operational advisors taught units how to build Company Intelligence Support Teams and produced a tactical pocket reference and a Center for Army Lessons Learned handbook to help diffuse the doctrine.²⁷² Later that year, it was codified in doctrine with the publication of Training Circular 2-19.63, *Company Intelligence Support Team*.²⁷³ When the concept became codified in doctrine, the tactical pocket reference was turned

267 Petraeus, interview by author.

268 Ibid.

269 Stanley McChrystal, interview by author.

270 Former Task Force 714 field artillery officer, interview by author.

271 Sussman, “COIST staffs.”

272 Center for Army Lessons Learned, Handbook 10-20, *COIST: Company Intelligence Support Team Tactics, Techniques, and Procedures* (Fort Leavenworth, KS: Center for Army Lessons Learned, 2010).

273 U.S. Department of the Army, Training Circular 2-19.63, *Company Intelligence Support Team* (Washington, DC: Headquarters, Department of the Army, 2010).

into a graphic training aid and the concept diffused to other doctrinal publications.²⁷⁴ For many years, the infantry and military intelligence basic officer leader and captain career courses taught the concept in their schools.²⁷⁵ Thus, there is ample evidence to demonstrate the AWG improved the Army's performance.

Conclusion

The creation of the AWG was a clear wartime innovation. The genesis of the idea emerged from the IED threat that U.S. troops were facing in Iraq. Cody's pet projects were the AWG and the JIEDDO—and their predecessor, the IED Task Force. He fought through the entrenched bureaucracy of the Pentagon to create them. While others were adapting, Cody sought a truly unique solution: the creation of a task force focused on defeating the IED cell as opposed to the IED itself. This solution was shaped by the technical expertise in manhunting he had gained during his special operations career.

While Cody may have devised the innovative idea, he had to rely on others to develop it. Like Petraeus, Cody ensured the idea's development through his successful employment of various leadership influence tactics: he made the development of the organization a priority, handpicked the right people for the job, facilitated an innovative culture, provided clear output expectations, provided the necessary monetary and ideational support, and effectively balanced oversight and freedom by ensuring all decision briefings went to him.

During the adoption phase, Cody was able to leverage his existing network to get the civilian policymaker support required to make the AWG a reality. He encountered some resistance but was able to bypass it due to his relationships with senior political appointees. Civilian policymakers played only a minor role in the innovation, and that role was primarily supporting the Army's requests to authorize and fund

274 Asymmetric Warfare Group, GTA 90-01-022, *Company Intelligence Support Team*.

275 Battalion Commander of the Military Intelligence Basic Officer Leaders Course and the Captains Career Course at Fort Huachuca, AZ, e-mail message to author, April 2, 2013; Battalion Commander of the Infantry Basic Officer Leaders Course and the Captains Career Course at Fort Moore, GA, e-mail message to author on March 10, 2013.

the new unit.

Like Petraeus, Cody ensured the innovation's effective implementation. He understood that having the right people was the most critical part of effective implementation. Just as Cody hand-picked Jette to run the Rapid Equipping Force and Votel and Hughes for the IED Task Force, he personally selected the first command team for the AWG.²⁷⁶ He delayed the initial operating capability of the unit by a year to ensure that it had time to recruit, assess, select, and train the right people. Cody relied heavily on contract personnel to help develop and staff the AWG instead of waiting years to develop the required talent. He also ensured its effective implementation by remaining actively involved, despite changing positions. As a final measure, he had the AWG report to the Army Staff as a direct reporting unit and had the IED Task Force teams report directly to him when they returned from Iraq so he would have access to unfiltered information.

²⁷⁶ Cody, interview by author.

5

THE 'NETWORK' AND THE F3EA TARGETING CYCLE: GENERAL MCCHRYSTAL AND THE TARGETING OF AL QAEDA IN IRAQ

*"It takes a network to defeat a network."*¹

This quote by General Stanley McChrystal was the mantra for the special operations task force—Task Force 714—that he commanded from 2003 to 2008. When he took command in 2003, the task force was effective but not yet efficient at operating on a find, fix, finish targeting cycle. After capturing or killing intended targets the cycle ended, requiring the task force to start over, slowly finding and fixing new targets to a specific location before conducting a finish operation to kill or capture them. As a result, the task force conducted only ten operations a month due to intelligence rather than operational constraints. The task force was unable to rapidly generate new targets, requiring the “operators”—the special operations finish force soldiers—to sit idle for days waiting to launch on new targets.

There were plenty of targets to pursue if only the task force could find them. Al Qaeda in Iraq's power was growing, and its suicide bombing campaign jeopardized the coalition as Iraq teetered on the edge of a civil war. McChrystal understood the threat posed by the terrorist group, but his task force was not organized to defeat it. McChrystal knew he needed to create a networked force to defeat a networked enemy. His task force had to get more efficient with its targeting cycle. The task force would have little impact if it conducted only ten operations per month.

1 Stanley A. McChrystal, "It Takes a Network: The New Front Line of Modern Warfare," *Foreign Policy*, February 21, 2011, accessed December 21, 2023, <https://foreignpolicy.com/2011/02/21/it-takes-a-network/>. Some use the phrase "It takes a network to beat a network," and often refer to a technology-centric network not a people/organizational-centric network. McChrystal is believed to be the first to modify the quote from "beat" to "defeat."

In his first two years in command, McChrystal radically transformed Task Force 714, though he did not do it alone. Subordinates developed an efficient targeting cycle: the find, fix, finish, exploit, and analyze (F3EA) cycle. Task force members had years of manhunting experience and determined that the only way to get faster was to focus on the exploit and analyze phases of the cycle. This required the exponential expansion of intelligence, surveillance, and reconnaissance capability, as well as much greater interrogation and document and media exploitation capability. But the task force could do only so much on its own. McChrystal recognized that degrading al Qaeda in Iraq required the help of many other government agencies, which he pulled into his network.

Innovating the F3EA targeting cycle and the network was a doctrinal, organizational, and—to some extent—a technical innovation, which flattened the organization, and networked it with other governmental agencies. This organizational innovation, in turn, facilitated more effective deployment of technological innovations. By June 2006, the Task Force was hitting on all cylinders, able to conduct more operations each night than in an entire month only two years earlier. By 2010, the Task Force had decimated al Qaeda in Iraq, and in 2011, the Task Force killed bin Laden.

The F3EA Targeting Cycle

F3EA is a targeting cycle the U.S. military developed primarily for manhunting operations. In simplest terms, the *find* component is the starting point for intelligence collection, and includes all sources of intelligence: human, signals, measurement and signature, geospatial, imagery, open-source, and technical. Together, this intelligence provides starting points—or leads—to distinguish targets amid “civilian chatter.”^{2 3}

2 Michael T. Flynn et al., “Employing ISR: SOF Best Practices,” *Joint Force Quarterly* 50, no. 3 (2008): 57, <https://apps.dtic.mil/sti/pdfs/ADA516799.pdf>.

3 Charles Faint and Michael Harris, “F3EAD: Ops/Intel Fusion ‘Feeds’ the SOF Targeting Process,” *Small Wars Journal*, January 31, 2012, accessed December 21, 2023, <https://smallwarsjournal.com/jrnl/art/f3ead-opsintel-fusion-%E2%80%99C-feeds%E2%80%9D-the-sof-targeting-process>.

Once a target is identified, the gamut of intelligence collection assets can be applied against the target to develop a “pattern of life” and other operational triggers to *fix* the target in space and time. Fixing a target means that the intelligence effort has progressed enough to facilitate action against the target with a reasonable degree of certainty the target will be at a specified location. The goal, while rarely possible due to resource constraints, is to mass redundant and persistent intelligence, surveillance, and reconnaissance assets to provide an “unblinking eye” focused on the target.⁴

The first two steps lead to decisive *finish* operations. These are often kill or capture missions, although other options exist. Finish operations may be lethal—such as raids, drone strikes, missiles launched from naval vessels, or bombs dropped from aircraft—or non-lethal, such as neutralizing enemy communications nodes; achieving a desired psychological, political, or social effect; meeting with the targeted individual; or capturing and legally prosecuting a key enemy individual. The finish option that is selected depends on the desired end state and the constraints or challenges associated with a particular target. The finish phase was considered the main effort with legacy targeting methodologies, and the cycle often stopped there. This made sense when the goal was physical destruction of enemy forces and infrastructure as a means to end their will to resist. But in an information-age era of protracted conflict, nonlethal operations can be more effective than lethal operations.⁵

The *exploit* and *analyze* phases are the main effort of the F3EA cycle. They are the most critical because they lead to finding, fixing, and finishing the next target and perpetuating the cycle.⁶ Exploitation entails examining, analyzing, interrogating, and processing captured enemy personnel, equipment, and materiel for intelligence purposes.⁷ The goal of the exploit-analyze phases is to gather information as rapidly as possible so it can be applied operationally to defeat the enemy’s network. Thus, raids are preferred to other lethal options because they allow for

4 Ibid.

5 Ibid.

6 Flynn et al., “Employing ISR: SOF Best Practices,” 57; and Faint and Harris, “F3EAD.”

7 Faint and Harris, “F3EAD.”

seizure and exploitation of materiel and the opportunity to interrogate prisoners.⁸ Exploitation has four broad goals: force protection, targeting, prosecution, and component and materiel sourcing.⁹ The first three are self-explanatory. The fourth—component and materiel sourcing—allows intelligence personnel to backtrack enemy sources, enabling friendly forces to engage the enemy across its network. Finally, exploitation facilitates the prosecution of enemy forces after they and their materiel have been fully exploited for intelligence purposes.¹⁰

The *analyze* phase converts information into actionable intelligence that drives future operations. It may be undertaken by forward deployed or stateside personnel.¹¹ Exploited information sometimes leads to immediate finish operations and cuts out intermediary steps. For example, by questioning an individual on a target, the finish force may learn of others within the enemy network who know the identity (*find*) or location (*fix*) of individuals they are after. Thus, on-target *exploitation* can lead to immediate *finish* operations if the target can take the finish force to a new target. In other cases, the materiel gathered on the target—such as a hard drive—cannot be exploited on-site and requires transport to someone who can exploit it. Often, it is not a single piece of intelligence that illuminates the network and provides the next targeting line. Instead, new lines of operation and starting points are identified only through careful analysis and “connecting the dots” of the various sources of intelligence that have been exploited. These “dots” often exist in separate agencies on separate databases that can be connected only when individuals analyzing the same problem connect physically or virtually.

Find, fix, and finish harkens back to Korean War General Matthew Ridgway, who repeatedly told his commanders to “Find them! Fix them! Fight them! Finish them!”¹² Ridgway reportedly based this maxim on Ulysses S. Grant, who said, “The art of war is simple enough.

8 Flynn et al., “Employing ISR: SOF Best Practices,” 60.

9 Russell McIntyre, “Criteria for a Successful Theater Exploitation Effort,” unpublished paper, September 19, 2009; and Faint and Harris, “F3EAD.”

10 Faint and Harris, “F3EAD.”

11 Ibid.

12 Matthew B. Ridgway, *The Korean War* (Garden City, NY: Da Capo, 1967), 89.

Find out where your enemy is. Get him as soon as you can. Strike at him as hard as you can as often as you can, and keep moving on.”¹³ The U.S. Army infantry’s mission is to “to close with the enemy by means of fire and maneuver in order to destroy, capture, or repel an assault by fire, close combat, and counterattack.”¹⁴ According to Army doctrine, infantry tasks include “Find, fix, defeat, [and] destroy.”¹⁵ For search and attack missions, it states, “Commanders task-organize subordinate units...into reconnaissance, fixing, and finishing forces.”¹⁶ “Find, fix, and finish” has been part of the Army’s lexicon for at least six decades and is a fundamental concept of war.

The main effort when battling conventional militaries is the finish operation. Finding them is easier than finishing them. Conventional forces are easy to distinguish from the populace, but their sheer size and firepower make finishing more difficult. In other words, the size of the force required to *finish* the enemy is much larger than the size needed to *find* and *fix* them. Therefore, an infantry battalion of nearly 750 soldiers has an intelligence section of only six.

By contrast, when fighting a terrorist or insurgent organization, finding the enemy is more challenging than finishing them. Thus, a force’s composition using an F3EA cycle is much different than that of a force organized to fight a conventional threat. The ratio of intelligence personnel to finish personnel is magnitudes higher. Effective F3EA cycles can identify critical nodes of the enemy’s network, allowing the finish operations to have maximum effect. The lack of efficient exploitation or analysis often leaves forces playing a game of “whack-a-mole,” with little effect on the overall network.

13 Aki Peritz and Eric Rosenbach, *Find, Fix, Finish: Inside the Counterterrorism Campaign That Killed Bin Laden and Devasted Al Qaeda* (New York: PublicAffairs), 2012.

14 Department of the Army, ATP 3-21.8, *Infantry Platoon and Squad* (Washington, DC: Headquarters, Department of the Army, 2016), 1-1.

15 *Ibid.*, 2-4.

16 *Ibid.*, 2-73.

Abu Musab al-Zarqawi and the Founding of al Qaeda in Iraq (1984-2004)

Al Qaeda in Iraq was formally founded in October 2004, but the organization was present in Iraq under the name *Bayat al-Imam* (Allegiance to Imam) before the U.S. invaded in March 2003. The emergence of al Qaeda in Iraq can be traced to its founder, Abu Musab al-Zarqawi. Zarqawi was born Ahmad Fadil Nazal al-Khalaylah in October 1966, to a modest working-class family in Zarqa, Jordan—a city of 850,000 sixteen miles northeast of Amman.¹⁷ His father, a local tribal leader and retired army officer, died in 1984. His death devastated the 17-year-old Zarqawi, causing him to drop out of high school and embrace a life of alcohol, drugs, and violence.¹⁸ This lifestyle landed him in prison for drug possession and sexual assault where he remained until released under general amnesty in 1988.¹⁹ Prison introduced Zarqawi to radical Islam, and shortly after his release, he departed Jordan to fight in the Soviet-Afghan War. It is unlikely that he participated in any significant fighting since he arrived after the Soviet forces had started their withdrawal. Yet, the journey provided a “young and impressionable” Zarqawi with his first exposure to al Qaeda.²⁰ In Peshawar, he interacted with Salafi doctrinaires, including Sheikh Abu Muhammad al-Maqdisi who served as Zarqawi’s mentor and founding partner of *Bayat al-Imam*.²¹

After Kabul fell in 1992, Zarqawi returned to Jordan with Maqdisi, where they formed *Bayat al-Imam* and plotted against the Hashemite monarchy. Before long, he once again found himself in prison, arrested in 1993 and sentenced to fifteen years after directing a failed suicide bomb attack against a local movie theater.²² Maqdisi joined him in

17 Gary Gambill, “Abu Musab al-Zarqawi: A Biographical Sketch,” *Jamestown Terrorism Monitor* 2, no. 24 (2004), <https://jamestown.org/program/abu-musab-al-zarqawi-a-biographical-sketch-2/>; and Mary Anne Weaver, “Inventing al-Zarqawi,” *The Atlantic* 298, no. 1 (2006): 87-97.

18 Gambill, “Abu Musab al-Zarqawi.”

19 Bruce Reidel, *The Search for Al Qaeda: Its Leadership, Ideology and Future* (Washington, D.C.: Brookings Institution, 2008), 89-90.

20 Weaver, “Inventing al-Zarqawi,” 87-97.

21 Ibid.

22 Ibid.

prison, and together they thrived. They quickly built a following in the prison, with Zarqawi serving as “the muscle” and Maqdisi as “the thinker.” Their following soon expanded beyond the prison walls after the religious tracts they produced were smuggled out. By May 1998, some of Zarqawi’s religious tracts caught the attention of Osama bin Laden, al-Qaeda’s leader.²³

In the spring of 1999, the Jordanians released Zarqawi from prison in another general amnesty. Shortly after his release, he returned to Afghanistan and met with bin Laden. According to several accounts, bin Laden immediately distrusted and disliked Zarqawi due to his aggressive, ambitious, abrasive, and overbearing nature. Zarqawi’s hatred of Shiites also seemed to be divisive to bin Laden. Despite these concerns, bin Laden agreed to provide some limited support to Zarqawi. Seif al-Adel, al Qaeda’s security chief, was sympathetic to Zarqawi’s fight against Jordan’s Hashemite monarchy and convinced bin Laden to grant Zarqawi \$5,000 in seed money and space to set up his own training camp in Herat in western Afghanistan and, thus, far from bin Laden’s camp in Kandahar. Zarqawi thrived in Afghanistan. By October 2001, his camp’s population numbered 2,000-3,000 fighters as he built a mobile army by attracting recruits from exiled Jordanian, Palestinian, and Syrian Islamists living in Europe.²⁴

Following the U.S. airstrikes on Afghanistan in 2001, Zarqawi led 300 of his men—under the name of *Jama’at al-Tawhid wal-Jihad* (The Organization of Monotheism and Jihad)—into Iran. The arrests of Europe-based *Tawhid wal-Jihad* members alerted Western intelligence to Zarqawi’s presence in Iran. To evade authorities, Zarqawi moved between Iran, Syria, Lebanon, and the Kurdish-controlled areas of northern Iraq, which helped him establish new smuggling routes through Syria. Seif al-Adel continued to meet with Zarqawi and encouraged and facilitated his group’s entry into Iraq once the U.S. invasion became clear. Seif al-Adel also funneled Arab Islamists through Syria and into Zarqawi’s network in Iraq. Zarqawi quickly

23 M. J. Kirdar, *Al Qaeda in Iraq* (Washington, DC: Center for Strategic & International Studies, 2011), 2, <https://www.csis.org/analysis/al-qaeda-iraq>.

24 Weaver, “Inventing al-Zarqawi,” 87-97.

became the default leader for most Islamist terrorists in Iraq. Thus, before the invasion Zarqawi had already established a robust network of smuggling routes, safe houses, weapons caches, and intelligence.²⁵

As the U.S. was building its case to invade Iraq to the UN, the U.S. mistakenly identified Zarqawi as the critical link between al Qaeda and the Saddam Hussein regime. While making the case for war with Iraq before the UN Security Council on February 5, 2003, Secretary of State Colin Powell argued that Iraq was harboring Zarqawi.²⁶ Much of what Powell described in his speech was true, but his statement that "Iraqi officials deny accusations of ties with al Qaida. These denials are simply not credible," was mistaken. No link existed between the Saddam regime and al Qaeda.²⁷ The U.S. soon invaded Iraq and eventually faced a staunch insurgency.

Zarqawi developed a four-pronged strategy to defeat the U.S. in Iraq. The first was to isolate U.S. forces from their coalition partners. His bombing of the UN headquarters in Baghdad was one such example. On August 19, an al Qaeda in Iraq truck bomb killed 22 staff members, including UN envoy Sergio Vieira de Mello, and injured more than 150. A second bombing on September 22 prompted UN Secretary-General Kofi Annan to pull all but a skeletal staff from Iraq, effectively ending their presence.²⁸ His second prong was to deter Iraqis from cooperating with the coalition by targeting police stations, Iraqi politicians, and recruitment centers. For the first few years of the war, he accomplished this through a campaign of bombs and terror. His third prong was to undermine the rebuilding process by conducting high-profile attacks against humanitarian workers and civilian contractors. One such attack was the May 2004 beheading of communications contractor Nicholas Berg. His fourth prong was to entangle the U.S. in a Sunni-Shiite civil war by attacking Shiite targets to provoke retaliatory responses against Sunni communities.²⁹

25 Kirdar, *Al Qaeda in Iraq*; and Weaver, "Inventing al-Zarqawi," 87-97.

26 Colin Powell, Speech to the United Nations on Iraq, "A Policy of Evasion and Deception" *The Washington Post*, February 5, 2003, accessed October 25, 2023, http://www.washingtonpost.com/wp-srv/nation/transcripts/powelltext_020503.html.

27 Ibid.

28 Kirk Semple, "Truck Bombing; Panel Faults U.N. on Lax Security for Iraq Office," *The New York Times*, October 23, 2003, <https://www.nytimes.com/2003/10/23/world/struggle-for-iraq-truck-bombing-panel-faults-un-lax-security-for-iraq-office.html>.

29 Kirdar, *Al Qaeda in Iraq*, 3-4.

Zarqawi's strategy was sound, but he needed fighters to execute it. Coalition Provincial Authority Order No. 1, "De-Ba-athification of Iraqi Society," and Order No. 2, "Dissolution of Entities," provided the base that his insurgency needed. According to Petraeus, the effect of these two orders "was that tens of thousands of former party members were unemployed, without any salary, without any retirement, without any benefits, and therefore, to a large degree, without any incentive to support the new Iraq."³⁰ Zarqawi augmented this Sunni base with a steady stream of foreign fighters that grew exponentially after the abuses at the Abu Ghraib prison became public in the spring of 2004.³¹ The insurgency included a mix of Islamists, nationalists, and Ba'athist elements, that may not have shared his vision for Iraq. Still, all shared a common enemy in the U.S., which facilitated their cooperation. As discussed in the previous chapter, the improvised explosive device soon became the insurgents' tactic of choice. But what separated Zarqawi from other insurgents was his willingness and ability to use suicide bombs against the coalition, the Iraqi government, and the Iraqi population.³² Zarqawi's own father-in-law served as the driver in one suicide truck bomb attack.³³

As the insurgents' attacks became more aggressive, they soon found themselves facing coalition forces head-on at the First Battle of Fallujah in April 2004. Zarqawi viewed the willingness of the United States to negotiate a cease-fire to prematurely end the battle as a victory. Newly emboldened with the "victory," he started a "theocratic reign of terror," demanding full compliance and listing the names of collaborators marked for death. With his "victory," local mujahedeen pledged their loyalty to Zarqawi, the emir of the "Islamic caliphate in Al-Fallujah," in a ceremony in Fallujah.³⁴ With Zarqawi's rise in power, he reached an agreement with bin Laden in October 2004. Zarqawi declared allegiance to bin Laden and changed the group's name to al Qaeda in Iraq. Although the group was not called al Qaeda

30 Wright and Reese, *On Point II*, 97.

31 Former Task Force 16 intelligence officer, interview by author.

32 Kirdar, *Al Qaeda in Iraq*, 4.

33 Weaver, "Inventing al-Zarqawi," 87-97.

34 Ibid.

in Iraq until this merger, for simplicity, I will refer to its predecessor as al Qaeda in Iraq for the remainder of the chapter.

The Early Years of Task Force 714 (September 2001–October 2003)

The task force McChrystal inherited, Task Force 714, was responsible for more than just operations in Iraq. It had a broad geographical expanse throughout USCENTCOM area of operations, which included a large presence in Afghanistan. The task force's origin traced back to September 2001, when the U.S. military established Task Force Sword for operations in Afghanistan following the 9/11 attacks. Task Force Sword was a combined joint interagency task force under the direction of USSOCOM. It deployed to Afghanistan in late 2001 to conduct direct action missions against high-value al Qaeda and Taliban targets.³⁵ It was also tasked to coordinate the interagency effort in Afghanistan.³⁶

Task Force Sword was composed primarily of elements from USSOCOM and particularly the JSOC.³⁷ Congress established the JSOC following the disaster at "Desert One," the failed hostage rescue mission to Iran in 1980. The Special Operations Review Group, more commonly known as the Holloway Commission, studied the botched rescue mission. It found that the command and control relationship and coordination were poorly defined, and it recommended the military establish a Counterterrorist Joint Task Force.³⁸ In December 1980, DoD established JSOC to oversee the various special operations forces. On June 1, 1987, the U.S. Congress activated USSOCOM as part of the Goldwater-Nichols Defense Reorganization Act to provide a 4-star

35 Leigh Neville, *Special Operations Forces in Afghanistan* (Oxford: Osprey, 2008), 8; and Global Security, "Task Force 11 (TF 11) 'Task Force Sword,'" GlobalSecurity.org, accessed October 25, 2023, <http://www.globalsecurity.org/military/agency/dod/tf-11.htm>.

36 Global Security, "Task Force 11."

37 Neville, *Special Operations Forces in Afghanistan*, 8–9; and Global Security, "Task Force 11."

38 U.S. Special Operations Command, *United States Special Operations Command History*, 6th ed. (Tampa, FL: U.S. Special Operations Command, 2008), 5–7.

headquarters for all special operations forces.³⁹ Following the Act, the JSOC became a subordinate element within the USSOCOM.⁴⁰

The JSOC is a sub-unified command of USSOCOM. At the time it was charged to “study special operations requirements and techniques, ensure interoperability and equipment standardization, plan and conduct special operations exercises and training, and develop joint special operations tactics.”⁴¹ Members of the command have participated in all the nation’s wars and contingency operations since it was activated in 1980: Desert One in Iran (1980), Grenada (1983), the Mediterranean Sea during the *Achille Lauro* hijacking (1985), Panama (1989), the Gulf War (1991), Somalia (1993), Haiti (1994), Bosnia (1996-2002), Afghanistan, and Iraq.⁴²

From the mid-1990s until 2001, USSOCOM hunted former Yugoslav war criminals indicted for war crimes in Bosnia.⁴³ A *U.S. News and World Report* article in 1998 reported that USSOCOM forces in Bosnia were responsible for apprehending persons indicted for war crimes.⁴⁴ But beyond this article, there was little reporting on these low-visibility operations. According to journalist Sean Naylor, “The command worked closely with the CIA, whose job it was to find the [war criminals], with [Joint Special Operations Command] brought in to capture the individuals once they’d been located.”⁴⁵ Thus, on the eve of 9/11, the command had some interagency and manhunting experience through its pursuits of war criminals in Bosnia, as well as Mohamed Farrah Aidid in Somalia and Pablo Escobar in Colombia.⁴⁶

39 Susan L. Marquis, *Unconventional Warfare: Rebuilding U.S. Special Operations Forces* (Washington, DC: Brookings Institution, 1997), 70-73; 89.

40 The establishment of U.S. Special Operations Command was not part of the original Goldwater-Nichols Act but was part of the Bill that amended the Act and was signed into law in October 1986. See, U.S. Special Operations Command, *USSOCOM History*, 6th ed., 6-7; and Marquis, *Unconventional Warfare*, 163.

41 The mission has since changed, but at the time that was the unit’s mission. Source: U.S. Special Operations Command, “Joint Special Operations Command,” SOCOM.mil, accessed January 15, 2012. The current mission can be found at <https://www.socom.mil/ussocom-enterprise/components/joint-special-operations-command>.

42 Ibid.

43 Sean Naylor, *Relentless Strike: The Secret History of Joint Special Operations Command* (New York: St. Martin’s, 2015), 63.

44 Richard J. Newman, “Hunting War Criminals: The First Account of Secret U.S. Missions in Bosnia,” *U.S. News and World Report*, June 28, 1998.

45 Naylor, *Relentless Strike*, 65.

46 Ibid., 176.

Task Force Sword conducted its first raid into Afghanistan on October 19, 2001.⁴⁷ Its target was Mullah Mohammed Omar, the Taliban's leader. The small force of less than one hundred raided Omar's residential compound on the outskirts of Kandahar. Under Colonel Joe Votel's command, the Rangers conducted a parachute assault onto a dirt airstrip near Kandahar to support the operation. The raids lasted only a few hours, and the forces departed during the same period of darkness.⁴⁸ The task force returned to Afghanistan in December 2001 and assumed command and control of U.S. forces at the Battle of Tora Bora, where bin Laden was believed to have been located.⁴⁹

In March 2002, elements of the task force supported the 10th Mountain Division's Operation ANACONDA in the Shahikot Valley of eastern Afghanistan.⁵⁰ The division expected a three-day battle with light combat, but it ended up being the largest battle in the Afghanistan War, lasting seven days with intense combat. Coalition forces killed several hundred enemy fighters while U.S. forces suffered eight fatalities and more than 50 wounded.⁵¹ Following Operation ANACONDA, the task force remained in Afghanistan with the primary task of hunting al Qaeda and Taliban "tier one" and "tier two" high-value targets.⁵²

While maintaining a presence in Afghanistan, Major General Dell Dailey, who commanded both Task Force Sword and the JSOC, was directed to support the invasion of Iraq. For the initial invasion, his special operations task force was assigned responsibility for Iraq's west.⁵³ The area had been assigned to General Ray Odierno and his 4th Infantry Division, but the Turkish Parliament had barred the U.S. from using its territory as a staging ground for the ground invasion, consequently, the military needed a way to fill this void quickly.⁵⁴ USCENTCOM tasked

47 U.S. Special Operations Command, *United States Special Operations Command, Command History 1987-2007* (Tampa, FL: U.S. Special Operations Command, 2007), 90, <https://irp.fas.org/agency/dod/socom/2007history.pdf>; Global Security, "Task Force 11," and Robin Moore, *The Hunt for Bin Laden: Task Force Dagger* (New York: Random House), 28-29.

48 U.S. Special Operations Command, *USSOCOM, Command History: 1987-2007*, 90; and Moore, *The Hunt for Bin Laden*, 28.

49 U.S. Special Operations Command, *USSOCOM, Command History: 1987-2007*, 93-8.

50 *Ibid.*, 271-289; and Neville, *Special Operations Forces in Afghanistan*, 20-25.

51 Richard Kugler, *Operation Anaconda in Afghanistan: A Case Study of Adaptation in Battle* (Washington, DC: National Defense University, 2007), 1, <https://apps.dtic.mil/sti/pdfs/ADA463075.pdf>.

52 Neville, *Special Operations Forces in Afghanistan*, 45.

53 Leigh Neville, *Special Operations Forces in Iraq* (Oxford, UK: Osprey, 2008), 9 and 30-31.

54 Kaplan, *The Insurgents*, 71.

Dailey's special operations task force to seize key targets including airfields deep in Iraq, capture high-value targets, provide long-range special reconnaissance, and search for weapons of mass destruction.⁵⁵ On March 19, elements of this task force became some of the first units to enter Iraq. On April 1, elements from the task force seized Haditha Dam and conducted the rescue of Private Jessica Lynch, who had been captured by Iraqi troops when her convoy was ambushed in Nasiriyah. Two days later, the task force suffered its first suicide attack of the war when a pregnant woman detonated the car that she was driving at a blocking position near Haditha Dam, killing herself, her female passenger, and three of Votel's Rangers. After securing the dam, elements moved to interdict potential avenues of escape for high-value target Ba'athists attempting to flee the country. On April 9, the task force seized an airfield near Tikrit. One week later, the task force turned over the western sector to conventional forces that had advanced from the south, and the task force moved to Baghdad.⁵⁶

After the fall of Baghdad, the task force's operations focused on capturing former regime members, conducting sensitive site exploitations at facilities suspected of being used to store or process weapons of mass destruction, and hunting down Ba'athists attempting to flee the country. On July 22, 2003, the task force led a raid—supported by the 101st Airborne Division—that killed Saddam's sons, Uday and Qusay. The two men were number two and three on the U.S. military's most wanted list.⁵⁷

The Network McChrystal Inherited (October 2003)

General Stanley McChrystal assumed command of the JSOC and Task Force 714 on October 6, 2003.⁵⁸ McChrystal came from a family with a long military history. His father had been a major general in the Army,

55 Neville, *Special Operations Forces in Iraq*, 9 and 30-31.

56 Ibid., 26-32.

57 Rym Brahimi et al., "Pentagon: Saddam's Sons Killed in Raid," CNN, July 22, 2003, accessed October 25, 2023, <http://www.cnn.com/2003/WORLD/meast/07/22/sprj.irq.sons/index.html>; and Neville, *Special Operations Forces in Iraq*, 41-42.

58 The task force went through several name changes for security purposes. Each time the media mentioned the name of the task force, it changed its designation to remain clandestine. See Neville, *Special Operations Forces in Iraq*, 26-42. For simplicity, I will use one number for each component: Task Force 714 for the overarching task force and Task Force 16 for the subordinate task force in Iraq.

and, like his father, grandfather, and brother, he chose to be an infantry officer.⁵⁹ He graduated from West Point in 1976 and spent much of his career in the 75th Ranger Regiment, the Army's elite infantry unit, commanding at the company and battalion level before serving as the regimental commander. Before commanding the Ranger Regiment, McChrystal spent a year at Harvard University's John F. Kennedy School of Government as a senior service fellow in lieu of attending the U.S. Army War College. After commanding the regiment, he spent a year as a military fellow on the Council on Foreign Relations, and then a year as the assistant division commander for the 82nd Airborne Division from June 2000 to June 2001. He spent the next year as the chief of staff of the XVIII Airborne Corps, with which he deployed to Afghanistan as the chief of staff for the headquarters directing operations in Afghanistan as part of Operation ENDURING FREEDOM. In July 2002, McChrystal moved to the Pentagon, where he served as the vice director for operations on the Joint Staff.⁶⁰

When McChrystal took command of Task Force 714, its primary mission had shifted almost exclusively to hunting former Iraqi regime leaders.⁶¹ By this time, the U.S. had determined that Iraq did not possess weapons of mass destruction, and most Ba'athists who had wanted to flee the country had left months prior. In Iraq, McChrystal had teams in Baghdad, with Petraeus's 101st Airborne Division in Mosul, and with Odierno's 4th Infantry Division in Tikrit. The task force also maintained a sizable presence in Afghanistan, a small number of personnel elsewhere in the region, a few liaison officers at critical headquarters in the region, and liaison officers at a small number of partner agencies in the Washington, DC, area. At the time, the task force's analytical capability was extremely limited.

McChrystal took his first trip overseas only weeks after taking command, arriving in Iraq on October 24, 2003. He visited his task force headquarters in Baghdad before visiting his "outstations," or teams at other locations in Iraq. Petraeus and Odierno were

59 Stanley A. McChrystal, *My Share of the Task* (New York: Penguin, 2013), 8-22.

60 U.S. Army, "General Stanley McChrystal," AUSA.org, August 2, 2010, accessed November 2, 2023, <https://www.ausea.org/people/general-stanley-mcchrystal-usa-ret>.

61 McChrystal, *My Share of the Task*, 101.

highly complementary of the work that his teams were doing, but McChrystal found the teams to be “largely cut off from the rest of [the] force.”⁶² The teams and the task force had a clear mission, but they lacked a common strategy and “real-time links” to one another. The most glaring shortcoming was how they managed raw intelligence. The “operators” that conducted the raids understood the need to collect documents and electronic media for their intelligence value and were mastering what they called “sensitive site exploitation,” but the materiel that they captured was rarely exploited. The teams were learning and innovating on the job, since there was no doctrine on how to conduct sensitive site exploitations at that time.⁶³ It would not become formal doctrine until the Army published Field Manual 3-90.15, *Sensitive Site Operations*, in April 2007.⁶⁴

On a typical raid, a task force team would grab everything it found on target, stuff it into garbage bags or burlap sacks used for making sandbags, and send it to the headquarters for analysis. This was because each team had only a single analyst and one person could not digest and process everything the team gathered.⁶⁵ But the task force headquarters also lacked the capacity to process the enormous amount of materiel the teams captured. When McChrystal inspected his intelligence processing facility at his headquarters at Baghdad International Airport, he opened the door to a spare room which he found “filled with piles of these plastic and burlap bags stuffed with captured material,” which appeared to be unopened.⁶⁶ The task force’s media exploitation cell consisted of a single individual who could not possibly exploit the more than 75 computers that had been recovered. They were incapable of prioritizing the exploitation, so the most recently captured computer was placed at the end of the queue.⁶⁷

Beginning in the summer of 2003, members at all levels of the task force recognized the importance of exploitation, but the task force

⁶² Ibid., 106.

⁶³ Ibid.

⁶⁴ Department of the Army, FM 3-90.15, *Sensitive Site Operations*.

⁶⁵ Former JIATF deputy director, interview by author.

⁶⁶ McChrystal, *My Share of the Task*, 106. The unexploited captured material was confirmed by many others, including interviews with a former JIATF director, former Task Force 714 field artillery officer, and Dell Dailey.

⁶⁷ Former Task Force 714 field artillery officer, interview by author.

needed more capability to do something about it. Some of McChrystal's staff officers started to develop spreadsheets to track the exploitation of captured individuals, documents, and media. Unfortunately, the most common entry in the spreadsheet was either "unknown" or "TBD" (to be determined). When the teams asked the headquarters for updates, the most common response was "we don't know," because they had conducted only minimal exploitation. At that time, the headquarters' primary role was synchronizing assets.⁶⁸ The subordinate elements of the task force were actively seeking any help they could get but did not know where to find it.⁶⁹

After his overseas visit, McChrystal realized that the task force existed primarily as a finishing force. Teams could effectively prosecute targets when provided with sufficient intelligence, but the task force had limited ability to exploit and analyze intelligence to find new targets. He concluded that his command had five significant shortfalls.

The task force's first shortfall was that it lacked a common strategy. McChrystal's headquarters was irrelevant to the forward teams, and each team was fighting its own independent campaign. He sketched out a concept on a legal pad that became the vision to drive Task Force 714's change for the rest of his command. He realized that he needed to bring the forward teams and the headquarters together into a single fight.⁷⁰ The task force's second shortfall was a lack of sufficient intelligence, surveillance, and reconnaissance assets that were critical for finding and fixing targets.⁷¹ The third shortcoming was a lack of adequate human intelligence capability that was required for the find, fix, and exploit phases of the cycle.⁷² The fourth shortcoming was a lack of document exploitation capability. This was widely recognized throughout the command as captured media and documents piled up in the storage room at the airport.⁷³ The final significant shortfall was a lack of proficient interrogators, translators, and

68 Ibid.

69 Former Task Force 16 commander and former Task Force 714 field artillery officer, interviews by author.

70 McChrystal, *My Share of the Task*, 106-107.

71 Scott Miller, e-mail message to author, March 26, 2013.

72 Ibid.

73 Many others confirmed the unexploited captured material, including interviews with a former JIATF director, former Task Force 714 field artillery officer, and Dell Dailey.

analysts who were necessary to gain intelligence from detainees. As a result, exploitation suffered.⁷⁴

The one capability that the task force was not lacking was a sufficient finishing force.⁷⁵ Even though the enemy conducted thousands of attacks each month, it was far more common to find the finishing forces sitting on their base as opposed to prosecuting targets because they lacked the analytic capability necessary to find targets.⁷⁶ Thus, in early 2004, the task force was short of just about everything. These shortfalls were widely recognized across his task force.⁷⁷

Developing the F3EA Targeting Cycle (October 2003–June 2004)

The idea for the F3EA cycle came from Colonel Scott Miller in early 2004.⁷⁸ He was commanding Task Force 16, Task Force 714's subordinate element in Iraq. Miller simply provided a name to capture what his teams were already doing. He remarked that "the light bulb came on" as he watched the task force pursue Saddam Hussein from October to December 2003. The task force had been searching for Saddam since the fall of Baghdad, but the trail was cold from the start. In October, the task force found a lead on a low-level associate. Starting with this low-level and distant lead, the team located in Tikrit eventually found Saddam based largely on information that the team gained through the interrogation of the detainees that they captured. The team's interrogation of the first detainee led to the next person of interest, which it subsequently captured and interrogated, which led to the next person of interest. This process was repeated dozens of times over the next few months until coalition forces captured Saddam on December 14.⁷⁹

74 Former Task Force 714 field artillery officer and former Task Force 16 subordinate commander, interviews by author.

75 Once the task force had fully developed its F3EA capability, it found that it lacked adequate airlift capability to transport the finish force to all its targets. Miller, e-mail message to author.

76 U.S. Department of Defense, *Measuring Stability and Security in Iraq* (Washington, DC: Department of Defense, 2010), 27, https://dod.defense.gov/Portals/1/Documents/pubs/June_9204_Sec_Def_signed_20_Aug_2010.pdf; and former Task Force 16 subordinate commander, interview by author.

77 Former Task Force 16 subordinate commander, interview by author.

78 Ibid.; and Miller, e-mail message to author.

79 Eric Maddox, *Mission: Black List #1: The Inside Story of the Search for Saddam Hussein* (New York: HarperCollins, 2008); and

Previously, the task force had run down every spurious report to no avail. After chasing bad leads for months, the task force determined that it must exploit the human network and developed a new targeting methodology, which required thorough interrogations.⁸⁰ Thus, early experiments with exploitation proved effective in the hunt for Saddam.

Miller had accompanied McChrystal during his trip to the various outstations in Iraq in late October. At the time, Miller was re-reading *Modern Warfare* by Roger Trinquier, a counterinsurgency theorist who had served as an officer in the French Army during World War II, the First Indochina War, and the Algerian War.⁸¹ In the book, Trinquier discussed the methods the French used to break up the National Liberation Front in Algiers. The book focused heavily on the value of interrogating recently captured insurgents. Miller observed that his troops in Iraq had learned what the French had learned 50 years earlier in Algeria: the exploitation of detainees played a critical role in illuminating the enemy network. Miller described that "this became the 'E' as in exploitation."⁸²

At that time, the teams and not the headquarters conducted most of the useful exploitation. The headquarters rarely exploited captured individuals and materials effectively, and the teams seldom received any leads for subsequent targets once the captured personnel and material left their hands. Miller realized he needed to put a name to the targeting cycle to formalize the process and make it easier to communicate the task force's function to others. As a result, in early 2004, the targeting cycle that was nascent in execution was formally named F3EA.⁸³ The task force had been using the term "find-fix-finish" dating back at least as early as the summer of 2001 when Lieutenant Colonel Pete Blaber used the term "find-fix-finish" to describe his unit's objective during a joint readiness training exercise.⁸⁴ While the

Miller, e-mail message to author.

80 Former Task Force 16 intelligence officer, interview by author.

81 Trinquier also advocated the torture of detainees, but that is not something that Miller or U.S. forces condoned since doing so is a violation of the United States Code of Military Justice and the law of armed conflict. Roger Trinquier, *Modern Warfare: A French View of Counterinsurgency*, trans. Daniel Lee (London: Pall Mall, 1964).

82 Miller, e-mail message to author.

83 Ibid.; and former Task Force 16 intelligence officer, interview by author.

84 Former Task Force 714 field artillery officer, interview by author.

task force lacked the internal capacity to conduct the exploitation and analysis parts of the cycle, Miller understood the critical importance of exploitation and analysis. He hoped the term would help communicate the task force's efforts to people outside the task force whose help he required.

In late 2003, the task force first became aware of Abu Musab al-Zarqawi after talking to the Joint Intelligence Task Force—Combating Terrorism.⁸⁵ The Defense Intelligence Agency had established the Joint Intelligence Task Force shortly after the 9/11 attacks.⁸⁶ At the time, however, Task Force 16 could not dedicate significant manpower to hunting Zarqawi because Saddam remained its priority target, and it lacked the capacity to pursue both target sets simultaneously. Despite the task force's focus on Saddam, the Zarqawi threat concerned Miller enough to establish a new team in Anbar province. His foresight paid off, as he already had an element in place and the infrastructure to support it when the task force's mission shifted from former regime leaders to al Qaeda in Iraq, with Zarqawi replacing Saddam as the task force's top target after the military had captured Saddam.⁸⁷

In January 2004, Miller's intelligence officer told McChrystal, "Sir, we have good reason to believe Zarqawi is in Iraq...and we believe he's building up a network" after Kurdish security forces arrested Hassan Ghul.⁸⁸ Ghul was an al Qaeda operative who was couriering two compact discs and a thumb drive that included several documents. The documents included a 17-page progress report and a future plan of action for Iraq written from Zarqawi to bin Laden and Ayman al-Zawahiri, al Qaeda's number two behind bin Laden.⁸⁹ In the letter Zarqawi dismissed the United States as a paper tiger and argued the real threat was the Shia. He cast the foreign jihadists as the true keepers of the faith and the only defense against the Shia. Zarqawi announced his plan to

85 Former Task Force 16 intelligence officer, interview by author.

86 Defense Intelligence Agency, *50 Years Committed to Excellence in Defense of the Nation* (Washington, DC: Defense Intelligence Agency, 2011), 43, <https://apps.dtic.mil/sti/tr/pdf/ADA536892.pdf>.

87 Former Task Force 16 intelligence officer, interview by author.

88 McChrystal, *My Share of the Task*, 113.

89 Brian Bennett and Vivienne Walt, "Fields of Jihad," *Time*, February 23, 2004, <https://content.time.com/time/magazine/article/0,9171,590685,00.html>.

attack Shiites to provoke reprisals in hopes that it would escalate into a full sectarian war, which would then stoke the rage and sympathy of Sunnis worldwide. He believed the new Iraqi government—which Shiites would dominate—was the main obstacle to making Baghdad the seat of the reestablished caliphate. Only through an ethnic war would the Sunnis win and al Qaeda reign.⁹⁰ Thus, as early as January 2004, McChrystal's task force knew of Zarqawi's strategic plans.

McChrystal understood the importance that Zarqawi played in Iraq, yet he also understood where Iraq fit into the larger fight against al Qaeda. With most of al Qaeda's senior leaders believed to be increasingly isolated in Pakistan, al Qaeda needed to remain relevant. It was difficult for al Qaeda's "core" to conduct operations; therefore, it became reliant on its "franchises" in Algeria, Libya, Saudi Arabia, Yemen, Somalia, and Iraq to remain active. These groups were cut off from the al Qaeda leadership; hence, the local groups often acted on their own with little guidance or direction. Communication, when it did occur, was slow, often through couriers carrying compact discs or letters. The leaders did not communicate using e-mail or phone due to the security risk.⁹¹ Given this decentralized network, McChrystal concluded that there was "no single person or place" the U.S. could strike that would cause al Qaeda to collapse. Therefore, McChrystal developed a strategy to target "two of the enemy's surfaces": al Qaeda's senior leadership and its regional affiliates. The task force would attack regional leaders as they sprouted up locally and target al Qaeda's senior leadership, which they believed to be located primarily in the border region of Pakistan and Afghanistan. If successful, the al Qaeda brand would suffer as onlookers who might consider joining or supporting would think better after seeing the organization losing.⁹² It would take a networked approach to overlay the enemy network. Or, in McChrystal's words, "It would take a network to defeat a network."

90 Abu Musab Al-Zarqawi, "Zarqawi Letter: February 2004 Coalition Provision Authority English translation of terrorist Musab al Zarqawi letter obtained by United States Government in Iraq," State.gov, accessed November 2, 2023, <https://2001-2009.state.gov/p/nea/rls/31694.htm>.

91 Nelly Lahoud et al., *Letters from Abbottabad: bin Ladin Sidelined?* (West Point, NY: Combating Terrorism Center, 2012); and Liam Collins, "The Abbottabad Documents: Bin Ladin's Security Measures," *CTC Sentinel* 5, no. 5 (2012): 1-4, <https://ctc.westpoint.edu/the-abbottabad-documents-bin-ladins-security-measures/>; and McChrystal, *My Share of the Task*, 115-116.

92 McChrystal, *My Share of the Task*, 115-116.

In April 2004, McChrystal held his first commander's conference in Bagram, Afghanistan. Like other leaders, he held command conferences once or twice each year to align the command's strategy and goals.⁹³ On taking command, McChrystal decided to hold the conference in Afghanistan. He assumed the Afghanistan-Pakistan region would be his task force's main effort since most of DoD's senior leaders believed the Iraq War would be short-lived.⁹⁴ However, it became clear to him after his first visit to Iraq in 2003 that things were getting worse. The task force's main effort quickly shifted to Iraq.⁹⁵ At the conference, he had his senior leaders watch the 1966 film *The Battle of Algiers*, read *Modern Warfare*, and listen to a lecture by Professor Douglas Porch, one of the foremost scholars of French military counterinsurgency, whom McChrystal brought to Bagram from California.⁹⁶ McChrystal had read *Modern Warfare* years earlier and had asked Miller for a copy during his October visit when he saw Miller reading it. McChrystal recognized the U.S. was facing an insurgency that he believed would last a long time. He wanted to prepare his commanders and their units for the realization that they would be facing a long war that might be unpopular with the troops. He had seen the task force's screening facility and recognized that it was their "Achilles heel," yet saw the value that it provided and wanted to drive home these points with *The Battle of Algiers*.⁹⁷ He used the conference to promote some of the changes he was attempting to implement within his command to coordinate the disparate efforts.

In the summer of 2004, Colonel Bennet Sacolick, the commander of his task force in Iraq, came into McChrystal's office and put a single PowerPoint slide on the monitor that read "FIND-FIX-FINISH-EXPLOIT-ANALYZE."⁹⁸ The words represented the targeting cycle that Miller had outlined in January 2004.⁹⁹ Although Miller had developed the concept earlier, this was the first time that it had been articulated

93 Ibid., 111-123.

94 McChrystal, interview by author.

95 Flynn, interview by author.

96 McChrystal, *My Share of the Task*, 123.

97 McChrystal, interview by author.

98 Ibid.; and McChrystal, *My Share of the Task*, 153.

99 Miller, e-mail message to author; and McChrystal, *My Share of the Task*, 153-154.

in such a clear and concise manner. This provided McChrystal with precisely what he needed to effectively communicate the idea with his interagency partners. It allowed him to explain what he needed from them and how they could support the war effort.¹⁰⁰ Sacolick's brief also captured what the task force referred to as the "blink" problem.¹⁰¹ A blink was anything that slowed or degraded the targeting process—a process that often involved at least a half dozen units or agencies working in separate locations. Information crossed organizational lines, cultural barriers, physical distances, and time zones between and within each process. Sacolick summed up the ineffectiveness of the process that existed at that time: "By the time we're ready to go after another target, it's often days later, the situation has changed, and we're essentially starting from square one." McChrystal described the process as feeling "slow at the time. In retrospect, it was glacial."¹⁰²

McChrystal attributed part of the problem to an insufficient technological infrastructure, but most was due to a lack of trust among the participants. At each stage, people would ask: "*Should we pass this intelligence and if so, how much? If we share it, will we lose control over it? Will we get in trouble for sharing info? Will those we pass it to use it in the way we agreed they would?*"¹⁰³ Thus, in addition to expanding his network, he realized he needed to strengthen it.

Building the "Network" and Expanding F3EA Capability (2004-2006)

Over the next two years, McChrystal radically transformed the task force from disparate teams waging individual campaigns capable of conducting barely a dozen operations each month into a unified task force waging a single campaign and executing dozens of operations in a single night.

100 McChrystal, interview by author.

101 Miller, e-mail message to author; and McChrystal, *My Share of the Task*, 154.

102 McChrystal, *My Share of the Task*, 154.

103 Ibid.; and former JIATF deputy director, interview by author.

Flattening the Organization

During his first command visit, McChrystal found that many of his subordinate units were stove-piped and rarely worked with one another. The flow of information was also problematic. The rigid hierarchical structure of the task force could not keep pace with a networked enemy. It impeded the flexibility of subordinate commanders to execute time-sensitive operations and their ability to share information rapidly. McChrystal realized that he needed to change how information was communicated and shared. To do so, he would have to flatten the organization using videoconferencing, create a portal to share information, and change e-mail protocols.

To fight together as a unified task force, subordinate teams had to understand how their operations fit into the larger campaign. To increase situational awareness, McChrystal expanded the use of videoconferencing. He forced all his deployed teams to participate in the daily operations and intelligence meetings and purchased the required communications packages to make it happen. This gave the dispersed elements the situational awareness they needed to function as part of a combined team. It also fundamentally changed the meeting's format. Previously, the operations and intelligence meetings primarily served to synchronize the headquarters' staff, but with the outstations not just attending but actively participating, the meeting was transformed into a venue to synchronize the entire task force. Many teams were opposed to videoconferencing at first, but this quickly changed when they saw the value it offered.¹⁰⁴

McChrystal also established a task force portal: a one-stop shop on the task force's internal computer network that contained all the task force's operational information. It served as a repository for information including the commander's priorities, trip reports, and operational after-action reports, as well as a venue to manage important staff actions. McChrystal and his staff constantly emphasized the importance of using the portal to force its use. His chief

¹⁰⁴ Former Task Force 16 subordinate commander, interview by author.

of staff was well known for remarking, "You're either a martyr or a zealot" to anyone who was not fully embracing the portal. Eventually, McChrystal expanded portal access to his conventional military and interagency partners.¹⁰⁵

A final measure McChrystal implemented to flatten the organization was changing its e-mail protocol. If information was meant for him or his staff, subordinates were directed to send it directly to them rather than having it go through multiple layers of command. To make this system work effectively, everyone needed to understand what needed to go directly to McChrystal and his primary staff and what could be handled by someone else; otherwise, they would become hamstrung by the volume of e-mails. Given the importance of information in the networked war McChrystal was waging, over-communicating was preferable to under-communicating. Once again, if someone did not understand the new protocol, the chief of staff was the first to reprimand them.¹⁰⁶

Flattening his task force in this manner allowed McChrystal the advantages of centralized and decentralized organizations while avoiding many of the disadvantages of each. With the decentralized approach, initiative and freethinking were encouraged, and subordinates were liberated to act without hesitation because they understood their commander's intent. They were freed from having to seek his permission before acting. Everyone left the daily meeting knowing the latest update on the organization's intent, strategy, rules, and approvals.¹⁰⁷

McChrystal recognized that he also needed to improve the operations-intelligence integration within his task force, so he brought in Colonel Mike Flynn to help fix its intelligence capability.¹⁰⁸ McChrystal

105 Dana Priest and William M. Arkin, *Top Secret America: The Rise of the New American Security State* (New York: Little, Brown, 2011).

106 Former Task Force 16 subordinate commander, interview by author.

107 Ibid., 164.

108 By all accounts, Mike Flynn had a distinguished and honorable military career. After retiring, he worked for the Trump presidential campaign, where he notoriously led the chant of "Lock her up!" when referring to Democratic candidate Hillary Clinton. Trump appointed Flynn his National Security Advisor, a position he only held for less than a month. Flynn was prosecuted for making false statements to the FBI regarding conversations he had with the Russian Ambassador, but prior to the case being resolved, he received a presidential pardon on November 25, 2020. See, Barton Gellman, "What Happened to Michael Flynn," *The Atlantic*, July 8, 2022, accessed November 10, 2023, <https://www.theatlantic.com/ideas/archive/2022/07/michael-flynn-conspiracy-theories-january-6-trump/661439/>.

had first met Flynn at Fort Johnson, Louisiana, in April 1994, when he was commanding a battalion during its training rotation at the Joint Readiness Training Center. Flynn was an observer-controller and, despite being junior to McChrystal in rank, rode McChrystal fairly hard. But Flynn had impressed McChrystal enough so that when the command's senior intelligence officer position opened, McChrystal asked Flynn to fill it.¹⁰⁹ Flynn had never served in the command and had spent his previous 23 years in conventional units; therefore, he arrived as an outsider to an organization that rarely brought in outsiders to serve in such a senior position. Flynn anticipated this would be a challenge, but it also allowed him to enter with a more critical perspective of its operations. He quickly realized that the intelligence system within the command was broken. It was staffed with good people but not resourced or organized effectively. He saw the fight against Zarqawi, first and foremost, as a battle for intelligence. Hence, the intelligence apparatus had to improve.¹¹⁰ Flynn pushed supporting assets to the lowest level rather than holding them at the headquarters because he understood that the lower they were, the faster the teams could execute the F3EA cycle.¹¹¹ Ultimately, Flynn served as the catalyst for many of the changes the command implemented over the next three years to expand its find, fix, exploit, and analyze capability.¹¹²

Expanding the Liaison Network

McChrystal's second task was to expand his links with other organizations that had a role to play in his operations. He needed to expand his network. Only days after the commander's conference in Bagram, Task Force 714 supported Major General Mattis and his Marines during the First Battle of Fallujah in April 2004. With the Marines on the verge of taking the city, Mattis called McChrystal to inform him that policymakers had forced him to halt the attack. This caught McChrystal

109 From Stanley A. McChrystal, class at Yale University on April 2, 2013; and Flynn, interview by author.

110 Flynn, interview by author.

111 Ibid.; and former Task Force 16 subordinate commander, interview by author.

112 McChrystal, *My Share of the Task*, 156.

completely off guard, and he blamed himself for not having established a sufficient link with the Marines. He described it as "a mistake I worked hard not to repeat." Soon thereafter, McChrystal sent liaison officers to as many units and relevant agencies as he could. Before Fallujah, de-confliction was the task force standard; after the battle, coordination and collaboration became the standard.¹¹³ McChrystal also seeded liaisons across the region to work with U.S. Embassy country teams to ensure local authorities had the information necessary to make arrests. Having elements in other countries accelerated the F3EA cycle.¹¹⁴ McChrystal recognized that influence in the embassies and other government agencies depended "on charisma, integrity, and competence," thereupon, he took some of his best operators and analysts out of the direct fight for these critical roles.¹¹⁵

McChrystal's most valuable partner, the CIA, was also his most difficult. McChrystal remarked that "no alliance could be as infuriating or as productive as my relationship with the CIA and yet more than once, my most trusted subordinates had to stop me, in moments of utter frustration, from severing all ties with our 'Agency brothers' repeating back to me my own guidance to preserve our relationships through specific conflicts."¹¹⁶ To improve the relationship, he sent his senior intelligence officer to Baghdad Station where he spent a good portion of his first few months in the task force trying to shore up the relationship with their crucial partner.¹¹⁷

McChrystal believed that eliminating the "blinks" would have a dramatic payoff, but it required significant physical, organizational, procedural, and cultural changes from his interagency partners. It required everyone within the network to believe in the network premise and trust their counterparts—including some they might never meet in person or communicate with directly. Thus, he expanded the use of videoconferencing to allow these critical partners to attend without any preconditions. Despite the importance of the information

113 Ibid., 131.

114 Former JIATF deputy director, interview by author.

115 McChrystal, *My Share of the Task*, 169.

116 Ibid., 118.

117 Priest and Arkin, *Top Secret America*, 242; and Flynn, interview by author.

that was shared, McChrystal believed the trust that was built was even more valuable.¹¹⁸

To minimize the blink problem and bring the task force and inter-agency partners closer together, he greatly expanded the Task Force 714 operations and intelligence videoconferences that his predecessor had started. Previously, they had served primarily as a synchronization tool for his staff, and they had recently grown to be a synchronization tool for his task force. Now, he was expanding it further to be a synchronization tool for the entire U.S. government effort against al Qaeda. The newly formatted version also differed from those conducted by most units by “its regularity; the size, diversity, and dispersion of the forum; and the richness of the information discussed.”¹¹⁹ The task force conducted the videoconference six days a week at 4 p.m. in Baghdad. This was still several hours prior to the start of many of the task force’s night raids, but—more importantly—it was 9 a.m. in Washington, which was the start of the workday for many agencies.

In the winter of 2004, the videoconference’s audience was relatively small; it included some of the larger bases in Afghanistan and Iraq and the conference room of a few key agencies in Washington. By the summer of 2005, the videoconference had grown to include even the most remote bases, thanks to the development of pre-packaged communication bundles that could connect from anywhere in the world. The command also installed communications packages in several U.S. embassies to entice interagency partners to participate. Eventually, anyone with access to the portal could watch the daily operations and intelligence meetings from their computer through the portal.¹²⁰ By 2007, the daily operations and intelligence meeting was a worldwide forum of thousands of people associated with the mission, with up to 72 distinct locations participating daily.¹²¹

The breadth and depth of the forum invited an array of perspectives that built a richer understanding of the threat. Few topics were off-limits, and granular tactics were discussed alongside strategy.

118 McChrystal, *My Share of the Task*, 154-155.

119 Ibid., 163.

120 Former JIATF deputy director, interview by author; and McChrystal, *My Share of the Task*, 163.

121 Former JIATF director and deputy director, interviews by author.

Beyond the value that the operations and intelligence meeting provided in sharing information, McChrystal described it as the "single most powerful tool I had at my disposal in leading a dispersed force." It provided him nine hours each week to "influence, inspire and learn" from the diverse force that he led.¹²²

By flattening the organization and expanding his liaison network, McChrystal established a culture where "everyone knows everything...all the time."¹²³ Situational awareness was centralized, while decision-making was decentralized.¹²⁴ Communication was flat and fast. The task force moved information and knowledge as rapidly as possible and pulled in "outsiders," the integral interagency partners, to be part of the process.¹²⁵ The operations and intelligence videoconferences also helped to animate the Washington Beltway to provide critical support to the task force. It served as a daily reminder that the U.S. was at war. When stateside analysts saw the relevance of their work, they often worked harder—they could see how their work led to a senior enemy leader being captured or a car-bomb factory being shut down.¹²⁶

Forming the First JIATF

Given the geographical dispersion of al Qaeda, McChrystal understood that the military alone could not defeat al Qaeda and recognized early on that "counterproductive infighting" among the CIA, Department of State, DoD, and others back in Washington threatened his campaign.¹²⁷ Likewise, General John Abizaid, the commander of USCENTCOM, grew increasingly frustrated with the U.S. government's lack of a "unity of effort" and convened a conference in January 2004, later known as Tampa I, to focus key organizations on the war

122 McChrystal, *My Share of the Task*, 163.

123 Miller, e-mail message to author.

124 Flynn, interview by author.

125 Miller, e-mail message to author.

126 McChrystal, *My Share of the Task*, 164.

127 Ibid., 116.

on terror. The conference included senior leaders from the intelligence and defense communities and—most importantly—CIA director George Tenet. Abizaid argued that two years after 9/11 the U.S. had lost its focus on al Qaeda.¹²⁸

McChrystal sought to leverage the enthusiasm from the conference by bringing all potential intelligence sources to bear. McChrystal recognized that a special operations or a military-only task force was insufficient for the challenge his task force faced. Thus, he followed the recommendation of his deputy, Rear Admiral Bill McRaven, to form a Joint Interagency Task Force (JIATF).¹²⁹

A JIATF is an interagency element that is formed when the close integration of two or more agencies is required for a specific task and purpose.¹³⁰ The U.S. government formed its first two JIATFs on April 7, 1994, when the director of the Office of National Drug Control Policy published the first National Interdiction Command and Control Plan. With the plan, the nation's two counter-drug joint task forces became JIATFs: Joint Task Force-5 became JIATF-West and Joint Task Force-South became JIATF-South. It was more than simply a name change, as the plan changed the joint task forces from primarily military elements into interagency organizations. By most accounts, JIATF-West and JIATF-South were recognized as models of success for interagency cooperation and intelligence fusion.¹³¹ McRaven sought to replicate their success by building a JIATF focused on al Qaeda. It would leverage the CIA's human intelligence, the National Security Agency's signal intelligence, the FBI's forensic and investigative expertise, the Defense Intelligence Agency's military reach, and the National Geospatial-Intelligence Agency's mapping ability.¹³²

Shortly after Tampa I, McChrystal established the JIATF inside a tent at Bagram Air Base, Afghanistan, slowly filling the seats over the

128 Abizaid, interview by author; and McChrystal, *My Share of the Task*, 117-177.

129 McChrystal, *My Share of the Task*, 117-177.

130 Joint Chiefs of Staff, JP 3-08, *Interorganizational Coordination during Joint Operations* (Washington, DC: Department of Defense, June 24, 2011), II-20 and E-5 to E-6, <https://www.govinfo.gov/content/pkg/GOVPUB-D5-PURL-gpo29344/pdf/GOV-PUB-D5-PURL-gpo29344.pdf>.

131 Evan Munsing and Christopher J. Lamb, *Joint Interagency Task Force—South: The Best Known, Least Understood Interagency Success* (Washington, DC: National Defense University Press, 2011), <https://ndupress.ndu.edu/Portals/68/Documents/stratperspective/inss/Strategic-Perspectives-5.pdf>.

132 Former JIATF deputy director, interview by author; and McChrystal, *My Share of the Task*, 117.

ensuing weeks and months. He had to resource it with experts from outside of his command—only the director, deputy director, and a handful of analysts came from within his stateside special operations unit.¹³³ Unlike most other intelligence fusion centers, which were run by intelligence professionals, McChrystal had an operations officer run the JIATF, and an intelligence officer serve as its deputy. This ensured that the JIATF remained operationally focused. Success was not measured by how many reports an individual produced; success was measured by the impact of the reports. The commanders understood the capability of the assault force because the JIATF directors had all been successful operational commanders.¹³⁴ As one former director described it, it worked because “a meat eater was in charge of plant eaters.”¹³⁵ McChrystal described the establishment of the JIATF as beginning the process of “turning Task Force 714 from a collection of niche strike forces into a network able to integrate diverse elements of the [U.S. Government] into a unified effort.”¹³⁶

Improving the Interrogation Capability

Among the task force’s various shortfalls, its interrogation capability was the most urgent. On the day he took command, his deputy, Air Force Brigadier General Lyle Koenig, called from Iraq and told McChrystal, “We need to close the screening facility...We don’t have the expertise or experience to do this correctly.”¹³⁷ McChrystal called it “our Achilles’ heel” and remarked, “If we don’t do this right, we’ll be taken off the battlefield.”¹³⁸ Yet, he—along with everyone else—recognized that detainees were a critical source of intelligence, so he resolved to keep the facility open but made fixing it a priority.¹³⁹ At the time, the task force had a skeletal staff of 13 people working in inadequate facilities. However, the

133 Former JIATF director, interview by author.

134 Ibid.

135 Former JIATF directors, interviews by author.

136 McChrystal, *My Share of the Task*, 119.

137 Ibid., 199.

138 McChrystal, interview by author; and McChrystal, *My Share of the Task*, 200.

139 Former Task Force 16 intelligence officer, interview by author.

bigger problem had less to do with capacity and more to do with process. The interrogators often failed to gain intelligence from detainees because the handover from the capture force to the interrogators was so poor. The interrogators did not know where to begin their questioning; hence, they rarely learned anything of value before they were forced to transfer them to the next level for processing.¹⁴⁰

Out of necessity, operators who lacked formal training were forced to conduct their own interrogations. When the teams did get their own interrogators, they were rarely proficient, and the operators often performed the job better. In one case, a team received a school-trained interrogator from the task force headquarters, but he had been trained as a strategic debriefer and had no experience as a tactical interrogator. After a week of disappointing results, the team returned him to the headquarters so he could be paired with an experienced interrogator to conduct on-the-job training. The final straw came after the team discovered the interrogator had never heard of Stockholm syndrome.¹⁴¹

In early 2004, McChrystal started to grow the task force's interrogation capacity through every possible option he and his staff could imagine: they used different contracting mechanisms to hire proficient interrogators and linguists, they leveraged their personal relationships with colleagues at stateside units to get personnel deployed, they convinced colleagues from the coalition headquarters to cut individuals from their command to support the task force, and they submitted formal requests for forces up to the Pentagon to fill the remaining shortfalls.¹⁴² The task force also built a new screening facility at Balad—the base where the task force headquarters would be moving later that summer—and assigned a commander and command sergeant major to run the facility and its people. The new facility offered a clean, sterile environment for interrogations with the appropriate level of oversight, including cameras in every room.¹⁴³

Even though the capability of the screening facility was improving, the teams remained reluctant to transfer their detainees to the

140 Priest and Arkin, *Top Secret America*, 246.

141 Former Task Force 16 officer, interview by author.

142 Former Task Force 16 intelligence officer, interview by author.

143 McChrystal, *My Share of the Task*, 200-201.

headquarters.¹⁴⁴ It was a circular problem. The teams did not want to transfer their detainees until after they had been exploited because experience had shown that the teams received scant intelligence from the headquarters after turning them over. Yet, the headquarters could not demonstrate its new ability to exploit detainees until they had the opportunity to reveal it.¹⁴⁵ McChrystal was experiencing a common problem within many organizations: the sub-elements did not understand what other parts of the organization did; therefore, they thought that they were the only member of the organization that did anything and the headquarters was more of a hindrance than a help. It was the normal friction related to differing levels of command. In the Army's Special Forces, it is what is called the "team room mentality," in which teams adopt a team-centric view of the organization and think that anything that happens outside of the team is spurious.¹⁴⁶

The task force finally overcame this challenge when operators from the teams started accompanying their detainees back to the tactical screening facility instead of simply sending them to the screening facility without a proper handover. This allowed the operators to learn what the interrogators needed to be effective and vice versa. Operators learned that providing the interrogators with detailed information about what they learned on target helped the interrogators refine their questioning and hasten the exploitation process. Likewise, the operators educated the interrogators on what type of intelligence they needed from the detainees. It quickly became so effective that the teams could not get their captured individuals to the screening facility fast enough.¹⁴⁷

Despite significantly increasing its number of interrogators, the task force never had enough, and they remained a "choke point" for exploitation operations throughout much of the war. By 2005, it became so bad that McChrystal sent a message to Casey telling him that he could not ethically send his soldiers out to conduct raids if he lacked the capacity to interrogate the detainees they captured. It was not Casey's fault, but McChrystal wanted to ensure Casey and others

144 Flynn, McChrystal, and former Task Force 16 subordinate commander, interviews by author.

145 Bill Wall (former JIATF director) and former Task Force 16 subordinate commander, interviews by author.

146 Wall, interview by author.

147 Flynn and former Task Force 16 intelligence officer, interviews by author.

understood the importance. The situation would improve in the years ahead but was “never close to good enough.”¹⁴⁸

Expanding the Intelligence, Surveillance, and Reconnaissance Capability

Throughout the war, Task Force 714’s intelligence, surveillance, and reconnaissance capability increased exponentially regarding platforms, sensor packages, and employment. When McChrystal took command in October 2003, he had access to only a single Predator unmanned aerial vehicle and one surveillance helicopter outfitted with a camera.¹⁴⁹ To make matters worse, the task force had not yet learned how to employ the limited platforms effectively.

By June 2004, the task force had gained access to a few more Predators, but the process of controlling them remained awkward. The Air Force controlled the Predators, viewed them as a strategic collection platform, and tried to manage them this way, but the task force needed them to conduct tactical intelligence.¹⁵⁰ Strategic collection is typically conducted by overflying an area for a short duration with the area overflown repeatedly over weeks or months to look for changes. By contrast, the task force required the platforms to conduct constant surveillance over a specific area to watch people or vehicles and to observe the subtleties required for manhunting. If someone entered or departed a target building, the likelihood of observing it through strategic collection would be slim and offer no ability to follow individuals and vehicles off the target. Strategic collection limited the task force’s ability to find targets and almost no ability to fix targets. Compounding the challenge, Air Force pilots controlled the Predators from stateside bases thousands of miles away, which made it difficult for the task force to direct changes to the targeting plan.

The expansion of the task force’s intelligence, surveillance, and reconnaissance capability coincided with the loss of human intelligence that resulted from the growing instability across Iraq and the loss of

¹⁴⁸ McChrystal, *My Share of the Task*, 178-179.

¹⁴⁹ *Ibid.*, 137.

¹⁵⁰ *Ibid.*, 138.

access to Fallujah following the Marines' withdrawal from the city in May 2004.¹⁵¹ Lacking other intelligence collection means, the task force was forced to rely on an uncrewed aerial vehicle-centric approach for targeting. Thus, the task force refined its ability to "find, monitor, and map" targets in Fallujah and elsewhere in Iraq in the spring of 2004.¹⁵² By mid-June, its expanded use of intelligence, surveillance, and reconnaissance platforms started to pay off when one of the task force's intelligence analysts noted that a tractor appeared to be blocking a street in Fallujah to keep out foot traffic. Consequently, he directed the Predator to investigate. Through the Predator feed, the analyst observed what looked like men loading suspicious crates onto flatbed trucks that they subsequently covered with canvas. The analyst also observed men loading AK-47 rifles and munitions. When the first truck pulled away, the analyst directed the Predator to follow it. The truck left Fallujah, and when it entered Baghdad, the task force finish force launched against the vehicle. As expected, they found it full of munitions: machine guns, grenade launchers, rockets, and explosives for car bombs.¹⁵³

After the operation, the Predator returned to where the vehicles had been loaded to observe the second truck. The Predator followed it to a house at the edge of Fallujah that the intel analyst assessed to be a bomb-making factory. Since the insurgents controlled the city, the task force decided to bomb the house rather than launch a raid. Seconds after the bomb detonated, the munitions in the house started to detonate. Munitions continued to burn off for the next twenty minutes, confirming the bomb had indeed hit a large weapons, ammunition, and explosives cache, not a civilian residence. Sources in Fallujah and signal intercepts indicated that 20 people—most of them Tunisian foreign fighters—had been killed when the house exploded. This operation validated the task force's intelligence, surveillance, and reconnaissance techniques that it would replicate thousands of times in the following years.¹⁵⁴

The task force's senior intelligence officer used this operation

151 Former Task Force 16 subordinate commander, interview by author; and McChrystal, *My Share of the Task*, 137.

152 Former Task Force 16 subordinate commander, interview by author; and McChrystal, *My Share of the Task*, 144.

153 McChrystal, *My Share of the Task*, 139.

154 Ibid., 139-143.

to explain to Abizaid and Rumsfeld how critical the Predators and other intelligence, surveillance, and reconnaissance assets were to task force operations.¹⁵⁵ Their success was rewarded with additional resources. As Casey received more Predators, he dedicated a vast majority to the task force.¹⁵⁶ This led to some jealousy on the Multi-National Force – Iraq staff, and Task Force 714's senior intelligence officer became somewhat of a hated man because they blamed him for stealing all the theater's intelligence, surveillance, and reconnaissance assets.

The subordinate elements also learned how to better employ the assets. The inability to operate in Fallujah dramatically decreased the number of operations the task force conducted each week, and its operators quickly became bored. Most were type-A personalities, so they hated sitting around idly and instead looked for work that needed to be done. Some operators sat down next to the Predator crew—by this time, the crews were co-located inside team headquarters—and helped direct the crew, and some would even help detail the events in the logbooks. This type of relationship was common across the task force, leading to the operators developing increased respect for the intelligence professionals. At the same time, the intelligence analysts gained a greater appreciation for what the operators needed.¹⁵⁷ This was an early step of the operators' transformation from a *finish* professional to an intelligence collector, and the shift of the main effort from *finish* to *exploit* and *analyze*. Using intelligence, surveillance, and reconnaissance video capability, the task force was now finding and fixing its own targets. Over time, the task force got better at managing its growing intelligence, surveillance, and reconnaissance fleet, and centralizing and synchronizing these assets at the task force level to ensure that they were allocated according to priority, as opposed to equity, among the various teams.¹⁵⁸

In early 2004, however, the task force remained desperately short of required assets. After visiting Israel in February 2004, McChrystal

155 Flynn, interview by author.

156 Abizaid, Flynn, and McChrystal, interviews by author.

157 Former Task Force 16 subordinate commander, interview by author; and McChrystal, *My Share of the Task*, 138-139.

158 Former Task Force 16 intelligence officer, interview by author.

asked USSOCOM to bypass the slow acquisition process and buy ready-made Israeli platforms. The Air Force thwarted USSOCOM's attempt to buy them by promising to field more Predators quickly. But when the Air Force failed to follow through on its promise, USSOCOM bought aircraft and retrofitted them with intelligence, surveillance, and reconnaissance packages.¹⁵⁹ It purchased six commercial single-engine turboprop planes and gutted the insides of all amenities, stripping them down to metal frame to reduce weight. The lighter the aircraft, the more fuel it could carry and the longer it could fly and collect intelligence. Only essential communication and surveillance equipment was installed. The command soon dubbed this unorthodox fleet the "Confederate Air Force."¹⁶⁰

At the same time the task force was expanding its fleet, their sensor packages were improving. In the spring of 2004, a couple of operators briefed McChrystal and his staff about a technology they encountered that, if slightly modified, could prove game-changing by allowing the task force to capitalize on the enemy's increasing use of broadband Internet and cell phones. The product's potential was obvious, so McChrystal directed them to produce the capability. After several months of working with interagency partners and technology experts, their innovation was ready to field. To complement the technology, the operators also developed software that "revealed the relationships among the owners of captured equipment," which provided the task force with a vivid understanding of the enemy's organization. McChrystal described it as an "accelerant to F3EA that had a distinct impact on [the Zarqawi network], forcing them to modify how they communicated and making it much harder to hide in the expanses of Anbar."¹⁶¹

By the end of the war, the task force could effectively employ dozens of platforms outfitted with sophisticated sensor packages. The size and capability of this fleet could hardly be imagined at the start of the war.¹⁶²

¹⁵⁹ McChrystal, *My Share of the Task*, 157.

¹⁶⁰ Former Task Force 16 intelligence officer and TF 16 subordinate commander, interviews by author.

¹⁶¹ McChrystal, *My Share of the Task*, 157-158.

¹⁶² Ibid.

Expanding the Document and Media Exploitation Capability

At the onset of the task force's operations, a significant challenge was the need for adequate document and media exploitation capability. This was a recognized shortfall across all levels of the command as early as the summer of 2003, when the task force first started pulling computers and other electronic media from targets. The task force attempted various solutions, but none was particularly effective. Operators with computer skills and other personnel who were assigned to the subordinate task forces attempted to exploit the computers themselves. This process, however, was painstakingly slow. Even if operators pulled the data, interpreters were still needed to analyze the exploited material.

A more practical solution was to reach back to U.S.-based intelligence organizations that might have the exploitation capability. The first test came in the summer of 2003, when the task force sent a hand-carried hard drive back to the U.S. It took 32 days to get the information back. By that time, even if the information had been useful in illuminating the enemy network, it would have been unlikely to be actionable.¹⁶³

By the summer of 2004, media exploitation had only slightly progressed. When the task force captured one of Zarqawi's computers, it had an officer hand-carry it to the U.S. and turned it over to the National Security Agency (NSA), CIA, and National Media Exploitation Center (NMEC) for exploitation.¹⁶⁴ The JIATF held an "exploitation videoconference" 24 hours after the hard drive had been handed off to discuss the data that had been recovered. The NSA said they had exploited everything. When the JIATF director asked what they had, they said they did not know as they had only "exploited" it—they had uploaded its contents into a database. It was someone else's responsibility to analyze it. Likewise, the CIA confirmed pulling everything. When asked what was found, the CIA replied it could not share it even though the task force captured the computer and, thus, "owned" the intelligence. Finally, the NMEC stated it was still triaging the material but gave a good summary

¹⁶³ Former Task Force 16 subordinate commander, interview by author.

¹⁶⁴ Former JIATF director, interview by author.

of what they had already discovered. Over the ensuing days, the NMEC provided additional information on the computer's content.¹⁶⁵ Despite this small success, it would be another year before the NMEC and the task force established a more formal relationship.

The task force created the Joint Exploitation Team to better triage and exploit captured documents. The task force selected the name because its acronym, JET, implied the element was fast. In practice, the small element—it started as four reservists—could not possibly exploit the massive number of captured documents and media quickly. The task force hired Arabic linguists to help, but exponential improvement occurred only after the NMEC contributed a "powerhouse" capability that the task force could not generate internally.¹⁶⁶ McChrystal and Flynn met Roy Apseloff, who managed the NMEC, in the summer of 2005. They had just concluded a series of meetings at the CIA's headquarters when Apseloff tracked them down. By this time, the Task Force 714 network had expanded so that other organizations sought to become part of it. Apseloff understood the task force's mission and thought his center could help.¹⁶⁷ His small team of thirty to forty people could download the contents of locked or damaged computers; they could extract phone numbers, names, messages, and images; and they could process and store the data and link it to other information that would not only find individual targets but also illuminate large portions of the network.¹⁶⁸ Flynn stayed to talk with Apseloff and visited his center the following day.¹⁶⁹

Flynn immediately understood the center's capability and brought Apseloff to Balad so they could figure out how to best leverage it. At that time, the NMEC was not being used effectively. It was being used to exploit media captured in the opening stages of the war. Such media had little strategic and almost no tactical value. They were often called the "toilet bowl" because materials went in and never came out. In reality, "garbage bowl" would have been a more appropriate analogy

¹⁶⁵ Ibid.

¹⁶⁶ Flynn used the word "powerhouse" to describe their capability. Flynn, interview by author.

¹⁶⁷ Ibid.

¹⁶⁸ Priest and Arkin, *Top Secret America*, 244-245.

¹⁶⁹ Flynn, interview by author.

because only garbage was going in—old and irrelevant laptops—hence, only garbage could come out. The center’s analysts wrote intelligence reports, but since they were given insignificant media to exploit, their reports had little to no intelligence value. Flynn and Apseloff concluded that there was no need to deploy a bunch of the center’s analysts to Iraq. The task force needed only a small element to triage captured devices in Iraq. It could send the data from captured devices back to the NMEC’s headquarters in Washington.¹⁷⁰ As a result, the task force purchased huge satellite dishes and paid for the commercial satellite bandwidth required to send the large amount of data.¹⁷¹ Fortunately, the dot-com bust created a glut in the commercial satellite industry and there was excess capacity available for the task force to buy at a relative bargain. Still, the task force reportedly spent close to \$1 million a day for commercial bandwidth early in the war.¹⁷²

The NMEC’s impact on Task Force 714’s operations was profound and immediate. Recognizing the value of its efforts, the NMEC initiated 24/7 operations to bolster the task force’s mission. The exponential growth of document and media exploitation acted as a significant catalyst to the F3EA cycle, underscoring the strategic importance of the task force’s work.¹⁷³ Since the exploitation of captured battlefield materiel exceeded the capability of forward-deployed intelligence professionals, the task force created “exploitation videoconferences,” during which specialists in Washington could weigh in on materiel only minutes after capture to help with the immediate exploitation.¹⁷⁴

Building the Second JIATF

Although the war in Iraq was becoming international, Task Force 16 was not. Zarqawi’s supply lines of materiel, money, recruiters, handlers, volunteers, and fighters stretched from Iraq to Riyadh, Aleppo, Tunis,

¹⁷⁰ Ibid.

¹⁷¹ Former JIATF director and deputy director, interviews by author; and Priest and Arkin, *Top Secret America*, 244-245.

¹⁷² Priest and Arkin, *Top Secret America*, 246.

¹⁷³ Flynn, interview by author.

¹⁷⁴ Priest and Arkin, *Top Secret America*.

and Hamburg. Still, outside of Iraq, the task force did not have a good understanding of the enemy network—let alone an ability to affect it. To uncover and dismantle the outer rings of the al Qaeda network, the task force needed its own network to overlay al Qaeda's. This meant establishing liaison elements or small teams in other countries to gain a better understanding of the enemy network and to assist other agencies in leveraging local security forces to conduct operations.¹⁷⁵ Because the JIATF in Bagram was focused primarily on al Qaeda leaders in the Afghanistan-Pakistan region, McChrystal decided to create a second JIATF to reverse engineer the flow of foreign fighters into Iraq, a decision that would have strategic implications.¹⁷⁶

Zarqawi's network had grown more sophisticated and more powerful since the initial invasion. The steady increase of foreign fighters indicated that Zarqawi was perceived to be winning. Zarqawi possessed great charisma, and his reputation as a battlefield commander—often accompanying local groups on combat missions—contributed to his mystique. At the time, the task force estimated that only 100-150 foreign fighters were entering Iraq each month.¹⁷⁷ By comparison, the coalition estimated insurgents to number 12,000-20,000.¹⁷⁸ While small in number, foreign fighters were having a strategic effect. They accounted for 75 percent of all suicide bombers in Iraq, and since they had no stake in a stable Iraq, they were not afraid to hit infrastructure targets that made the situation worse.¹⁷⁹ It was a highly efficient network that could reach out to someone with no history of violence, pull him out of his daily life, smuggle him into Iraq, and convince him to put on an explosive vest or drive a car bomb in less than a year.¹⁸⁰

Thus, in December 2004, the task force established JIATF-West to focus on the foreign fighter problem and renamed the original JIATF as JIATF-East. Shortly before Christmas, the West leadership

¹⁷⁵ McChrystal, *My Share of the Task*, 168.

¹⁷⁶ Former JIATF directors, interviews by author.

¹⁷⁷ McChrystal, *My Share of the Task*, 170-171.

¹⁷⁸ John F. Burns, "Iraq's Ho Chi Minh Trail," *The New York Times*, June 5, 2005, accessed December 23, 2023, <https://www.nytimes.com/2005/06/05/weekinreview/iraqs-ho-chi-minh-trail.html>.

¹⁷⁹ Joseph Felter and Brian Fishman, *Al-Qa'ida's Foreign Fighters in Iraq: A First Look at the Sinjar Records* (West Point, NY: Combating Terrorism Center, January 2, 2007), 18, <https://ctc.westpoint.edu/al-qaidas-foreign-fighters-in-iraq-a-first-look-at-the-sinjar-records/>.

¹⁸⁰ *Ibid.*, 32-65; and McChrystal, *My Share of the Task*, 171-172.

moved into a trailer near the Task Force 16 headquarters in Balad, Iraq. Within weeks, analysts from the FBI, NSA, National Geospatial-Intelligence Agency, and Defense Intelligence Agency arrived. Like JIATF-East, it had its own weekly videoconference focusing primarily on the foreign fighter network. Quickly, the videoconference grew to include chiefs of station from across the Middle East and three dozen agencies in Washington.¹⁸¹ One of the last agencies to physically join the JIATF was the CIA. The CIA did not feel it was necessary to do so since it had its own liaison officer assigned to the task force. The task force, however, devised a strategy to get their support when the opportunity presented itself. In early 2005, John Negroponte, the Director of National Intelligence, visited JIATF-West and was impressed by the interagency collaboration that led to measurable results. Before the visit, the JIATF director placed a placard above each desk with the name of the organization to which each analyst belonged and placed a placard that read “CIA” above an empty desk. Upon seeing the empty desk, Negroponte asked why the CIA did not have anyone in the JIATF, to which the JIATF director diplomatically responded that the CIA was in the process of assigning someone. The strategy worked, as Negroponte directed the CIA station chief who was escorting him to put an analyst into the JIATF as soon as possible.¹⁸²

By the nature of its target set, JIATF-West was much more tactically focused than JIATF-East, and it routinely drove missions. As a result, many analysts liked to support JIATF-West because they could see the immediate fruits of their labor.¹⁸³ Shortly after its establishment, JIATF-West had its first operational success. Twice daily, the director had everyone provide an update about what they were working on, as an editor might do on a newspaper or newsroom floor. During one such briefing, an analyst reported that he had specific intelligence on a package that would be delivered to a suspected foreign fighter facilitator in a nearby country, and he had the recipient’s name and address.

181 Former JIATF director, interview by author.

182 Wall, interview by author.

183 Former JIATF director, interview by author.

The JIATF director asked him to share the name and address, but the analyst responded that he could not provide them due to certain sensitivities. Despite his efforts, the analyst's headquarters would not authorize the release of the intelligence. Frustrated, the director asked his staff if anyone had any other ideas. The FBI agent said he thought he could help and called his headquarters. Within twenty minutes, he had the individual's name and address. Since the intelligence was perishable, the director immediately passed the information to McChrystal, who personally called the station in the country where the package was being delivered. The station shared the intelligence with its liaison partners, who proceeded to capture what turned out to be a major foreign fighter facilitator.¹⁸⁴ This interagency coordination had an immediate and tangible effect on the enemy network, which would not have happened had it not been for the JIATF acting as a forcing function to share intelligence.

The manning of the JIATFs was a constant challenge. In many cases, the partnership was based on a handshake as opposed to a formal memorandum of agreement.¹⁸⁵ Eighteen to twenty different organizations provided the roughly two dozen individuals required to staff JIATF-West alone.¹⁸⁶ The partnership was based on the personal relationships that McChrystal had cultivated with the leaders of the various organizations during his routine visits back to Washington.¹⁸⁷ During these visits, McChrystal would personally thank his counterparts and recognize the hard work of their analysts on the videoconferences. He constantly reinforced that it was a team effort and highlighted the value of each analyst and their parent organization to the war effort. When that approach failed, however, he was not afraid to shame or strong-arm organizations for support.¹⁸⁸

The talent of the augmentees varied greatly and generally worsened over time. Unlike DoD, which can order its people to go anywhere, most organizations could ask only for volunteers to deploy to a

184 Ibid.

185 Former JIATF director and deputy directors, interviews by author.

186 Former JIATF director, interview by author.

187 Former JIATF directors and deputy director, interviews by author.

188 McChrystal, interview by author.

combat zone. Despite this challenge, the overall caliber of the augmentees was excellent. Surprisingly, some of the worst augmentees to the JIATF and Task Force 714 came from DoD.¹⁸⁹ The Army preferred to deploy units instead of individuals. When a forward-deployed headquarters required a specific capability that it lacked, it sent a request for forces through its headquarters to the Pentagon. After the Joint Staff validated the requirement, the Army's G-2 and/or G-3 would task a specific unit to source the requirement. Often, units chose to ignore the tasking. Sometimes units stalled indefinitely. Still, others would send someone who met only the minimum qualifications since they did not want to lose one of their more talented individuals. Yet some would send their best and brightest.¹⁹⁰

Flynn understood the process since he had been on the receiving end of taskings as a brigade commander prior to arriving in the task force. As a commander, he received more than 60 individual taskings and observed that some of his subordinate commanders did not actively support the requests. Thus, after moving to the task force, Flynn realized he had to take an active role to ensure that the Army filled critical requests in a timely manner with the right individuals. Flynn got a list of every intelligence brigade commander in the Army. After the Joint Staff had validated task force requests for intelligence personnel and assigned the tasking to a specific unit, Flynn would call the brigade commander, who was often a friend and a peer, to solicit their help. Since he had spent 23 years in the conventional intelligence community, he had a robust network to leverage. As a result, it was not uncommon for him to request a specific individual from a peer. When he encountered resistance, he figured out how to overcome it. In one case, U.S. Forces Korea said they would not support the tasking, so he called a key U.S. Forces Korea's intelligence officer, and she agreed to support it. He knew her personally, and she understood the valuable contribution that the specific non-commissioned officer could provide.¹⁹¹ In other cases, units would want a formal memorandum of agreement to justify the deployment to the

¹⁸⁹ Intelligence Officer in Task Force 714, interview by author.

¹⁹⁰ Flynn, interview by author.

¹⁹¹ Ibid.

commander. In these cases, Flynn would gladly craft and sign the agreement, even though the agreement had no real validity.¹⁹²

Since operations in Iraq lasted for many years, it became difficult for some organizations to staff the JIATFs. Some agencies experienced fusion-cell fatigue. Even those organizations that fully supported the mission had only a limited number of experts available to deploy.¹⁹³ After JIATF-West was established, it soon became the preferred location for many due to the immediate relevancy of their work.¹⁹⁴ By 2007, even the Army was experiencing difficulties fulfilling some requests. The Army had no one left to send; therefore, requests were filled by less qualified reservists from other services.¹⁹⁵ Most organizations, including most of the Army's, were unwilling or unable to conduct the rotation pattern that was the norm within McChrystal's special operations command. McChrystal rotated his people much more frequently than conventional units did. Individuals and units often conducted three- to six-month deployments instead of year-long deployments. However, there was no lull or loss in capability following these relatively frequent transitions, unlike the loss of understanding that often occurred when conventional units rotated. The task force maintained continuity because unit members frequently returned to the same positions, and units often redeployed to the same location multiple times. The same two or three individuals rotated into each individual liaison officer position or JIATF director or deputy director position. What also differed from conventional units was these individuals stayed engaged with the war effort after redeploying. They continued to attend the daily video-conferences. Many, especially analysts, continued to provide the same support they did when deployed; the only difference was that they provided it from a different location. Accordingly, nearly everyone within McChrystal's stateside command was deployed, recently deployed, or would soon be deploying. A vast majority of the command spent less than six months at home before redeploying.¹⁹⁶

192 Ibid.

193 Former JIATF deputy director, interview by author.

194 Former JIATF director, interview by author.

195 Former JIATF deputy director, interview by author.

196 From multiple interviews.

Despite the manning challenge, JIATF-West was a resounding success, and the task force would not have been as effective without it. The JIATFs worked because their people lived together, sat together, and worked together for the three to six months that each analyst was deployed. The close proximity to the finish force and the importance of the mission allowed them to break down the cultural barriers between the various organizations. The military members of the JIATF—including the director and deputy director—all wore civilian clothes to make the nonmilitary members feel an equal part of the team. They also used only names with one another instead of rank. This provided a level of trust that allowed them to overcome the institutional constraints accompanying the sharing of intelligence.¹⁹⁷ Each individual in the JIATF could see the relevance of their work, and how it led to the immediate capture of an individual. To further drive home the importance of what they were doing, at least one JIATF deputy would take their members to see the assault force depart on helicopters before an operation and had them attend a memorial service for a fallen member.¹⁹⁸

JIATF-West held its weekly videoconference, which hit a broad audience similar to the task force's operations and intelligence videoconference. Many analysts who had redeployed from a JIATF rotation would attend the weekly videoconferences and continue supporting the effort from their headquarters in Washington. It was not uncommon for senior members of the intelligence community to attend, especially if the videoconference covered a topic or target of particular interest to them. Each videoconference typically lasted sixty minutes and had a specific focus that varied from an overview of the larger al Qaeda network to the focus on a specific foreign fighter facilitation network or individual. This improved the collective understanding, as each agency could contribute its piece to the larger puzzle to help connect the dots. They also helped identify gaps so agencies could focus their collection efforts on closing them based on a consensual prioritized list.

Regardless of the subject, the forum was similar. The director or his deputy emceed what resembled a series of short news stories,

197 Former JIATF director, interview by author.

198 Former JIATF deputy director, interview by author.

which allowed for discussion and questions by any member of the network after each short presentation. Presentations were kept short to keep the audience from losing its attention.¹⁹⁹ If a senior member of a partner organization was attending, McChrystal would take the opportunity to publicly thank them for being a valued member of the team.²⁰⁰ Eventually, McChrystal created a monthly stakeholder conference with the directors of the six major partner agencies.²⁰¹ When seniors attended the JIATF videoconferences, he used it as an opportunity to overcome bureaucratic hurdles from the participant's respective organization that negatively impacted the task force's effort.²⁰² The individual who was providing the briefing sometimes mattered more than the subject, accordingly, the JIATF directors spent significant time and effort planning each videoconference.²⁰³ If an agency's director or deputy director planned to attend, the JIATF director would ensure that the agency's analyst would present that day. Additionally, McChrystal and his staff knew that some seniors responded better to certain analysts and would have those analysts presenting if they knew the seniors were attending.²⁰⁴

Since the primary function of JIATF-West was to reverse engineer the flow of foreign fighters into Iraq, Task Force 714 quickly realized that the JIATF needed to have its own dedicated interrogation capability. Without a dedicated team, they knew the interrogation team would focus interrogations on producing actionable intelligence for targets in Iraq even though they recognized the need to have some portion dedicated to backtracking the flow of foreign fighters, gaining a better understanding of the problem, and learning how to stop it. Thus, McChrystal dedicated a small team of interrogators to do nothing but interview foreigners who were captured in Iraq. Casey ensured that the interrogators were notified whenever a coalition unit captured a foreign fighter. JIATF-West also facilitated the release of interrogation

199 Wall, interview by author; and McChrystal, *My Share of the Task*, 162-166.

200 McChrystal, interview by author.

201 Ibid.

202 Wall, interview by author.

203 Wall and former JIATF director, interviews by author.

204 Ibid.

transcripts of foreign fighters to their home nations so that the information could be exploited.²⁰⁵ Therefore, the creation of JIATF-West led to its own dedicated interrogation capability.

Developing a Campaign

After McChrystal had grown his internal capability and had expanded his external network, he was finally able to develop and implement a proper campaign to degrade al Qaeda in Iraq. When McChrystal first took command, he found Lieutenant General Ricardo Sanchez's coalition headquarters too understaffed and overwhelmed to synchronize a campaign. At that time, McChrystal's command was operating as disparate elements; consequently, he had to get his own command in order before attempting to wage a combined campaign with coalition forces. He finally synchronized the effort in June 2004, at the same time that General George Casey and his larger Multi-National Force – Iraq headquarters replaced Sanchez and his smaller Combined Joint Task Force 7 headquarters.

From this point forward, McChrystal and his staff met with Casey and his staff on a weekly basis to discuss the insurgency. Despite Zarqawi's effectiveness, much of the Multi-National Force – Iraq staff did not view al Qaeda in Iraq as being central to the insurgency.²⁰⁶ By May 2005, however, Casey became convinced that the foreign fighter flow was a strategic vulnerability after seeing more than sixty suicide bombings in May alone. He decided the coalition needed to conduct a major operation along Iraq's western border to shut down the foreign fighter ratlines. The main effort for the operation was McMaster's 3rd Armored Cavalry Regiment in Tal Afar. McChrystal surged additional forces from the U.S. and repositioned some of his forces from Afghanistan to support the operation, nearly doubling his finish presence in Iraq. Prior to this point, McChrystal described Task Force 714 as "executing missions," now it was finally "waging campaigns."²⁰⁷

²⁰⁵ Former JIATF deputy director, interview by author.

²⁰⁶ McChrystal, *My Share of the Task*, 175.

²⁰⁷ Ibid., 180-1.

In July 2005, before the campaign started, the insurgents conducted 51 suicide attacks that killed 277 people. By the end of summer, the task force was finally pressuring al Qaeda in Iraq. The task force became so effective that many al Qaeda in Iraq leaders, even mid-level ones, started sleeping with suicide vests or barricading themselves in basements and firing through the floorboards when the task force entered. Not since Fallujah had al Qaeda in Iraq attempted to hold terrain and defend houses in this manner, and it showed their desperation.²⁰⁸ After the operation, there was a marked drop in suicide attacks. In September, insurgents conducted 40 suicide attacks that killed 43; in November, 11 attacks killed 270; and in December, ten attacks killed 97. This push in the west likely contributed to the Anbar Awakening as well.²⁰⁹

The Results

By the end of McChrystal's first year in command, the task force in Iraq had grown from disparate strike teams into a budding network. Task Force 714 had a common strategy; it had developed the F3EA targeting cycle; it had expanded its liaison network throughout Iraq and in critical agencies in Washington; it expanded videoconferences to bring the network together; it established two JIATFs; it had improved its interrogation capability; it expanded its intelligence, surveillance, and reconnaissance capability; and it expanded its document and media exploitation capability. Yet despite these efforts, the task force conducted only 18 operations in Iraq in August 2004, little more than the ten it conducted in April that same year.²¹⁰ At the same time, bin Laden had formally admitted Zarqawi's *Tawhid wal-Jihad* into al Qaeda, and insurgent attacks and coalition casualties continued to rise.²¹¹ McChrystal had built an interagency network, but it needed time to mature.

208 Ibid., 184.

209 Ibid., 186.

210 Ibid., 145.

211 U.S. Department of Defense, *Measuring Stability and Security in Iraq*, 27; Anthony H. Cordesman et al., *IED Metrics for Iraq*; and Defense Casualty Analysis System, "U.S. Military Casualties."

Over the winter of 2004-2005, the task force's main effort shifted from finish to exploit and analyze. This was a fundamentally new concept, and the new doctrine produced groundbreaking results. Many of the task force's leaders recognized that the exploit and analyze phases were the main effort back in 2004. Still, it took time to develop the exploit and analyze capabilities so that they could function as the main effort. It also took time for the organization to make this cultural shift, a period marked by challenges that the task force overcame with resilience and adaptability. When operators realized that their role was not limited to the finish phase, F3EA became an actual operations-intelligence cycle.²¹² By the summer of 2005, operators had become involved in all phases of the targeting cycle. They watched intelligence, surveillance, and reconnaissance videos; took notes; directed drones; read interrogation and other intelligence reports; and mapped the enemy network on dry erase boards.²¹³ By understanding the network and the intelligence picture, they accelerated the F3EA process. Operators asked more pointed questions on targets, which sometimes led to immediate finish operations, further accelerating the F3EA cycle. Although some analysts viewed this as operators encroaching into their territory, it created a more robust and innovative team. The operators challenged the analysts, which motivated the analysts to improve.²¹⁴

Despite the shortfall of adequate interrogators, by late 2005, Task Force 714 had what Flynn called "industrial-scale, capture-interrogation-exploitation operations." Just as the task force massed intelligence, surveillance, and reconnaissance assets to provide an unblinking eye, the extended task force network massed exploitation capabilities to exploit detainees and find subsequent targets in record time. As a result, when interrogators entered the booth to interrogate a detainee for the first time, they had a wealth of knowledge, which made them more effective and efficient at pulling information. Analysts were paired with interrogators in teams that worked together from start to finish for each detainee.²¹⁵ The assault leader who captured the detainee often

212 Wall and former JIATF director, interviews by author.

213 Former Task Force 16 subordinate commander, interview by author.

214 Former JIATF director, interview by author.

215 Former Task Force 16 subordinate commander and JIATF deputy director, interviews by author.

joined the interrogation team. He provided detailed sketches showing where detainees had been captured and where documents and media had been recovered. This was necessary to determine what equipment belonged to whom and help identify the most significant members captured on target. While the assault leader was debriefing the interrogation team, other members of the network were exploiting the captured documents and media.²¹⁶

Hitting on All Cylinders: The Killing of Zarqawi (2006)

By the end of 2005, McChrystal had finished building the network, and nearly every component played a role in supporting the task force when it eliminated Zarqawi. The first lead came on January 6, 2006. One of the task force's liaison officers reported that Iraqi forces had captured Abu Zar al-Ghifari, a high-value individual on Task Force 714's target list. The Iraqis subsequently transferred Abu Zar to the task force screening facility, where its expanded interrogation capability paid off. During his tactical interrogation, Abu Zar identified a group of buildings in Yusufiyah—a rural area in Baghdad's southwest outskirts—that al Qaeda in Iraq used for planning and staging and that Abu Ayyub al-Masri used for shelter. Al-Masri's relationship with Zarqawi dates back to 1999 when they met in Afghanistan. Al-Masri was now second in command of al Qaeda in Iraq and the emir of its foreign fighter network. The group of buildings that Abu Zar identified was labeled "named area of interest 152," and the task force immediately redirected intelligence, surveillance, and reconnaissance assets to observe it.²¹⁷

For the next eight weeks, Task Force 16's intelligence analyst directed space intelligence, surveillance, and reconnaissance assets to watch the area. The patient and robust use of the assets paid off on April 8, 2006, when the analyst observed a convoy of vehicles approach the buildings. The task force immediately loaded helicopters for a daytime raid. As the team was flying to the target, a car

216 Flynn, interview by author; and Priest and Arkin, *Top Secret America*, 248.

217 McChrystal, *My Share of the Task*, 204.

departed the target area. One surveillance platform remained on the buildings while a second followed the car. Having multiple platforms dedicated to a single target allowed the task force to follow the vehicle and observe the buildings. When the task force hit the target, a firefight ensued that resulted in the death of all five insurgents. After eliminating the threat, the team conducted a thorough sensitive site exploitation. From there, the assault force launched to the location where the vehicle had stopped. They met little resistance upon hitting the target and detained the 12 men they found.²¹⁸

At first, the interrogations of the 12 individuals produced nothing of value. It was not until the fifty-first interrogation that the task force gained its first lead. Had it not been for its new detention facility and additional capacity, the task force would never have been able to hold the group for that length of time, nor would it have had the ability to conduct the number of interview sessions required to discover this critical intelligence. The detainee, Mubassir, was the group's only member who had drawn the interrogators' suspicion. This allowed the task force to keep him in custody well after the others had been processed to other facilities. Mubassir provided information that Abd al-Rahman, Zarqawi's spiritual advisor, lived in Baghdad and met with Zarqawi every seven to ten days.²¹⁹ After reading the tactical interrogation report that was sent to him directly and posted on the "portal," the Task Force 16 intelligence analyst who was working the target set directed an intelligence, surveillance, and reconnaissance platform to fly to the address that Mubassir had provided. Because the task force controlled the assets, the analysts did not need to go through multiple layers of bureaucracy to request a change in its tasking. Nor did the analyst have to request a change through his own higher headquarters. By this time, the surveillance fleet had grown to the point that the analyst controlled several assets at his level.²²⁰

When the surveillance platform arrived, the analyst was surprised to find the house was located in a Shia area. A few minutes later, a

218 Ibid., 206.

219 Ibid., 204-216.

220 Former Task Force 16 intelligence analyst, interview by author; and McChrystal, *My Share of the Task*, 216.

silver sedan stopped in front of the house. The driver entered the house and soon exited with a second individual. They both entered the car and then drove away. The analyst directed the unmanned aerial vehicle operator to stay on the car and followed it to another house, one of five locations the task force believed was part of al-Masri's courier network. What they observed on the video matched the information from Mubassir's tactical interrogation report. If the individual they observed was al-Rahman, he was their only lead to Zarqawi. If their intelligence was correct, he would meet with Zarqawi within the next 7 to 10 days. Over the next few days, the task force dedicated most of its surveillance assets to watching the two targets. At the same time, the interrogators continued interviewing Mubassir, who eventually identified 14 sites in Baghdad that were related to Rahman's movement routine.²²¹

The task force dedicated 70 percent of its intelligence, surveillance, and reconnaissance fleet to developing al-Rahman's pattern of life, which was required to identify signs that he was meeting Zarqawi. The tradeoff, however, was that the number of attacks the task force conducted dropped significantly as the surveillance assets critical to finding and fixing new targets were focused on a single target. McChrystal grew concerned about the decrease in the task force's operational tempo. He wanted to keep constant pressure on the enemy network, but he also understood the necessity of focusing the collection effort on the only lead they had to Zarqawi. The decision to focus on Rahman was controversial and heavily debated throughout the command. Some pushed to detain Rahman for questioning, believing he would provide information on Zarqawi's location. Others, however, believed that he was unlikely to talk, and even if he did, his capture would spook Zarqawi and cause him to flee.²²²

As part of the normal rotation of forces, Tom took over as the commander of the assault forces in Iraq on June 1. He had previously served as a JIATF director and was firmly in the camp that believed it was best to continue to follow Rahman in the hopes that he would

221 Former Task Force 16 intelligence analyst, interview by author; and McChrystal, *My Share of the Task*, 216-219.

222 Former Task Force 16 intelligence analyst, interview by author; and McChrystal, *My Share of the Task*, 219-221.

lead them to Zarqawi.²²³ On June 6, the 19th day of the heavy surveillance coverage, moving trucks showed up at Rahman's house. When watching the video feed the following day, the intelligence analyst and Tom noticed more strange behavior. As usual, Rahman entered a silver sedan at his brother-in-law's house, but instead of driving to his house as usual, he circled the neighborhood and returned to his brother-in-law's house. He was driving as if he was worried about being followed. From there, things really diverged from his normal pattern of life that they had observed over the past 19 days. When the vehicle departed the second time, it took a highway out of Baghdad and into Diyala Province. While driving along the six-lane highway, the vehicle pulled over to the side road and stopped. Rahman exited, and then the vehicle drove away. Rahman started walking backward against traffic and then put his cell phone to his ear. A few seconds later, a blue bongo truck²²⁴ stopped, picked him up, and accelerated away.²²⁵

One reconnaissance platform remained with the silver sedan, while a second followed the bongo truck. As the truck departed Baghdad, Tom woke his squadron as he anticipated they might have to launch at any moment. An hour later, the truck arrived in Baqubah, the capital city of Diyala Province. It pulled into a parking area in front of what appeared to be a restaurant in a commercial part of town. Rahman exited the truck and entered the building. A minute later, a white pickup truck with a red stripe pulled up and parked hood to hood with the bongo truck. A man exited the pickup truck and entered the building. Minutes later, when two men exited the building, the intelligence analyst, with remarkable precision, quickly identified one of them as Rahman, even though he had changed his clothes. This vividly illustrates the importance of having dedicated surveillance assets. After watching him for 19 days, the analyst could identify the target solely by his gait. Rahman entered the pickup truck with the other individual, and they drove away.²²⁶

By now, the squadron had nine surveillance platforms following

223 Former Task Force 16 subordinate commander, interview by author.

224 A bongo truck looks resembles an old Volkswagen minibus, with the engine typically under the cab floor.

225 Former Task Force 16 subordinate commander, interview by author; and McChrystal, *My Share of the Task*, 223-224.

226 Former Task Force 16 subordinate commander, interview by author; and McChrystal, *My Share of the Task*, 224-226.

four targets: the silver sedan in Baghdad, the building in Baqubah, the blue bongo parked there, and the white pickup driving out of town.²²⁷ This demonstrated the need for multiple reconnaissance platforms. Although it was resource-intensive, it was arguably more efficient to mass platforms for a short period of time than employing fewer platforms over a longer period. With one or two platforms, if the squadron followed the wrong person or vehicle, it would be weeks before they would have another opportunity to fix Zarqawi.

The pickup truck drove towards Hibhib, a small town five miles northwest of Baqubah. Outside Hibhib, the truck turned onto a frontage road and stopped halfway up the driveway of a house. Rahman exited the vehicle and entered the house. Tom had no way of knowing if Rahman was meeting Zarqawi, but he decided they were, given how unique Rahman's method of travel had been. Tom alerted the force to launch but decided it was best to bomb the house as opposed to conducting a daytime raid. The task force had hit hundreds of targets over the past two years and assessed a daytime raid too risky. There were too many routes out, and Zarqawi had narrowly avoided capture too many times already.²²⁸

A little more than an hour after Rahman entered, F-16s dropped two 500-pound bombs on the house. The assault force was 18 minutes away when the first bomb fell. By the time it arrived, Iraqi police were already on the scene, and they had loaded a single person into an ambulance. The police claimed not to know who he was, yet he was the only person they were evacuating from the house. The squadron assessed it to be Zarqawi, who was barely alive. Despite attempts to resuscitate him, he died within the hour. After securing Zarqawi, the task force launched on the other targets they had identified over the past three weeks. Later that night, the FBI agent assigned to the JIATF confirmed through a fingerprint match that they had indeed killed Zarqawi.²²⁹

The death of Zarqawi demonstrated the effectiveness of the F3EA cycle and the network that supported it. It had all started with

227 Ibid.

228 Former Task Force 16 subordinate commander, interview by author; and Ibid., 226-234.

229 Ibid.

information from one of McChrystal's many liaison officers. Throughout the multi-week operation, the improved screening facility and its interrogator and analyst teams pulled valuable intelligence from detainees and disseminated their reports on the portal for everyone to analyze. The growing intelligence, surveillance, and reconnaissance fleet was critical in determining Rahman's pattern of life. In total, the task force had dedicated more than 600 intelligence, surveillance, and reconnaissance hours to fixing Zarqawi during the operation.²³⁰ Finally, the operators had learned patience and understood the role that intelligence played in finding and fixing their top priority targets. Years earlier, they might have grown impatient with the low operational tempo and launched on Rahman prematurely, blowing the opportunity to fix Zarqawi. By this time, they were operating more like the law enforcement community and investing more time in gathering intelligence and developing targets than they did in the raid itself. From start to finish, it looked more like an operation to take down an organized crime ring than a military raid. After the operation, it was one of the task force's interagency partners who confirmed they had indeed killed Zarqawi.

Analysis

Just like the previous cases, the Zarqawi operation vividly illustrates the pivotal role of senior military leaders in all three phases of the innovation process, underscoring its strategic importance.

Formulation

The innovative idea—the F3EA cycle and its supporting network—was developed in response to a performance gap: the inability to degrade al Qaeda in Iraq, which was growing stronger. Knowledge accumulation occurred slowly, and even years into the war, serious disagreement

²³⁰ Ibid.

remained within the U.S. military as to how significant a threat al Qaeda in Iraq posed—hence, the magnitude of the performance gap. The gap arose due to a change in the enemy's tactics and capability. Although the terrorist organization was relatively small, Zarqawi's suicide bombing campaign was particularly effective.

In another parallel with the previous cases, this case finds that the innovation was heavily influenced by an individual's experience and position within the larger organization. McChrystal's peers in Iraq failed to recognize the Zarqawi threat as it emerged. As division commanders, Odierno and Swannack mistakenly believed the insurgency would wither after coalition forces captured Saddam Hussein.²³¹ Likewise, Sanchez and his understaffed command were simply overwhelmed and too busy trying to get established; therefore, they could not understand an emerging threat or innovate in response. Even as late as November 2004, most of the Multi-National Force – Iraq staff did not believe that al Qaeda in Iraq was central to the insurgency. Conventional forces had little understanding of terrorist organizations, and when an al Qaeda target appeared in their area of operations, they usually passed the target over to the task force. Thus, their knowledge of and ability to gain knowledge of terrorist organizations remained limited.²³² Accordingly, it is unsurprising that the innovation was developed by Task Force 714. McChrystal's task force had been focused on the al Qaeda network since 9/11—and searching for targets for many years earlier—so they had years of experience with unconventional threats. They were the only element within the U.S. military with the domain-specific expertise to develop an innovative solution to the problem.

Many task force members recognized the same gap, but it was Miller who introduced the F3EA targeting cycle as the solution. His technical expertise was honed through his study of counterinsurgency theory and nearly 20 years in special operations, including experience

231 U.S. Department of Defense, "4th Infantry Division Commanding General's Briefing from Iraq," Defense.gov, January 22, 2004, accessed March 3, 2013, <http://www.defense.gov/transcripts/transcript.aspx?transcriptid=1432> (source is no longer posted on the site); and U.S. Department of Defense, "82nd Airborne Division Commanding General's Briefing from Iraq," Defense.gov, January 6, 2004, accessed March 3, 2013, <http://www.defense.gov/transcripts/transcript.aspx?transcriptid=1381> (source is no longer posted on the site).

232 Former Task Force 16 officer and Task Force 714 Field Artillery officer, interviews by author.

in manhunting and leading the task force's Advance Force Operations efforts. Having read Trinquier's *Modern Warfare*, he also recognized that his unit was not the first to realize this. Like Petraeus, he understood the importance of communicating new ideas. Previously, Miller had coined the terms "Advance Force Operations" and "Operational Preparation of the Battlespace" to provide language for what his command was doing. Coining a term helped communicate these new concepts to people inside and outside of the military. Miller's success in this endeavor led him to give the targeting cycle a name.²³³

Likewise, McChrystal was not the first to realize that his task force was not fighting a unified campaign, but he was the one who came up with a unique solution to the problem. His previous experiences shaped his solution. He also had the advantage of coming in with a fresh set of eyes, having arrived from the Pentagon, which allowed him to see things that others within the command might have overlooked. During his initial overseas command visit in October 2003, he recognized that the teams and task force had a clear mission but lacked a common strategy and real-time links between the teams and the headquarters. Others recognized the flaw, but they had witnessed immense progress since 9/11. They were less critical because their reference point was different. McChrystal also realized that his task force was disconnected with conventional forces. Instead of looking at how far they had come, he looked at how far they still had to go. McChrystal also understood that the military lacked the intelligence, capabilities, and authorities to defeat al Qaeda on its own. Two years after 9/11, there was no one running America's war on terror. Together, these experiences led McChrystal to his innovative solution of creating a "network to defeat a network." Finally, by being the unit's commander, he could leverage outside organizations that lower-level commanders simply could not.

While McChrystal may have thought up the innovative idea, he had to rely on others within his command to help develop the concept. He possessed the necessary skills and employed the necessary

233 Former Task Force 714 field artillery officer, interview by author.

leadership tactics to facilitate innovation. His time in the Ranger Regiment and on the Joint Staff provided him with exceptional planning ability—the Rangers are renowned for their planning. Earlier assignments within the command and the Ranger Regiment provided him with the creative problem-solving skills required to lead innovation. Members of his command were problem solvers and approached problems fundamentally different than the rest of the Army. In the culture of his unit, members felt that nothing was impossible, and they never took no for an answer.²³⁴ When most units attempt to solve a problem, they typically constrain themselves to the assets they possess at that time. By contrast, members of his command rarely felt constrained to existing assets; they would buy, borrow, or build whatever it took to solve their problem.²³⁵

McChrystal also possessed exceptional interpersonal skills, essential for building a diverse team to operate the F3EA cycle effectively. He worked hard to maintain relationships with the conventional units and interagency partners that he needed to combat al Qaeda in Iraq. He made it a point to thank his interagency and Army partners in public forums and ensured they shared in the credit for any of his task force's successes. Everyone within the command understood his guidance that "in most cases, the long-term relationship was more important than the immediate operation."²³⁶ A senior official from a partner agency organization once remarked, "We adore General McChrystal."²³⁷ Perhaps his weakest trait, at least when first arriving at the command, was technical expertise in the realm of manhunting. He recognized that this was a weakness, but he compensated for it by leveraging other strengths: he brought the right people, like Flynn, into the organization, and he learned quickly.

While the idea of the network was his, McChrystal recognized that much of the work required to make his vision a reality would come from his subordinates; hence, he prioritized facilitating their innovative efforts. Perhaps no quote is more revealing than the following:

234 Former Task Force 714 chief of staff, interview by author.

235 McChrystal, interview by author.

236 Ibid.

237 Remark comes from a senior intelligence agency official.

“More than once, I encountered equipment we’d purchased or tactics we’d adopted that made me worry I was negligent in oversight. But I thought of the alternative—corseted centralization—and that squelched my inclination to grab control.”²³⁸ McChrystal clearly understood that his actions could impede innovation, and while the previous quote might lead one to believe he might have provided too little oversight, that was not the case. He employed several measures that successfully facilitated innovation: he encouraged collaboration, provided necessary resources, balanced freedom and oversight, and helped bring the right people to the organization.

McChrystal provided the critical resources that were required for innovation. He secured funding, intellectual capital, and other resources needed to innovate by expanding partnerships with other agencies and by successfully leveraging his superiors for badly needed support. He knew the USCENTCOM commander, the USSOCOM commander, the Vice Chief of Staff of the Army, and the Chief of Staff of the Army personally. To illustrate how critical this external support was, during the twice-daily tactical screening facility changeover brief, it was not uncommon for McChrystal or his chief of staff to ask how many of the dozens of interrogators and analysts currently assigned to the screening facility were part of his stateside command. Typically, the answer was three: the commander, deputy, and senior analyst. Everyone else was an augmentee.

McChrystal leveraged the 2006 Quadrennial Defense Review to expand his command, identifying specific areas for growth.²³⁹ When the Air Force failed to provide intelligence, surveillance, and reconnaissance aircraft, McChrystal convinced the USSOCOM commander to buy six aircraft for him. When the command needed Stryker vehicles, the Army prioritized his task force ahead of other units.²⁴⁰ When the NSA tried to prevent the command from using specific signal intelligence capabilities, he successfully countered their efforts.²⁴¹

²³⁸ McChrystal, *My Share of the Task*, 155.

²³⁹ Former Task Force 714 chief of staff, interview by author.

²⁴⁰ Ibid.

²⁴¹ Former Task Force 16 subordinate commander, interview by author.

McChrystal understood the need to cultivate the experimental culture that already existed within his special operations command. He tried to set a climate in which entrepreneurship and free thinking were prized. He wrote that he “leaned hard on complacency, and did not punish ideas that failed.”²⁴² He “knew the creative solutions to eliminate blinks would originate from those closest to the fight,” and although most of his task force members were “self-starters by nature,” he needed them to “operate without waiting for detailed instructions or approvals.”²⁴³ Ultimately, he found this to be the case and discovered that “rarely did any one thing transform our capacity, and few ideas could be traced back to one person.”²⁴⁴

The daily videoconferences allowed McChrystal to focus on innovation efforts, provide ideational support and oversight, and encourage involvement from outside agencies to support those efforts. Finally, he helped bring in the right people to ensure the necessary intellectual and organizational diversity required for innovation. The JIATF was an alphabet soup of interagency partners, and McChrystal hand-selected leaders like Flynn for critical positions. Ultimately, McChrystal facilitated creative efforts by forcing collaboration; by providing support, intellectual stimulation, the right balance of freedom and oversight, and output expectations and feedback; and by facilitating an experimental culture within the organization.

Adoption

McChrystal, as the senior military leader, had the authority to adopt the innovation, but he could only adopt it partially. He could unilaterally adopt the F3EA targeting cycle, but to make it work effectively, he relied on other intelligence community members—both inside and outside of DoD—to adopt the innovation by contributing to his network. To create a network capable of executing the F3EA targeting

²⁴² McChrystal, *My Share of the Task*, 155.

²⁴³ Ibid.

²⁴⁴ Ibid.

cycle, McChrystal employed an effective strategy to build the necessary interagency coalition. He engaged directly with senior leaders of partner agencies, a horizontal coalition-building approach that was key to his success.

As with the previous cases, this case finds that a leader's efforts during the adoption phase are primarily directed outside their organization. Unlike the earlier cases, however, in which the leaders had to gain the support of civilian policymakers to implement the innovation, McChrystal's efforts were directed primarily at interagency partners. He had little interaction with elected or appointed officials other than when Congressional delegations conducted periodic visits overseas. His position can explain part of this. He was "only" a two-star general; therefore, his superiors were the ones who interacted with policymakers on a more frequent basis, and McChrystal had an excellent working relationship with each of them that dated back many years.²⁴⁵ They fully supported McChrystal's efforts; hence, he did not have to develop a plan to fight for acceptance within DoD.

Recognizing that formal interagency agreements often take too long to process, McChrystal started building the network ad hoc, with agreements based primarily on handshakes. His strategy mirrored Cody's: build first and institutionalize later. McChrystal began by bolstering his internal capability—pushing communications packages and revamping and expanding the videoconferences—to get his command in order. As his internal network matured, he seeded critical partner agencies with liaison officers from his command. McChrystal understood the circular problem he faced. He needed to demonstrate value before anyone would commit their resources, but he needed their resources for the network to become more effective. McChrystal was able to garner support from crucial members of the intelligence community at the early stages, which in turn encouraged others—like the National Media Exploitation Center—to join on their own.²⁴⁶

²⁴⁵ McChrystal's leadership and strategic acumen were so exceptional that he was promoted to a three-star general on February 16, 2006. This promotion serves as a testament to the successful adoption of the F3EA targeting cycle under his leadership, further solidifying his position as a strategic leader.

²⁴⁶ McChrystal, interview by author.

His understanding of the importance of credibility was profound. McChrystal described it as a function of “proven competence,” “integrity,” and “relationships.”²⁴⁷ As the network expanded, he understood the need to develop deliberately. He knew that it was counterproductive to expand too quickly. Interagency partners would push back if he moved too fast, fearing the military would get too aggressive. He also carefully selected the individuals who would be the first to work with any new partner—selecting only his strongest to start the partnership.²⁴⁸

Civilian policymakers played only a limited and indirect role in developing the F3EA targeting cycle and its supporting network. Their role was primarily authorizing and funding the growth of special operations forces, which they supported enthusiastically. The 2006 Quadrennial Defense Review captured some of this remarkable growth. It documented “impressive gains in [special operations forces] capabilities since 2001” that included an “81% increase in the baseline budget” for special operations forces and supplemental appropriations of \$5.5 billion to improve dedicated special operations intelligence, and intelligence, surveillance, and reconnaissance, among other capabilities. Despite these gains, the review recommended the department further increase special operations forces “capability and capacity to conduct low-visibility, persistent presence missions, and a global unconventional warfare campaign,” and to establish a special operations forces uncrewed “aerial vehicle squadron to provide organic capabilities to locate and target enemy capabilities in denied or contested areas.”²⁴⁹ Thus, as with the previous cases, this case finds that civilian policymakers played an important role in authorizing significant increases. However, they can best be described as steadfast supporters of the military’s innovative efforts instead of pushing a reluctant military to innovate.

247 McChrystal, *My Share of the Task*, 142.

248 Former Task Force 16 officer, interview by author.

249 U.S. Department of Defense, *Quadrennial Defense Review Report*, 44–45.

Implementation

McChrystal's previous experiences as a commander provided him with years of experience dealing with the principal-agent problem. Years earlier, as a Ranger Battalion commander, he had identified the need to increase the physical confidence of Rangers in hand-to-hand combat. After a year of "dead ends"—attempting to use existing Army manuals or hiring outside experts or college wrestling coaches—his unit still struggled. McChrystal was unsuccessful until he made his platoon sergeants attend a two-week course at Fort Lewis run by two world-renowned martial artists. He described the "breakthrough" from sending the right people to the training. The specific fighting technique did not matter. What mattered most was having the platoon sergeants, the leaders who controlled the platoon's training and heavily influenced the platoon's culture, attend the training. Change succeeded only when the platoon's leadership incorporated combatives into the platoon's training, and they could not do this if they lacked confidence and mastery in combatives. After finishing the course, the platoon sergeants became "zealots." Within months, combatives had infused the battalion's culture.²⁵⁰ McChrystal learned from this and other experiences that he had to employ the right leadership tactics to ensure the effective implementation of change.

Years of experience led McChrystal to believe that successfully implementing his network concept would be difficult. It required overcoming the principal-agent problem within his command and gaining other agencies' support. Surprisingly, he found the internal resistance was "much less than [he] expected."²⁵¹ Despite his outstanding reputation prior to taking command of Task Force 714, McChrystal was concerned about whether some of his subordinate task forces would embrace him as their commander. Creating a network could be a brilliant strategy, but if his subordinates failed to embrace it, it would be dead in the water. He knew how intelligent his subordinates were and that simply trying to convince them something was a good

²⁵⁰ McChrystal, *My Share of the Task*, 63.

²⁵¹ McChrystal, interview by author.

idea would not work. He knew that he needed to demonstrate it. For example, the teams wanted a communications package to push and pull intelligence. They were, however, not so keen on being forced to attend daily videoconferences with their boss. They would embrace the videoconferences only if they saw value in attending them.²⁵² Ultimately, the teams saw the value. It helped them understand how they contributed to the larger mission, and it empowered them because they understood the commander's priorities.

Realizing he could not do it all himself, McChrystal brought in trusted agents, such as Flynn as his intelligence officer and Colonel Kurt Fuller as his operations officer, to help him implement the necessary changes. Flynn pushed analysts from the Task Force 714 headquarters to the subordinate task forces. Surprisingly, this was met with resistance by some who questioned Flynn on why he was sending "spies" to their location. This attitude, however, was short-lived because the teams quickly saw the analysts' value. As the task force gained additional capacity, it continued to push assets down to the teams. Before long, the subordinate elements asked for more of whatever the headquarters had provided.²⁵³ During one of McChrystal's visits, he jokingly asked one particularly outspoken commander, "Hey Charlie, it's great to see you again. I can't wait for you to tell me how poorly I'm doing my job and what I need to provide you to do it better."²⁵⁴ McChrystal was lightheartedly acknowledging that there was no way he could quench his subordinates' insatiable appetite for more resources. Demonstrating value was the quickest way to overcome their resistance. Likewise, teams were reluctant to turn over their detainees to the screening facility until it demonstrated capability. Once it did, the teams could not get them there fast enough.

To ensure his plan was implemented effectively, McChrystal relied on the videoconferences, his staff, and battlefield circulation. The videoconferences gave him a forum to ask pointed questions to ensure that subordinates followed his guidance. In addition to the daily operations

252 Ibid.

253 Flynn, interview by author.

254 Former Task Force 16 subordinate commander, interview by author; "Charlie" is not the individual's actual name.

and intelligence videoconferences, he and his primary staff officers led several other weekly videoconferences.²⁵⁵ McChrystal frequently visited his teams throughout the region. During these visits, he would ask question after question to ensure his subordinates were following his directives and to solicit valuable feedback.²⁵⁶ The videoconferences, command visits, and e-mail protocol allowed him to receive assessments that did not get filtered through multiple layers of command. His primary staff members promoted the portal, and his chief of staff reprimanded subordinates who did not use it properly.

The most significant resistance that McChrystal experienced was external to his command. Some members of the USSOCOM staff thought his task force was growing too large and encroaching on their territory. They did not like that McChrystal was meeting with senior officials in Washington. Yet, leaders in Washington wanted to deal with McChrystal because he was the one running the task force. Eventually, the task force became so powerful that USSOCOM stayed out of its way. Some officers within the Multi-National Force – Iraq did not understand the significance of the al Qaeda in Iraq threat and were jealous that the task force was given most of the theater's intelligence, surveillance, and reconnaissance assets. Some interagency partners also viewed the military as encroaching into their territory.²⁵⁷ In one case, an agency tried to take a signal intelligence capability from the task force by arguing that it fell within its domain. However, the task force successfully argued that it required the capability for tactical intelligence, so they were authorized to employ it.²⁵⁸

In most cases, this resistance was overcome because McChrystal had an excellent working relationship with the leaders of these organizations: Casey at Multi-National Force – Iraq, General Doug Brown at USSOCOM, Abizaid at USCENTCOM, and Lieutenant Generals Mike Hayden and Keith Alexander at NSA.²⁵⁹ Casey and Abizaid were strong proponents of the task force and served as strong advocates to

255 Wall and former JIATF directors, interviews by author.

256 Former Task Force 16 subordinate commanders, interviews by author.

257 Ibid.

258 Former Task Force 16 subordinate commander, interview by author.

259 McChrystal, interview by author.

get the task force the support it required. Having this 4-star endorsement was critical.²⁶⁰ Early on, Abizaid allocated almost all of the theater intelligence, surveillance, and reconnaissance assets to Task Force 714 because the task force was killing more senior al Qaeda leaders than everyone else put together.²⁶¹ In 2005, the task force became the de facto main effort for the Multi-National Force – Iraq even though it worked for USCENTCOM, not the Multi-National Force – Iraq.²⁶² This type of support sent a powerful message to the Multi-National Force – Iraq staff and USCENTCOM staff to support the task force.

McChrystal's biggest hurdle was overcoming bureaucratic processes and driving the interagency to action. Each agency had its own rules and regulations. While there were valid reasons for them, they often stifled information sharing, innovation, and impeded time-sensitive operations.²⁶³ McChrystal overcame many of these problems by creating the JIATFs, including interagency partners in the videoconferences, and by conducting frequent visits to their headquarters in Washington. When he had trouble with a key ally, he would address it, as demonstrated by sending his senior intelligence officer to the Baghdad station for three months. Sending his senior intelligence partner to serve as a liaison officer was a very unorthodox move, but the relationship with this particular intelligence agency was so critical that he was willing to do it.²⁶⁴

McChrystal routinely visited Washington to cultivate meaningful interagency partnerships. To ensure the partnerships remained effective between visits, McChrystal expanded his network of liaison officers, included the interagency partners in the videoconferences, and provided them access to the portal to ensure they understood they were integral members of the team. The videoconference reminded these critical partners that the U.S. was still at war. They were scheduled for 9 a.m., the most convenient time for the interagency partners to ensure maximum participation. They also allowed McChrystal to publicly thank his

260 Miller, e-mail message to author.

261 Abizaid and McChrystal, interviews by author.

262 McChrystal, interview by author.

263 Former JIATF deputy director, interview by author; and McChrystal, *My Share of the Task*, 154.

264 Priest and Arkin, *Top Secret America*, 242; and Flynn, interview by author.

partners and force them to provide support out of fear of professional embarrassment for failing to contribute to the team effort.

Inevitably, the “middle managers” of the various organizations—including DoD—were the most problematic. Those closest to the fight, analysts at the JIATF or embedded elsewhere within the task force, understood the significance of what they were doing and were mission-focused. Likewise, the senior leaders understood the challenge facing the nation and each organization’s unique role in the fight. The middle managers were the most problematic and often became too caught up in processes at the expense of the mission. McChrystal’s staff officers navigated this bureaucratic minefield magnificently, but when they reached an obstacle they could not overcome, they would elevate it to McChrystal to address. Sometimes, McChrystal would go to his counterpart to push the issue. Other times, he would accept the degradation in capability, feeling it was not worth damaging the partnership for a particular issue.²⁶⁵ Ultimately, McChrystal successfully built the network because he overcame internal and external resistance by demonstrating effectiveness.

Effectiveness

This case is perhaps the easiest of the cases to demonstrate success. In April 2004, the task force conducted only ten operations in Iraq. Two years later, with roughly the same operational capability, the task force conducted as many on any given night as it did in the entire month of April 2004, totaling more than 300 a month.²⁶⁶ From 2005 to 2007, the task force sent more than 2,000 Iraqis to trial.²⁶⁷ Petraeus credited the task force with playing a critical role during the surge in helping the coalition and Iraqi forces retake control of Baghdad and rid it of insurgents.²⁶⁸ By early 2010, the task force had decimated al Qaeda in Iraq. What had once been a broad terrorist network was

²⁶⁵ Former Task Force 714 Intelligence Officer, interview by author.

²⁶⁶ Flynn, interview by author; and McChrystal, *My Share of the Task*, 145.

²⁶⁷ Priest, *Top Secret America*, 248-9.

²⁶⁸ Petraeus, interview by author.

now an underground group with only a few cells remaining. By this time, Task Force 714 had shifted most of its forces to Afghanistan, but even the small element that remained in Iraq retained the capability to wreak havoc on the network. In the first three months of 2010, the task force dealt what U.S. Forces – Iraq commander, General Ray Odierno, called “potentially the most significant blow to al-Qaeda in Iraq since the beginning of the insurgency.”²⁶⁹ The task force and its Iraqi counterparts killed or captured most of al Qaeda in Iraq’s top leadership between January and March 2010, including its emirs for operations, northern Iraq, Baghdad, Mosul, east Mosul, and economic security, and an operative who was responsible for the group’s first major suicide attack in Baghdad in the summer of 2003.²⁷⁰ On April 18, in a raid near Tikrit, Iraqi Forces and Task Force 714 killed al-Masiri, the group’s leader, and Abu Omar al-Baghdadi, the head of the Islamic State of Iraq.²⁷¹ That same night Task Force 714 and Iraqis hit eight additional al Qaeda in Iraq targets.²⁷² In Afghanistan in 2008, the task force hit 550 targets, killing about 1,000 enemy fighters with only 17 civilian fatalities, an amazingly low level of collateral damage. In 2009, the task force struck 464 targets, killing 400-500 enemy personnel and capturing many more.²⁷³

Perhaps no single operation demonstrates the success of the targeting cycle and the network like that of Operation NEPTUNE SPEAR, which killed Osama bin Laden in Abbottabad, Pakistan, on May 2, 2011. For those who may be unimpressed by the operation and think that ten years is too long of a time to find someone in hiding, they need only look at the FBI’s “Ten Most Wanted List.” The average time that a fugitive has been on the run often exceeds a decade, with

269 Ernesto Londoño, “Two Top Leaders of the Insurgent Group al-Qaeda in Iraq Are Killed in Raid,” *The Washington Post*, April 20, 2010, accessed December 19, 2023, <https://www.washingtonpost.com/wp-dyn/content/article/2010/04/19/AR2010041901693.html>.

270 Bill Roggio, “Iraqi Forces Capture Two Senior al Qaeda Leaders in Mosul,” *Long War Journal*, April 7, 2010, accessed December 19, 2023, https://www.longwarjournal.org/archives/2010/04/iraqi_forces_capture.php; and Bill Roggio, “Iraqi Forces Detained al Qaeda’s ‘Ruler of Baghdad,’” *Long War Journal*, April 22, 2010, accessed December 19, 2023, https://www.longwarjournal.org/archives/2010/04/iraqi_forces_detaine.php.

271 Londoño, “Two Top Leaders,” and Gordon and Trainer, *The Endgame*, 623.

272 Gordon and Trainer, *The Endgame*, 623.

273 Priest, *Top Secret America*, 251.

fugitives sometimes having evaded capture for more than 30 years.²⁷⁴ Eric Rudolph, the Olympic Park bomber who conducted a series of bombings across the southern U.S. between 1996 and 1998—to include the Atlanta Olympics—spent five years on the FBI’s top ten list.²⁷⁵ Ted Kaczynski, known as the “Unabomber,” evaded capture for 18 years.²⁷⁶

Conclusion

Task Force 714 successfully innovated due to its culture, people, and strategic leadership of McChrystal. Operating in an environment that provided a clear sense of urgency and considerable resources, McChrystal effectively facilitated the development of the innovative idea. He not only gained the necessary interagency support for adoption, but also employed the necessary leader influence tactics to ensure their successful implementation.

McChrystal inherited a command that already possessed an innovative culture. The personnel within the command possessed the traits of innovators and early adopters: they were professionally curious, were creative, did not take no for an answer, and were not discouraged by failure. They were problem solvers who approached problems fundamentally differently than the rest of the Army; they did not feel anything was impossible.²⁷⁷ They were more experienced than servicemembers in a typical unit. Most of McChrystal’s subordinate units could handpick their people using lengthy assessment and selection processes. They were also highly intelligent.²⁷⁸ Another aspect of the culture that spurred innovation was that the unit was mission-focused. Its people were more interested in results than process. This attitude became highly contagious, and it is what made the JIATFs so successful.

274 FBI, “Ten Most Wanted,” FBI.gov, accessed March 29, 2013, <http://www.fbi.gov/wanted/topten>.

275 FBI, “Eric Rudolph,” FBI.gov, accessed November 2, 2023, <https://www.fbi.gov/history/famous-cases/eric-rudolph>.

276 Alston Chase, “Harvard and the Making of the Unabomber,” *The Atlantic* 285, no. 6 (2000): 41–65, <https://www.theatlantic.com/magazine/archive/2000/06/harvard-and-the-making-of-the-unabomber/378239/>.

277 McChrystal, interview by author.

278 U.S. Special Operations Command officer, interview by author.

The wartime environment served as an accelerant for innovation. Before 9/11, the command was constantly developing new techniques, tactics, procedures, and equipment, but war provided a new sense of urgency, and budget increases from Congress provided the necessary slack. This allowed the command to rapidly purchase, develop, and test new concepts and capabilities in a real environment. Developing closer ties with interagency partners also helped spur innovation by expanding the potential solutions to the problems the task force encountered. They were able to develop and employ new signals intelligence capabilities only because partner organizations, through earlier prototypes, exposed them to new ideas and technologies.

Infusing the right senior military leader into an organization with professionally curious people and a culture of experimentation, operating in an environment where both stress and slack existed, provided a boon for innovation. During his first visit to Iraq, McChrystal recognized that his command was not waging an effective campaign and developed an innovative solution to the problem: "a network to defeat a network." The development of the F3EA targeting cycle from his subordinates provided an operating construct for his network to be effective, but he still required outside support for it to work. During the adoption phase, McChrystal leveraged his interpersonal skills to get the necessary support from his interagency partners to build out the exploit and analyze capabilities required for the cycle to function effectively.

McChrystal was successful during implementation because he overcame potential resistance to his innovative ideas. He brought in trusted agents for critical staff positions and empowered them, expanded the use of videoconferences to communicate his priorities broadly, and conducted frequent battlefield circulation to get unfiltered assessments. Most importantly, McChrystal overcame resistance by demonstrating effectiveness—his subordinates wanted to attend the daily conferences and wanted to send their detainees to the screening facility because they saw the value of doing both. To overcome external resistance, McChrystal, with his remarkable interpersonal skills, gained and maintained partner support; he placed his best personnel as liaison officers at the most critical locations, he used videoconferences

to facilitate support, and he routinely acknowledged the support that partners contributed to the successful operations of the network.

The transformation of Task Force 714 was remarkable. It went from executing ten operations in a month to ten operations in a night. This change resulted once the task force shifted its main effort from the finish phase to the exploit and analyze phases and built the necessary architecture—including greater intelligence, surveillance, and reconnaissance capability; interrogation capability; document and media exploitation capability and JIATFs to leverage interagency capability—to make that happen. By overlaying the task force network and employing the F3EA targeting cycle over the enemy network, McChrystal was able to decimate al Qaeda in Iraq.

THE MINE RESISTANT AMBUSH PROTECTED VEHICLE PROCUREMENT: A LACK OF LEADERSHIP



“The MRAP program should be considered the highest priority Department of Defense acquisition program.”

—Secretary of Defense Robert Gates¹

Secretary of Defense Robert Gates made the Mine Resistant Ambush Protected (MRAP) vehicle DoD’s top acquisition priority in the spring of 2007, a mere two weeks after hearing about the vehicle for the first time. A public discourse between the military and civilian policymakers followed, which was well-documented by the media. For many, this fits the narrative of an entrenched military that would change only if forced to by civilian officials. But that narrative is also wrong.

The procurement of the MRAP stands as a stark example of a failure to innovate. The innovation of mine-resistant vehicles occurred in the 1970s as a wartime innovation by the Rhodesians to combat the insurgency they faced in southern Africa. Yet, despite having 30 years to adopt this innovation during peacetime and having suffered casualties to mines in Vietnam, Somalia, and Bosnia, the U.S. failed to do so.

The wartime innovation of the MRAP started with a couple of Marine Corps majors in 2003, but it was not until 2007 that the military finally procured the vehicles. The majors’ first attempt to procure the vehicles using the military’s peacetime procurement process in 2003, quickly ground to a halt. A second effort in 2005, this time utilizing the Marine Corps wartime procurement process, once again

¹ Robert Gates, Memorandum, “MRAP Acquisition” (Washington, DC: Office of the Secretary of Defense, May 2, 2007); and Jason Sherman, “Gates Calls MRAP Pentagon’s ‘Highest Priority’ Acquisition Program,” *Inside the Army* 19, no. 19 (2007): 5-6, <https://www.jstor.org/stable/24824610>.

failed because they could not overcome entrenched program managers who were wedded to existing vehicle programs and, therefore, viewed the MRAP as a threat. These program managers prevented the requirement from reaching the necessary senior military leader for a decision.

The third attempt in 2006-2007 finally succeeded because the innovation champions used a third strategy: the joint wartime procurement process. As a result, they were finally able to bypass institutional resistance within the Marine Corps to reach the senior military leader—the Commandant of the Marine Corps—who was capable of adopting them. With a significant price tag of billions of dollars, the vehicles required Congressional support for the purchase. Although he became an instant advocate for the vehicle, Gates was not aware of them until after the military had already requested nearly 7,000 vehicles costing more than \$7 billion. Thus, Gates's role could more accurately be described as supporting the military's request instead of forcing change on a reluctant military. He did, however, force the Army to purchase more than it otherwise would have.

Describing Mine-Resistant Ambush Protected Vehicles

Mine-Resistant Ambush Protected vehicles are not one specific vehicle but a family of vehicles, just as *tank* refers to a type of vehicle and not a specific tank, such as the M1 Abrams. Mine-resistant vehicles are commonly referred to as MRAPs, even though the acronym MRAP, for *Mine-Resistant Ambush Protected*, does not make sense without the acronym followed by the word *vehicle*. There are three categories of MRAPs, based on their size and carrying capacity.² The main characteristic common to all MRAPs is the V-shaped hull and armor plating designed to protect against improvised explosive devices (IEDs), mines, and other munitions.³ Unlike the M1 Abrams tank or the Bradley Fighting Vehicle,

2 Andrew Feickert, CRS Report RS22707, *Mine-Resistant, Ambush-Protected (MRAP) Vehicles: Background and Issues for Congress* (Washington, DC: Congressional Research Service, 2011), 1, <https://sgp.fas.org/crs/weapons/RS22707.pdf>; and U.S. Department of Defense Inspector General, "Marine Corps Implementation of the Urgent Universal Needs Process for Mine Resistant Ambush Protected Vehicles" (Washington, DC: Department of Defense Inspector General, December 8, 2008), 1.

3 Feickert, "MRAP Vehicles," 1.

which are produced by single corporations, different MRAPs were and are produced by different companies, including Force Protection Industries, General Dynamics, Armor Holdings, BAE Systems, Navistar International, Oshkosh Truck, Protected Vehicles Inc., Rafael Advanced Defense Systems, and General Purpose Vehicles.⁴

MRAPs are designed to mitigate the blast effect of mines. Injuries from vehicular mines result from four distinct causes: overpressure, fragmentation, acceleration, and heat.⁵ Overpressure injuries to the lungs and other air-containing organs result from the rapid change in air pressure generated by the mine blast as air rapidly enters the vehicle through the rupture.⁶ Fragmentation injuries result when shrapnel propelled by the mine blast penetrates the body and causes tissue damage. Acceleration injuries result when the explosion rapidly throws the vehicle upward, and the occupants collide with other objects, the ground when it comes down, or from the deformation of the crew compartment. Unrestrained occupants are the most likely occupants to suffer fatal or permanent spinal, neck, and head injuries, but even restrained occupants are susceptible to these injuries. Thermal injuries result from the heat of the explosion.⁷

To mitigate the blast effects, militaries have employed different strategies to develop mine-resistant vehicles. First-generation developments consist of field improvised protection, such as sandbags or metal sheeting, strapped to the sides or placed on the floors of existing vehicles. Second-generation protection consists of mass-produced retro-fit kits (bolt-on protection) designed and produced for existing vehicles. In addition to adding armor protection to the floor and sides of vehicles, kits may include strap-on armor and blast deflectors around the wheels and exposed turret gunners, and four-point seat belts for drivers and occupants. Third-generation protection consists of deep V-shaped blast deflecting hulls mounted onto the existing vehicle

4 Ibid., 3; and Mike Guardia, *US Army and Marine Corps MRAPs* (New York, NY: Osprey, 2013), 10.

5 Arul Ramasamy et al., "Blast Mines: Physics, Injury Mechanisms and Vehicle Protection," *Journal of the Royal Army Medical Corps* 155, no. 4 (2009): 258-261, <http://dx.doi.org/10.1136/jramc-155-04-06>; and Wayne A. Sinclair, "Answering the Landmine," *Marine Corps Gazette* 80, no. 7 (1996): 38.

6 Sinclair, "Answering the Landmine," 38.

7 Ramasamy et al., "Blast Mines," 260-1.

frames. Fourth-generation vehicles, such as MRAPs, are designed for blast protection from the ground up.⁸

First-generation armor provides little protection for the crew from all but the smallest blasts. To reduce the blast effects of an explosion, the distance from the vehicle to the explosion must be increased, the blast effect must be diverted away from the vehicle, or the armor must be thickened to prevent the blast's penetration. First-generation armor helps by increasing the thickness of the armor, but the makeshift material provides only a marginal level of added protection. This is because the added armor reduces the pressure of detonation products only slightly and reduces the penetration of only those fragments with the least amount of force. In some cases, makeshift armor may increase casualties by producing additional fragmentation from the spalling of the ad hoc armor.

Likewise, second-generation efforts provide only limited benefits as they do nothing to change the vehicle's geometry from ground blasts and provide limited added protection from side blasts. As a result, much of the blast effect is still transferred to the vehicle and its occupants. There is some reduction in pressure and fragmentation, but rarely is it significant enough to reduce casualties, given the size and engineering of many explosive charges.

The V-shaped hull of third and fourth-generation efforts changes the vehicle's geometry, diverting blast energy away from the vehicle. This reduces penetration, fragmentation, and acceleration effects. Fourth-generation vehicles offer even greater protection. Since the vehicle is designed from the ground up, it is built to have a higher ground clearance, which increases its effectiveness at diverting a blast. Likewise, the angle of the V-shaped hull can be designed to provide the optimal angle to divert the blast. The angle of the V-shaped hull for a strap-on kit is limited by the vehicle's existing design. For example, the U.S. military's Humvee fleet's ground clearance is so low that modifying the vehicle's hull is impossible. Fourth-generation vehicles are designed to deflect blasts from ground and side explosions and can be designed to include additional safety features to secure passengers and protect them from acceleration injuries.⁹

8 Ibid., 261-263; and Roy McGriff III, "Mine Resistant Ambush Protected Vehicles" (Quantico, VA: Marine Corps University, 2004), 15.

9 Ramasamy, "Blast Mines," 261-263.

The United States Military's Acquisition Process

The three principal decision-making processes that comprise the traditional defense acquisition process include the Planning, Programming, Budget, and Execution process; the Joint Capabilities Integration and Development System process; and the Defense Acquisition System process. The Planning, Programming, Budget, and Execution process—owned by two offices within the Office of the Secretary of Defense—allocates resources. The Joint Capabilities Integration and Development System process—owned by the Joint Staff—assesses gaps in warfighting capabilities and develops requirements to resolve those gaps. The Defense Acquisition System process—owned by the Under Secretary of Defense for Acquisition, Technology, and Logistics—manages the development and procurement of weapon systems and other equipment.¹⁰

These acquisition processes are very deliberate, regarded as slow, and meant primarily for peacetime acquisition. Recognizing the shortcomings of the existing acquisition processes to support wartime requirements, each service established its own rapid wartime acquisition process in late 2003. For brevity, this section will focus on the Marine Corps and the joint processes, given their relevance to the case.

The Marine Corps established its wartime acquisition process, called the Urgent Universal Need Statement process, in November 2003 to “meet the immediate operational needs of deployed forces, or forces preparing to deploy.”¹¹ The Marine Corps defines an urgent universal need as “a request for a capability that, if not filled, places the

10 U.S. Department of Defense, *Manual for the Operation of the Joint Capabilities Integration and Development System*, Washington, DC: Department of Defense, March 13, 2009, 1; and Defense Science Board, *Fulfillment of Urgent Operational Needs* (Washington, DC: Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics, 2009), 8, <https://apps.dtic.mil/sti/pdfs/ADA503382.pdf>.

11 Naval Audit Service, Audit Report N2007-0060, *Marine Corps Urgent Universal Need Statement Process* (Washington, DC: Naval Audit Service, 2007), 5, https://pogoblog.typepad.com/pogo/files/dplus2007_3342.pdf. The Commandant of the Marine Corps published three administrative messages that described the Urgent Universal Need Statement (UNS) Process: MARADMIN 533/03, “OIF II Urgent Universal Need Statement (UNS) Process” (Washington, DC: Headquarters, United States Marine Corps, November 21, 2003), <https://www.marines.mil/News/Messages/MARADMIN/Article/891135/oif-ii-urgent-universal-need-statement-uns-process/>; MARADMIN 424/04, “OIF III Urgent Universal Need Statement Process” (Washington, DC: Headquarters, United States Marine Corps, September 28, 2004), <https://www.marines.mil/News/Messages/Messages-Display/Article/891329/oif-iii-urgent-universal-need-statement-uuns-process/>; and MARADMIN 045/06, “Urgent Universal Need Statement (UUNS) process” (Washington, DC: Headquarters, United States Marine Corps, January 26, 2006), <https://www.marines.mil/News/Messages/Messages-Display/Article/894984/urgent-universal-need-statement-uuns-process/>.

accomplishment of the unit's mission in jeopardy or unduly increases the risk of casualties.”¹² This process is divided into three phases: capability gap identification, validation, and acquisition/development.

The capability gap identification phase begins “with the warfighter identifying existing combat capability gaps” and concludes when the requesting unit has submitted the urgent universal need request to the Marine Corps Combat Development Command.¹³ Requests can be initiated at any level and then forwarded up the chain of command to the Combat Development Command for validation.¹⁴

The validation phase begins when the Combat Development Command, which is responsible for the process, receives the urgent universal need statement. The command assigns the requirement to a lead advocate and tracks it using the combat development tracking system. After the advocate identifies a potential solution, it forwards the solution to the Combat Development Integration Board for the validation of solutions relating to previously approved urgent universal need requests, or existing programs or to the Marine Requirement Oversight Council for the validation of new solutions.¹⁵ The oversight council “advises the Commandant of the Marine Corps on policy matters related to concepts, force structure, and requirements validation.”¹⁶ At any time, the commanding general of the Combat Development Command can reject an urgent need requirement and convert the request to a non-urgent need.¹⁷

The acquisition/development phase begins after the Integration Board or Oversight Council validates the need and finalizes a statement of need authorizing the acquisition community to obtain the solution. This phase ends once the Marine Corps has purchased and delivered the required items.¹⁸

The Joint Chiefs of Staff established a joint wartime acquisition

12 Commandant of the Marine Corps, MARADMIN 045/06, “UUNS Process.”

13 Naval Audit Service, *Marine Corps UUNS Process*, 5.

14 Ibid.

15 Ibid., 2-7.

16 Commandant of the Marine Corps, Policy Memorandum 1-02, “Marine Requirements Oversight Council” (Washington, DC: Headquarters, United States Marine Corps, January 17, 2002), <https://www.secnav.navy.mil/rda/DASN-P/PolicyMem-os2/2002%20Policy%20Memoranda/cmcroc10217jan2002.pdf>.

17 Naval Audit Service, *Marine Corps UUNS Process*, 5-8.

18 Ibid., 6.

process on July 15, 2005.¹⁹ The process was “not intended to replace the [normal acquisition] process but rather to accelerate the process of fielding readily available systems to satisfy joint urgent wartime needs.”²⁰ Like the Marine Corps wartime acquisition process, the joint process is meant to address a need that is life-threatening or mission essential. It can be used when the equipment is “considered inherently joint in nature (e.g., theater-wide combatant commander needs spanning multiple services).”²¹ Thus, the process can be used for requirements spanning multiple services and flows through the joint staff as opposed to a service component.

A combatant commander is responsible for identifying, validating, and prioritizing joint urgent operational needs and forwarding those that are “urgent and compelling” to the Joint Staff for action. The Joint Staff J-8 receives the request and then assigns it to the appropriate functional capabilities board, which provides a validation recommendation to the Joint Capabilities Board and advises on a funding strategy.²² The Joint Capabilities Board reviews the recommendation, determines the priority in the case of multiple joint urgent operational needs, and provides a validation recommendation to Joint Staff J-8 (Director, Force Structure, Resources, and Assessments). If the J-8 validates the need, it is sent to the Joint Rapid Acquisition Cell for acquisition. If the need is designated as an immediate warfighter need, then it requires resolution and fielding within 120 days. Funding is obtained by reprogramming funds from an existing service, agency, or Joint Staff funding line; or by a supplemental appropriation.²³ If the joint urgent operational need is not validated, it usually becomes part of an ongoing capability gap analysis by the J-8.²⁴

American Military Experience with the Landmine (1942-1996)

19 Joint Chiefs of Staff, CJCS Instruction 3470.01, “Rapid Validation and Resourcing of Joint Urgent Operational Needs (JUONs) in the Year of Execution” (Washington, DC: Joint Chiefs of Staff, July 15, 2005), <https://www.acqnotes.com/Attachments/CJCSI%203470.01%20Rapid%20Validation%20and%20Resourcing%20of%20Joint%20Urgent%20Operational%20Needs%20in%20the%20Year%20of%20Execution%2015%20July%202005.pdf>.

20 Ibid., 1.

21 Ibid., 2.

22 Ibid., 3 and A-3 to A-6.

23 “A JUON may be designated as an IWN if 1) there is a material, logistic, or service solution, 2) left unfulfilled, the need will seriously endanger personnel or pose a major threat to ongoing operations, and 3) it requires a resolution within 120 days or less.” See, U.S. Department of Defense, “Marine Corps Implementation of the UUNS Process for MRAP Vehicles,” 57; and Office of the Deputy Secretary of Defense, Memorandum, “Meeting the Immediate Warfighter Needs (IWNs)” (Washington, DC: Office of the Deputy Secretary of Defense, September 3, 2004).

24 U.S. Department of Defense Inspector General, “Marine Corps Implementation of the UUNS Process,” 57.

Specialist Joel Bertoldie may have been the first U.S. soldier to be killed by a roadside bomb in Iraq when an IED struck the vehicle that he was driving on July 18, 2003. Still, he was by no means the first American to die in such a manner.²⁵ U.S. servicemembers have been killed by landmines as far back as World War I.²⁶ Prior to the start of the Iraq War, an estimated 110 million landmines remained spread throughout nearly 70 countries, killing and maiming approximately 15,000-25,000 each year.²⁷ At the time, 18 countries spanning the globe were each estimated to have more than one million unrecovered landmines.²⁸ Yet, despite the proliferation of landmines, the U.S. failed to procure a fleet of V-shaped hull vehicles until four years into the Iraq War.

Germans developed anti-vehicular landmines at the end of World War I in response to Allied tanks. The tactical use of landmines spread during World War II and continued in conventional conflicts including the Korean War, the Arab-Israeli Wars, and the Gulf War.²⁹ In conventional warfare, landmines are typically used defensively to create a concentrated barrier to fix, channel, disrupt, and turn enemy formations.³⁰ As a result, U.S. military countermine efforts have focused primarily on the ability of engineers to find and breach enemy minefields. Mines were expected to be found in deliberately laid minefields, instead of being scattered across the battlefield.³¹ Thus, the military did not believe that general-purpose tactical vehicles needed mine-resistant capabilities. The likelihood of them being exposed to mines was minimal since mines were expected to be in protective fields that engineers would breach.

While mines were an effective instrument in conventional conflicts, they became even more important in nontraditional conflicts, such as low-intensity conflicts, stability operations, and insurgencies. In these types of conflicts, mines were often employed singularly, in

25 Bernsten, *Human Intelligence*.

26 Sinclair, "Answering the Landmine," 37.

27 Nicolas E. Walsh and Wendy S. Walsh, "Rehabilitation of Landmine Victims—The Ultimate Challenge," *Bulletin of the World Health Organization* 81, no. 9 (2003): 665; and Gino Strada, "The Horror of Land Mines," *Scientific American* 274, no. 5 (1996): 41, <https://www.scientificamerican.com/issue/sa/1996/05-01/>.

28 Walsh and Walsh, "Rehabilitation of Landmine Victims," 666.

29 Sinclair, "Answering the Landmine," 37.

30 McGriff, "MRAP Vehicles," 8.

31 Sinclair, "Answering the Landmine," 37.

small numbers, or in combination with small arms fire to support an ambush, with the goal of undermining the morale of both the operational force and its public support at home.³² Accordingly, mines offered a cost-effective way—costing between \$3 and \$75—for an enemy to produce casualties against a superior military without becoming decisively engaged.³³

Despite the U.S. sustaining thousands of casualties from mines in the conventional conflicts of World War II and the Korean War, the percentage of casualties caused by mines in nontraditional conflicts is even higher. In World War II, mines accounted for less than 6 percent of U.S. casualties and nearly 30 percent of vehicle losses. In the Korean War, mines accounted for 10 percent of casualties and a little more than 50 percent of vehicle losses. However, in the Vietnam War, mines accounted for a staggering 33 percent of casualties and nearly 70 percent of vehicle losses.³⁴ Yet, in the face of this mine threat in Vietnam, the U.S. Army never truly modified its vehicle fleet to meet this threat.

In response to the mine threat in Vietnam, the U.S. employed a three-pronged strategy of neutralization, detection, and survivability. The neutralization measures consisted primarily of paving roads, a strategy that proved to be slow and cumbersome. The enemy responded by mining roads that remained unpaved, leaving the neutralization measures largely ineffective. To detect mines, the Army employed a variety of minesweeping strategies, including point persons, mine detectors, mine rollers, mine-sniffing dogs, and vehicles designed to set off mines. The most effective was the point man. However, even this strategy was effective only 50 percent of the time, and it limited a vehicular convoy to traveling only as fast as the point man could walk, exposing it to enemy fire during movement.³⁵

Despite survivability being the third component of the strategy, the U.S. military never implemented a coordinated countermine

32 McGriff, "MRAP Vehicles," 7-8.

33 Louise Doswald-Beck, Peter Herby, and Johanne Dorais-Slakmon, "Landmines in Africa: Fact Sheet", ICRC, January 1, 1995, accessed June 1, 2023, <https://www.icrc.org/en/doc/resources/documents/misc/57jmcj.htm>.

34 Sinclair, "Answering the Landmine," 37; and McGriff, "MRAP Vehicles," 8.

35 David H. Thomas, "Vehicle Convoy Security Operations in the Republic of Vietnam," Active Project No. ACG-78F (San Francisco, CA: U.S. Army Contact Team in Vietnam, 1971), II-80 to II-95.

survivability strategy during the war.³⁶ The U.S. Army's 8th Transportation Group started hardening 2½-ton and 5-ton cargo trucks by welding steel plates on the trucks' doors and undersides and laying sandbags on nearly every horizontal surface starting in 1967. Yet, the U.S. had made little additional progress when it left Vietnam in 1973. Sandbags and welded steel plates remained the extent of the countermine advancements.³⁷ Not surprisingly, the percentage of casualties caused by mines increased throughout the war.³⁸

Remarkably, the greatest innovation in the development of mine-resistant vehicles during the 20th century did not come from a major power but instead came from Rhodesia. Between 1967 and 1973, the U.S. failed to advance beyond second-generation countermine measures. By contrast, within seven years after having suffered their first mine strike in 1971, the Rhodesians demonstrated remarkable agility and innovation. They developed and fielded an entirely new vehicle fleet that virtually eliminated all mine fatalities.³⁹

The Rhodesian Bush War started in 1962, but the guerrillas did not start using landmines until 1971. The unconventional mine campaign was so effective that it put the Rhodesian government in jeopardy of falling.⁴⁰ Given the remoteness of the hundreds of miles of unpaved roads, it was impossible for the Rhodesians to sweep and clear the roads effectively. Thus, instead of focusing on detecting landmines, the Rhodesians concentrated on developing better survivability methods.⁴¹ UN sanctions forced Rhodesia to design, build, and field an MRAP vehicle fleet on its own. Like the U.S. in Vietnam, the Rhodesians tried first- and second-generation methods, but unlike the U.S., they quickly progressed to third-generation vehicles, consisting of V-shaped blast-deflecting hulls welded onto existing trucks, before culminating with fourth-generation MRAP vehicles that they built from the ground up. They quickly fielded a new vehicle fleet that significantly improved

36 McGriff, "MRAP Vehicles," 10.

37 Sinclair, "Answering the Landmine," 38.

38 Thomas, "Vehicle Convoy Security Operations," II-80 to II-95.

39 McGriff, "MRAP Vehicles," 12.

40 *Ibid.*, 12-13.

41 Sinclair, "Answering the Landmine," 38.

their survivability. The fatality rate for the crew and passengers was 22 percent for unprotected vehicles, eight percent for first- and second-generation MRAPs, two percent for third-generation MRAPs, and less than one percent for fourth-generation MRAPs.⁴² Yet the U.S. military ignored these advancements.

While the U.S. had little direct exposure to landmines after Vietnam in the 1970s and into the 1980s, this changed in the 1990s. In Somalia, the U.S. lost at least eight vehicles and suffered 16 casualties to landmines. The Humvee's performance was particularly poor. After striking landmines, 92 percent of their occupants became casualties, with half of those fatalities. By contrast, the UN contingent from Zimbabwe suffered no casualties from landmine strikes to its V-shaped hull vehicles. One Zimbabwean Puma detonated an estimated 30- to 40-pound IED without its occupants suffering a single casualty. Seeking better protection for its service members, the U.S. Army's Tank Automotive Command and the Advanced Research Projects Agency developed retro-fit kits, with more than a dozen shipped to Somalia in late 1993. The 5-ton truck kit included centerline blast deflectors (using the V-hull concept), shock-absorbing armor seats, four-point seat belts, floor armor, and complete small arms protection for the cab. The Humvee retrofit kits included similar features apart from the critical centerline blast deflectors, which were not possible given the vehicle's low ground clearance.⁴³

Despite its experience in Somalia, the U.S. military remained satisfied with its vehicular fleet and failed to pursue an MRAP vehicle when it found itself exposed to the lethality of the landmine only two years later in Bosnia. On December 31, 1995, Specialist Martin Begosh became the first American soldier to be wounded in Bosnia when the Humvee he was driving struck an anti-tank landmine.⁴⁴ In the first two months, 11 other mine-related incidents resulted in seven additional casualties.⁴⁵ The first fatality in Bosnia also resulted from a landmine.⁴⁶

42 McGriff, "MRAP Vehicles," 13-16.

43 Sinclair, "Answering the Landmine," 39-40.

44 Ian Fisher, "Land Mine Wounds Soldier, the First U.S. Casualty in Bosnia," *The New York Times*, December 31, 1995, accessed December 19, 2003, <https://www.nytimes.com/1995/12/31/world/land-mine-wounds-soldier-the-first-us-casualty-in-bosnia.html>.

45 Sinclair, "Answering the Landmine," 40.

46 Chris Hedges, "Bosnia Land Mine Kills U.S. Soldier," *The New York Times*, February 4, 1996, accessed December 19, 2003, <https://www.nytimes.com/1996/02/04/world/bosnia-land-mine-kills-us-soldier.html>.

By contrast, a Canadian Casspir MRAP struck a triple stack of anti-tank mines without the crew sustaining a single injury.⁴⁷ Despite the remarkable performance of the MRAP over the previous three decades and the U.S. military's repeated and often deadly exposure to landmines, the U.S. entered Iraq without an MRAP fleet.

Early Innovation Efforts (1996-2004)

Despite Rhodesia's demonstrated success with the MRAP in the late 1970s, it was not until the 1990s that someone in the U.S. military advocated for pursuing MRAPs. William Schneck was the Army's leading expert on countermine warfare in the 1990s and one of the first to write about what he termed "Mine-Resistant Vehicles." Schneck was a civilian project engineer who worked in the Countermining Systems Division at the Army's Engineer Center. He provided countermining training for troops who deployed to the Gulf War, Somalia, and Bosnia.⁴⁸ In his after-action report on Somalia, he stated that "US equipment was particularly poorly suited to this mission... where the primary threat was from landmines, snipers, small arms fire, and rocket-propelled grenades."⁴⁹ In the after-action review, he provided compelling statistics demonstrating that fourth-generation mine-resistant vehicles performed significantly better than first- and second-generation vehicles, with fatality rates four times lower and overall casualty rates three times lower. He described how personnel in Somalia were "forced to resort to primitive first-generation methods" as was done in Vietnam and the Persian Gulf Wars and recommended that the Army purchase mine-resistant vehicles.⁵⁰ During the 1990s, he produced more than a dozen publications relating to mine and countermining warfare, many of which advocated the military pursue mine-resistant vehicles, but they were ignored.

47 Sinclair, "Answering the Landmine," 39.

48 William C. Schneck Jr. and Brian M. Green, "Techniques and Procedures for Route Clearance," *Engineer* 26, no. 1 (1995): 10.

49 William C. Schneck Jr., *After Action Report: Operation Restore Hope* (Fort Belvoir, VA: Countermining Systems Directorate, 1994), 2.

50 Ibid.

In 1996, the *Marine Corps Gazette* published an article by Marine Captain Wayne Sinclair that reiterated the need for better mine-resistant vehicles for the U.S. military. Sinclair was familiar with MRAPs because he had grown up in South Africa.⁵¹ He had written a paper while attending the Marine Corps Amphibious Warfare School and submitted it for the *Gazette's* professional writing competition. His paper won, which led to its publication. In the article, he demonstrated that landmines had been a major weapon of war for over 50 years. Yet, the Marine Corps continued to lag in adopting vehicles that offered more protection against them. He concluded the article with a statement, "An affordable answer to the landmine was developed over 20 years ago. It's time the Marines at the sharp end shared in the wealth of the discovery."⁵² Sinclair continued to lecture and write about the combat-proven capabilities of MRAPs for the next decade.⁵³ Despite his efforts, little changed.

During the initial invasion of Iraq and through the first part of summer 2003, landmines did not pose a significant threat to U.S. military forces. This changed, however, on July 18, 2003, when Specialist Bertoldie became the first soldier killed by an IED.⁵⁴ Some IEDs are simply a landmine by another name. The UN defines a mine as "a munition placed under, on or near the ground or other surface area and designed to be exploded by the presence, proximity or contact of a person or a vehicle."⁵⁵ Thus, any IED that detonates due to the presence, proximity, or contact with a person or vehicle would be considered a mine. However, many IEDs in Iraq were command-detonated. These IEDs might not meet the definition of a mine but their effect on a vehicle is similar. Thus, vehicle survivability and protection measures that are effective against mines are also effective against IEDs.

Insurgents in Iraq and Afghanistan were forced to turn to IEDs

51 Franz J. Gayl, "Mine Resistant Ambush Protected Vehicle" (Arlington, VA: Headquarters, United States Marine Corps, Plans, Policies, and Operations Department, 2008), 2.

52 Sinclair, "Answering the Landmine," 40.

53 Gayl, "MRAP Vehicle," 5.

54 Bernstein, *Human Intelligence*.

55 From Article II of Amended Protocol II of the Convention on Certain Conventional Weapons of 1983 (as amended on May 3, 1996), <https://geneva-s3.unoda.org/static-unoda-site/pages/templates/the-convention-on-certain-conventional-weapons/AMENDED%2BPROTOCOL%2BII.pdf>.

out of necessity. For the most part, they lacked a state sponsor. With the signing of the Mine Ban Treaty in 1997, most nations stopped producing and selling landmines. Therefore, there was no readily available supply of landmines for insurgents to purchase. While the treaty applied to anti-personnel mines, the use and proliferation of anti-vehicular mines also became taboo. Explosives, however, were plentiful. The president's quarterly report to Congress in April 2004 stated "only 40% of Iraq's pre-war munitions inventory was secured or destroyed by April 2004," and "tens of thousands of tons probably pilfered."⁵⁶ Thus, Iraqi insurgents had ample supplies to construct improvised devices.

Often lost in the history of the MRAP is that the U.S. military acquired its first MRAPs in 2002. In 2000, the Army solicited bids for a mine-removal vehicle as part of its Ground Standoff Minefield Detection Systems. The need was identified following the Army's experience with mines in Somalia and Bosnia, but the vehicles were envisioned solely as a demining vehicle for engineers, as opposed to a universal mine-resistant vehicle.⁵⁷ The Army procured a mere ten Buffalos from Force Protection in September 2002, all of which were delivered in 2003.⁵⁸ The Marine Corps requested its first MRAPs in December 2003. The request was for a meager 27 vehicles for Explosive Ordnance Disposal teams.⁵⁹ The Marine Corps, like the Army, still viewed mine-resistant vehicles as something only engineers or Explosive Ordnance Disposal teams required. By 2004, the Army had fielded Husky, Meerkat, Buffalo, and RG-31 MRAPs to engineer units in Iraq. An Armed Forces News release praised what it called "armored cars" since the term MRAP had not yet been coined.⁶⁰ Yet, despite this praise, there was no push to acquire additional MRAPs.

Deputy Secretary of Defense Paul Wolfowitz directed the Joint Chiefs of Staff in late 2003 to explore options for better armor in

56 108th Congress, *A Report Consistent with the Authorization for the Use of Force against Iraq*; Bowman, "Iraq," 7-8; and Atkinson, "Left of Boom Part 1."

57 Guardia, *MRAPS*, 40.

58 "U.S. Military Struggles to Adapt to War's Top Killer," *USA Today*; and Guardia, *MRAPS*, 40.

59 James Hasik, *Arms and Innovation* (Chicago: University of Chicago Press, 2008), 120.

60 Joe Niesen, "New Vehicles Helping Against IEDs," Army News Service, February 11, 2004, accessed December 19, 2023, <http://www.ar15.com/archive/topic.html?t=1&f=5&t=229504>.

response to the mounting IED casualties. Over the next year, defense personnel exchanged limited e-mails relating to MRAPs, but none would constitute any real push for the vehicle. They were more exploratory or informational than anything else. On March 30, 2004, General Larry Ellis, the Commanding General of U.S. Forces Command (USFORSCOM), sent a memorandum to Army Chief of Staff General Peter Schoomaker, expressing his concern that “some Army members and agencies are still in a peacetime posture.” The memo also stated that many commanders in Iraq told him that the armored Humvee “is not providing the solution the Army hoped to achieve” in terms of force protection.⁶¹ Yet, rather than recommending the MRAP, which he was likely unaware of, Ellis recommended accelerating the production of the Stryker vehicle.⁶² The military’s response was that new Humvee armor kits would suffice.⁶³

Other disparate efforts also went nowhere. In April, a dedicated Pentagon analyst named Duncan Lang, who worked in acquisition and technology, suggested purchasing the Wer’wolf MRAP in e-mails to colleagues and superiors. Lang said it was “frustrating to see pictures of burning Humvees while knowing that there are other vehicles out there that would provide more protection.”⁶⁴ That same month, another Pentagon analyst, Lieutenant Colonel Bob Harris, forwarded details on the Wer’wolf and Cougar to a member of the IED Task Force. His job was limited to providing assessments and information; therefore, he was not in a position to do more to pursue MRAPs.⁶⁵

In August, Lieutenant Colonel Jim Hampton also recommended purchasing the Wer’wolf. He deployed to Iraq in August 2004. While there, he was tasked with looking for options on how to protect engineers better. During a brief to the operations staff of the U.S. Army Corps of Engineers in Baghdad, he recommended purchasing 53 Wer’wolves, but the Corps purchased only four. Frustrated, Hampton

61 Peter Eisler et al., “Pentagon Balked at Pleas for Safer Vehicles,” *USA Today*, updated August 22, 2007.

62 The Stryker was a wheeled vehicle that offered more protection than existing Humvees and was more transportable than the Bradley Fighting Vehicle; it was not an MRAP vehicle, as it lacked a V-shaped hull.

63 Eisler, “Pentagon Balked.”

64 Ibid.

65 Ibid.

wrote to his congressperson, Representative Chip Pickering (R-MS), urging him to investigate the Humvee deaths. He stated, “We would never consider sending troops [in Humvees] up against armor or artillery, but that is tantamount to what we’re doing because these vehicles are being engaged with the very ordnance delivered by artillery in the form of improvised explosive devices.”⁶⁶

Failed Attempt Using the Peacetime Acquisition Process (2003-2004)

Sinclair and fellow Marine Corps Major Roy McGriff led the first significant effort to acquire the MRAP. Sinclair returned to Quantico in 2002 to attend the Marine Corps’ Command and Staff College. There, he met McGriff, a logistics officer who would soon become the Marine Corps’ leading advocate for the MRAP. After graduating from the Command and Staff College, McGriff and Sinclair remained at Quantico for another year to attend the Marine Corps’ School of Advanced Warfighting, the Marine Corps’ equivalent to the Army’s School of Advanced Military Studies.⁶⁷

When it came time to write his “future war paper,” McGriff initially settled on the topic of direct support logistics, but the topic failed to excite him. In late 2003, he attended the funeral of a friend’s brother, who had died after an IED had struck his Humvee. That same year, one of McGriff’s former sergeants lost his hand to an IED. The IED casualties, combined with conversations with Sinclair, caused McGriff to change his future paper topic to mine-resistant vehicles. Sinclair gave McGriff all his notes, and he went to work. As McGriff described it, the topic was “nothing new.”⁶⁸ The Rhodesians had developed MRAPs back in the 1970s, the U.S. Army had experience developing mine-resistant vehicles dating back to World War II and Vietnam, and Schneck had been writing on the topic since the early 1990s.⁶⁹ This time would

⁶⁶ Ibid.

⁶⁷ Gayle, “MRAP Vehicles,” 5; and Trey McGriff III, interview by author.

⁶⁸ McGriff, interview by author.

⁶⁹ Ibid.

be different because McGriff actually pushed for the acquisition of the vehicle, as opposed to simply writing about it.

While McGriff was in the Command and Staff College, the Marine Corps had published its new ship-to-objective maneuver concept of operations, which was part of its overarching expeditionary maneuver warfare concept.⁷⁰ This new concept envisioned brigade-sized elements attacking up to 85 miles inland from a secure sea-base, using ground and air assault without slowing to secure a beachhead. When operating under this concept, there would be no secure rear area. The concept stated that “mines and obstacles in the littorals have the potential to be the greatest impediment to [ship-to-objective maneuver] operations” and dedicated a 12-page chapter to countermine measures.⁷¹ The chapter was, however, primarily devoted to mines in the littoral region, treating inland mines as obstacles that could be discovered and easily breached or bypassed.

While the ship-to-objective maneuver concept of operations largely ignored the mine threat to vehicles, McGriff recognized the significant threat that mines posed to operations and turned to other Marine documents, including a Marine Corps system threat analysis report, to justify the operational need for an MRAP. A system threat analysis report is a statutory requirement that supports policymakers in Congress, the Office of the Secretary of Defense, and service research-and-development and testing-and-evaluation organizations throughout a program's life cycle. This report provides an assessment of potential threats' ability to degrade or neutralize a system under development.⁷² McGriff's findings from this report were clear—“the most likely threat [ship-to-objective maneuver's] vehicles will face, are a combination of mines and ambushes employed in offensive, unconventional mine warfare throughout the battlespace.”⁷³ Given this environment, McGriff argued that the

70 Department of the Navy, *Ship-to-Objective-Maneuver (STOM) CONOPS* (Washington, DC: Headquarters, United States Marine Corps, 2003); and Department of the Navy, *Expeditionary Maneuver Warfare, Marine Corps Capstone Concept, Marine Corps Concepts Paper* (Washington, DC: Headquarters, United States Marine Corps, 2001).

71 U.S. Department of the Navy, *STOM CONOPS*, 11-1 to 11-2.

72 U.S. Department of Defense, DoD Instruction 5000.02, “Operation of the Defense Acquisition System” (Washington, DC: Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, 2015), <https://www.acq.osd.mil/fo/docs/500002p.pdf>.

73 McGriff, “MRAP Vehicles,” 5.

Marine Corps' current vehicles were "*not designed and built to survive against their most likely enemy threat*."⁷⁴ McGriff argued that the Marine Corps needed to "design a family of vehicles from the ground up" to protect against "the single threat system that has killed and wounded more Marines than any other: the mine."⁷⁵ He argued that the Marine Corps "must begin to acquire a mine-resistant ambush protected vehicle capability immediately."⁷⁶

Even as students in the School of Advanced Warfighting, Sinclair and McGriff decided to actively push the Marine Corps to procure MRAPs. Authoring a paper was not enough. In his quest to better promote and market the idea, McGriff realized that the vehicles needed a name. As a result, one Friday night at the Quantico Officers Club, McGriff coined the acronym "MRAP" with his School of Advanced Warfighting classmate Major Joe Allena, and the name stuck.⁷⁷

McGriff and Sinclair faced significant challenges when they approached the combat developer community at Quantico in 2004. They introduced the MRAP to the Combat Development Command and the Systems Command, the two organizations that play the most significant role in the acquisition processes for the Marine Corps.⁷⁸ Their concept was poorly received by senior civilians and action officers within the Combat Development Command. At the time, the command was focused on developing a replacement for the current vehicle fleet.⁷⁹ Independent of the war, the Marine Corps was looking for the Humvee's replacement. One of the primary requirements for the new vehicle was mobility. The Marine Corps sought a vehicle that could be transported by its air, ground, and amphibious fleet, including the new V-22 tilt-rotor Osprey that was in development. When McGriff approached the combat developers, they were focused on what became known as the Joint Light Tactical Vehicle, and the MRAP

⁷⁴ Ibid., 5-6.

⁷⁵ Ibid., 18-19.

⁷⁶ Ibid., 19.

⁷⁷ Gayl, "MRAP Vehicle," 5; and McGriff and Joseph Allena, interviews by author.

⁷⁸ McGriff, interview by author.

⁷⁹ William P. Canaley, "Joint Light Tactical Vehicle: A Case Study" (Carlisle Barracks, PA: U.S. Army War College, 2013), 2, <https://apps.dtic.mil/sti/pdfs/ADA592751.pdf>.

did not meet the program's mobility requirement due to its weight.⁸⁰

The developers emphasized that future vehicles must be air transportable by the CH-53X helicopter and the MV-22 Osprey and must be compatible with maritime prepositioning ships. McGriff, however, argued that neither the 5-ton trucks nor the logistics vehicle system replacements were envisioned to be air transportable, and they were part of the future vehicle fleet. He further stressed that only an MRAP could survive against the mine threat and transport mobility mattered little if the vehicle lacked the survivability to accomplish its mission. He argued that commercial off-the-shelf MRAP vehicles might not be ideal, but the Marine Corps could use the war to skip the initial design phases and choose the "best available" vehicle from the commercial market and then adapt it based on the requirements determined by operational commanders and vetted by the Combat Development Command.⁸¹ However, his argument was ignored.

After failing to convince the Combat Development Command of the need, McGriff and Sinclair approached the Systems Command. They argued that if the Marine Corps failed to field the MRAP, then the Marine Corps was likely to repeat its previous historical pattern of improving armor protection by sequential generations of (1) welding on local scrap metal and laying sandbags, (2) fielding standardized bolt-on kits, (3) fielding bastardized vehicles, before (4) eventually fielding a true MRAP vehicle. Based on his thesis, McGriff predicted this pattern would soon recur. Skipping the first three generations and going right to the MRAP was the best alternative because it would save more lives and be cheaper in the long run. Systems Command officials asked, "Where is the requirement?" Since two majors from the School of Advanced Warfighting had generated the requirement, Systems Command refused to act on it because they could support only requirements generated by operational commanders. Thus, McGriff's and Sinclair's attempts to use the normal peacetime acquisition process to procure the MRAP failed.⁸² The attempt was not a complete

80 "Executive Overview: Logistics Support and Unmanned," *HIS Janes*, May 5, 2015.

81 Gayl, "MRAP Vehicle," 5-6; and McGriff, interview by author.

82 McGriff, interview by author; and Gayl, "MRAP Vehicle," 7.

waste because it helped McGriff understand the acquisition process.⁸³

Lacking an MRAP requirement, the military instead decided to increase up-armored Humvee production and strap-on armor kits for its unarmored vehicle fleet. Yet these up-armoring kits were not without issues. They weighed more than 1,000 pounds, which stressed the vehicle's powertrain and suspension systems. This slowed the vehicle and caused more breakdowns, placing their crews at risk. Additionally, they did not help against IEDs from the bottom because the vehicle's ground clearance was too low to place anything underneath it. In August 2003, only 235 up-armored Humvees existed in theater.⁸⁴ That same month, the coalition headquarters identified a requirement for 1,407 up-armored Humvees. One year later, they had increased the requirement to 8,105. The first validated requirement for add-on-armor kits quickly followed with the command identifying the need for 8,400 kits in November 2003 and 13,872 less than a year later.⁸⁵ During this time, the U.S. military had generated only a single requirement for 77 MRAPs.⁸⁶

The production of up-armored Humvees started in 1996, but the up-armored model was never meant to be widely fielded. It was a specialty vehicle built primarily for Special Forces and Military Police.⁸⁷ Thus, the Army's requirement for up-armored Humvees prior to Operation IRAQI FREEDOM was only 360 vehicles per year with a production capacity of only 51 vehicles per month.⁸⁸ Likewise, in December 2003, only 35 add-on-armor kits were produced.⁸⁹ However, the situation changed drastically when the demand for these vehicles increased. By September 2004, the number of vehicles with strap-on kits in Iraq had increased from zero to 8,771 with a production capacity exceeding 4,000 per month, and up-armored Humvees increased from 253 to 5,583 with a production capacity of 550 per month.⁹⁰

⁸³ McGriff, interview by author.

⁸⁴ Atkinson, "Left of Boom Part 1."

⁸⁵ U.S. Government Accountability Office, "Actions Needed to Improve the Availability of Critical Items during Current and Future Operations" (Washington, DC: Government Accounting Office, 2005), 120-121, <https://www.gao.gov/assets/gao-05-275.pdf>.

⁸⁶ Guardia, *MRAPs*, 40-41.

⁸⁷ Atkinson, "Left of Boom Part 1."

⁸⁸ U.S. Government Accountability Office, "Actions Needed to Improve," 120 and 123.

⁸⁹ *Ibid.*, 121-124.

⁹⁰ *Ibid.*, 120-126.

At the same time, the enemy's use of IEDs and the resulting casualties they inflicted on coalition forces continued to grow. IED attacks increased from 193 in September 2003 to 459 in August 2004, and the fatalities and casualties they produced increased from 7 and 179 to 29 and 352, respectively.⁹¹ Yet, despite the rising casualties, there was no concerted effort to pursue the MRAP. This is evident by the fact that the Government Accounting Office's April 2005 report, *Actions Needed to Improve the Availability of Critical Items during Current and Future Operations*, does not mention the MRAP once in the 150-page report.⁹²

Failed Attempt Using the Marine Wartime Acquisition Process (2005)

After graduating from the School of Advanced Warfighting, the Marine Corps assigned McGriff to U.S. Marine Corps Force, Pacific (MARFORPAC), where he continued to pursue the MRAP. At MARFORPAC, he teamed up with Major Gert DeWet of the USCENT-COM plans division, who, like Sinclair, had been born and raised in South Africa.⁹³ DeWet was familiar with MRAPs, having seen them in Johannesburg as a child. McGriff altered his strategy for his second attempt to get the Marines to acquire the MRAP. Instead of arguing for the MRAP's long-term benefits as an essential supporting element in the ship-to-objective maneuver concept of operations, he focused on the MRAP's inherent safety aspects to emphasize the immediate gains the Marine Corps could realize by purchasing commercial off-the-shelf MRAPs for an ongoing conflict. This allowed him to bypass the standard peacetime acquisition process and use the Marine Corps' rapid wartime procurement process. All he needed was an advocate at MARFORPAC to submit the required urgent need statement.⁹⁴

For McGriff and DeWet, the justification for the MRAP was the moral imperative of protecting lives; cost-effectiveness was a distant

91 Cordesman et al., *IED Metrics for Iraq*.

92 U.S. Government Accountability Office, "Actions Needed to Improve the Availability,"

93 Gayl, "MRAP Vehicle," 7-8; and Franz Gayl, interview by author.

94 Gayl, interview by author.

second. Nonetheless, they understood cost was a major priority for budgeters. Yet, once they did the analysis, they were surprised that the MRAP proved more cost-effective than strap-on kits and up-armored Humvees. MRAPs were projected to last two to three times longer than Humvees, and the savings that resulted from lower long-term medical care and death benefit payments due to fewer casualties meant the MRAP was more cost-effective. In December 2004, McGriff and DeWet briefed the deputy commanding general of MARFORPAC, Brigadier George Trautman III. The briefing went favorably, and it led to them briefing the MARFORPAC commander, Lieutenant General Wallace “Chip” Gregson, later that month.⁹⁵

Concurrently, McGriff worked with Sinclair, now an operations officer at the First Marine Expeditionary Force, to generate the urgent need statement. While the urgent need statement required the endorsement of the MARFORPAC commander, it had to originate from a deployed or deploying unit—in this case, the First Marine Expeditionary Force, which was deployed in Iraq.⁹⁶ Recognizing that the First Marine Expeditionary Force staff lacked expertise on the MRAP, Sinclair asked McGriff to help him draft the needs statement.⁹⁷ After being thoroughly staffed through its headquarters, the First Marine Expeditionary Force submitted a priority 1 urgent need statement for 1,169 MRAPs to MARFORPAC on February 17, 2005.⁹⁸ The priority 1 rating was justified, as the statement clearly articulated how the MRAP mitigated the four greatest casualty-producing agents that Marines were facing in Iraq.⁹⁹

To help build a consensus for the vehicles, Gregson directed McGriff to brief the MRAP requirement before the March 2005 Marine Corps Safety Conference at Miramar Naval Air Station. The conference was presided over by the Assistant Commandant of the Marine Corps and included a total of five three-star generals, four

95 Ibid., and Gayl, “MRAP Vehicle,” 8-10.

96 Commandant of the Marine Corps, MARADMIN 533/03, “OIF II Urgent UNS Process.”

97 Gayl, “MRAP Vehicle,” 10-11; and Gayl, interview by author.

98 See “Urgent Universal Need Statement for Mine Resistant Ambush Protected Vehicles” in U.S. Department of Defense Inspector General, “Marine Corps Implementation of the UUNS Process.”

99 Ibid.

two-star generals, and seven one-star generals, including Lieutenant General James Mattis, then commanding general of the Combat Development Command; Lieutenant General James Amos, the Second Marine Expeditionary Force commander who would later become Commandant of the Marine Corps; Lieutenant General Gregson, the commander of MARFORPAC; and Brigadier General D.J. Hejlik, the deputy commanding general of the First Marine Expeditionary Force, who had signed the MRAP need statement. McGriff recommended a phased transition by continuing to armor Humvees while “as quickly and expeditiously as possible, [purchasing] as many MRAPs as possible [to phase out the] Humvees.”¹⁰⁰ Mattis, showing his unwavering commitment, replied, “That’s exactly what we’re going to do.”¹⁰¹ Mattis’s words, unfortunately, failed to translate into action. Following the First Marine Expeditionary Force’s redeployment from Iraq in March 2005, Sinclair and McGriff moved on to other requirements, leaving the MRAP without an advocate.

On receipt of the urgent need statement, the Combat Development Command initially followed the required process. It entered the urgent need into the combat development tracking system and assigned a working group to review the requirement.¹⁰² Surprisingly, the Combat Development Command assigned the Deputy Commandant, Installations and Logistics as the lead advocate for the requirement as opposed to the Deputy Commandant, Plans, Policies, and Operations, who oversees the Ground Combat Element Branch within the Marine Corps.¹⁰³ In the combat development tracking system, Installations and Logistics stated the MRAP requirement was “more appropriate as a [requirement] than as an urgent [requirement].” In practical terms, this meant that the requirement did not need to be filled immediately and could instead be filled somewhere between six months and ten years.¹⁰⁴ In contrast, Plans, Policies and Operations recommended fulfilling the requirement and establishing “an MRAP program of record

100 Gayl, “MRAP Vehicle,” 14-15; and Eisler et al., “Pentagon Balked.”

101 Ibid.

102 U.S. Department of Defense, “Marine Corps Implementation of the UUNS Process,” 11.

103 Gayl, “MRAP Vehicle,” 18.

104 Ibid.; and U.S. Department of Defense Inspector General, “Marine Corps Implementation of the UUNS Process.”

to establish the logistical tail and incorporate this capability into the Marine Corps for the long-term.”¹⁰⁵

The MRAP requirement was briefed in March before the Combat Development Integration Board. The presentation focused exclusively on doctrinal, organizational, training, materiel, leadership and education, personnel, and facility issues. It made no mention, however, of the tactical cost of not fielding the vehicle, the strategic cost of continued casualties, or a comparison of the improvement that fourth-generation mine-resistant vehicles offered over the incremental fielding of first-, second-, and third-generation vehicles.¹⁰⁶ Following the briefing, the integration board submitted an information paper with options for satisfying the requirement to Mattis, who directed the integration board to continue working on a solution. However, the effort quickly stalled. The integration board provided status briefs to the Marine Requirements Oversight Council on March 25 and June 10, 2005, but they were information briefs as opposed to decision briefs because the integration board had failed to develop the necessary courses of action required for the oversight council to make a decision.¹⁰⁷

The integration board provided a third and final status brief on the MRAP requirement to the oversight council on August 8, 2005. Once again, it was purely informational. Although the MRAP requirement was not officially closed as an unfulfilled request until November 7, 2005, it was effectively terminated on March 22 when its status was last updated into the combat development tracking system. An Inspector General investigation conducted in 2008 failed to determine if the MRAP requirement went unfilled due to a deliberate decision or by default, but the outcome was the same: the 2005 MRAP request went unfulfilled.¹⁰⁸

While the MRAP effort stalled, the armoring of Humvees progressed. After receiving emergency supplemental funds in May 2005, General Michael Hagee, the Commandant of the Marine Corps, directed Lieutenant General William Faulkner, Deputy Commandant for Installations and Logistics, to replace all Marine Humvees in theater

¹⁰⁵ Gayl, “MRAP Vehicle,” 19-20.

¹⁰⁶ *Ibid.*, 21-33.

¹⁰⁷ U.S. Department of Defense Inspector General, “Marine Corps Implementation of the UUNS Process,” 12.

¹⁰⁸ *Ibid.*, 8-14.

with up-armored Humvees. Faulkner sent an e-mail to Hagee, Mattis, Gregson, and several other senior Marine officers stating that the up-armored Humvee was the “best available, survivable asset to protect Marine forces and meet immediate mission requirements.”¹⁰⁹ Gregson replied that more than up-armored vehicles were needed in theater and introduced them to the MRAP. The Commandant may not have intended to preclude the Marine Corps from completing the requirements of the MRAP urgent need process, but his memo had that effect.

Success Using the Joint Wartime Acquisition Process (2006–2007)

In 2006, a Marine Corps Forces Central Command (MARCENT) team led the pro-innovation effort. The team included Ms. Susan Alderson, Major Joe Allena, and Lieutenant Colonel Thaddeus Jankowski. Alderson was the Science Advisor to the MARCENT and the First Marine Expeditionary Force. A GS-15, which is the civilian equivalent of a colonel, Alderson became known as the “Mother of the MRAP” for her role in convincing the military to procure them.¹¹⁰ Allena, who helped McGriff coin the term “MRAP” back at Quantico, was now on the MARCENT staff. He brought the intellectual continuity from McGriff’s earlier efforts.¹¹¹ Jankowski was a reserve Marine Corps infantry officer. As a civilian, he worked as a technology management consultant specializing in leading change and technology turn-arounds.¹¹² He had a Master of Science in Management of Technology from the University of Minnesota’s Technology Leadership Institute, where he had “studied disruptive technology and technology as a component of strategy.”¹¹³ Shortly after being mobilized in October 2005, he

109 Ibid., 8.

110 Jeanette Steele, “How ‘Mother of MRAP’ Earned her Name,” *San Diego Union-Tribune*, April 7, 2012, accessed December 20, 2023, <https://www.sandiegouniontribune.com/military/sdut-how-mother-of-mrap-earned-her-name-2012apr07-htmlstory.html#:~:text=First%2C%20because%20she%20the%20Navy.with%20saving%20lives%20in%20Iraq.>

111 Thaddeus L. Jankowski, “Disruptive Technology and Reforming the Pentagon Establishment, Part II: The Origin of MRAPs in DoD,” *Small Wars Journal*, July 16, 2012, accessed December 20, 2023, <https://smallwarsjournal.com/jrnl/art/disruptive-technology-and-reforming-the-pentagon-establishment%E2%80%94ii>; and Jankowski and Allena, interviews by author.

112 Thaddeus L. Jankowski, “Equipping the Force: Ten Guidelines,” *Marine Corps Gazette* 98, no. 10 (2014): 78.

113 Jankowski, “Disruptive Technology.”

was redirected within the MARCENT staff to lead its new technology urgent needs program.¹¹⁴ Together, Alderson, Allena, and Jankowski formed the MARCENT MRAP planning team.

In February 2006, Brigadier General Anthony Jackson, the MARCENT deputy commanding general, visited Marines in Afghanistan. While there, he rode in an MRAP that suffered only minor damage after detonating 14 mines while crossing an anti-personnel minefield. As a result, Jackson became an immediate proponent of the MRAP.¹¹⁵ Shortly after this experience, Jackson conducted a videoconference with his MARCENT headquarters in Florida and stated, "History will judge us on whether or not we buy this equipment for our Marines."¹¹⁶

Allena, who was attending the videoconference, immediately recognized the opportunity. As soon as it ended, Allena sent an e-mail to McGriff stating, "The window for MRAPs has just opened. Send me everything you have." Within an hour, Allena had McGriff's School of Advanced Warfighting paper, MRAP briefs, and other supporting material. After reviewing the files, Allena approached his superior, the MARCENT operations officer, about pursuing the MRAP, but the officer was uninterested. Undeterred, Allena walked over to the MARCENT plans cell and approached Jankowski with the concept.¹¹⁷ By the end of the meeting, Jankowski became convinced that he needed to make the acquisition of the MRAP a MARCENT priority.¹¹⁸

By chance, Alderson was passing through the MARCENT headquarters in Tampa on her way back to the First Marine Expeditionary Force headquarters in California following a visit to Iraq. Alderson was returning from a trip during which she had studied the effectiveness of jammers, but she had also been studying the effectiveness of MRAPs.¹¹⁹ Allena approached her for help, and together, they hatched a plan for Alderson to provide an MRAP brief to Lieutenant General John Sattler, the MARCENT commanding general. She was already

114 Ibid.; and Jankowski, interview by author.

115 Jankowski, "Disruptive Technology."

116 Ibid.; and Allena, interview by author.

117 Allena, interview by author.

118 Allena and Jankowski, interviews by author.

119 Steele, "Mother of MRAP"

scheduled to brief Sattler about the jammers; thus, they decided she would work the MRAP into her presentation instead of requesting a separate meeting that might take months. At this time, only a limited number of MRAPs existed in Iraq, but even that limited number had sustained enough IED attacks to allow statistical analysis. It was clear that MRAPs performed significantly better than other vehicles.¹²⁰ Alderson described the MRAP as her “star...If [troops] are in this vehicle and an IED hits them, they don’t die.”¹²¹ In late May, Alderson briefed Sattler, with Jackson also attending. Sattler approved the proposal to request MRAPs and directed the team to cut the presentation down to seven slides so that he could present it to General Michael Hagee, the Commandant of the Marine Corps.¹²²

The First Marine Expeditionary Force staff lacked the expertise to draft the need statement, whereupon, Jankowski and the MARCENT staff drafted it, just as McGriff had done the year prior. The First Marine Expeditionary Force determined it needed 1,185 MRAPS but submitted the request for only 185 MRAPS on July 21.¹²³ Given the unsuccessful attempt the previous year, the First Marine Expeditionary Force was unwilling to submit another large request. It believed a smaller request was more likely to get approved and acquiring 185 was better than getting none.¹²⁴

After speaking with McGriff, Jankowski believed that the Combat Development Command had torpedoed the 2005 request, so the MARCENT team sought to prevent them from having any role in the approval process.¹²⁵ Thus, they submitted the requirement as a joint urgent operational need through the joint wartime procurement process as opposed to an urgent universal need through the Marine Corps process, thereby cutting the Combat Development Command out of the loop.¹²⁶ They could use the joint process because Sattler

120 Jankowski, “Disruptive Technology;” and Steele, “Mother of MRAP”

121 Steele, “Mother of MRAP”

122 Jankowski, interview by author.

123 Multinational Forces—West, “MNF-W JERRV JUONS,” (Camp Fallujah, Iraq: MNF-W, May 21, 2006; and Jankowski, interview by author; and Gayle, “MRAP Vehicle,” 49-51.

124 Jankowski, interview by author; and Gayle, “MRAP Vehicle,” 51.

125 Jankowski, interview by author.

126 Multinational Forces – West, “MNF-W JERRV JUONS.”

commanded both the First Marine Expeditionary Force and Multi-National Forces West in Iraq. These forces included Army, Navy, and Air Force units. Thus, an urgent operational need originating from the Multi-National Forces West commander could be considered “inherently joint in nature.”

Multi-National Forces West submitted the request through Multi-National Corps – Iraq, to the Multi-National Force – Iraq, to the USCENTCOM. Since this was a joint need as opposed to a service need, it had to be submitted to the joint command, USCENTCOM, as opposed to the service component, MARCENT. However, since a Marine general commanded the Multi-National Forces West, the USCENTCOM staff turned to its Marine component, MARCENT, to validate the request. Given that it had drafted the request, it, of course, approved it.¹²⁷

At a senior Marine Corps executive offsite in early July, Sattler provided the seven-slide MRAP brief to Hagee, who approved the requirement for 185 vehicles. Realizing they now had the support of the Commandant of the Marine Corps, the Multi-National Forces West immediately increased their request by 1,000, bringing the total requirement to 1,185—a number that was nearly identical to the 1,169 that had been requested in 2005.¹²⁸ However, once it became clear that the Marine Corps would have to fund the requirement for all 1,185 MRAPs, the Marine Corps decreased the request to 805. The process may have been joint, but funding was still aligned by services. The Marines were willing to use their supplemental funds to purchase the vehicles for the Marines assigned to the Multi-National Forces West, but they viewed it as the responsibility of other services to fund their own vehicles.¹²⁹

Jankowski's first goal was to ensure the request did not get tabled again. His second was to expand the requirement to include all U.S. troops in Iraq, not just Marines operating in Multi-National Forces West. For the rest of the calendar year, Jankowski and his team shifted

¹²⁷ Jankowski, interview by author.

¹²⁸ Gayl, “MRAP Vehicle,” 51; Jankowski, “Disruptive Technology;” and Multinational Forces – West, “MNF-W MRAP JUONS” (Camp Fallujah, Iraq: MNF-W, July 10, 2006).

¹²⁹ Jankowski, “Disruptive Technology;” and Jankowski, interview by author.

their focus to persuading Army warfighters to request the MRAP. He took the same seven-slide presentation and presented it to officers at the Multi-National Corps – Iraq, Multi-National Force – Iraq, U.S. Army Central, and USCENTCOM, and spent the rest of the year trying to convince them that they needed to request MRAPs.¹³⁰ By the end of 2006, his efforts paid off, as nearly every major subordinate command within USCENTCOM had an approved MRAP requirement.¹³¹ In November, an Army-Marine Corps board established a total requirement of 4,060 MRAPs (1,022 for the Marines, 2,500 for the Army, and 538 for the Navy).¹³² The next month, the Joint Chiefs of Staff validated the requirement.¹³³ Less than a month later, they increased the requirement again. Realizing the opportunity existed to replace all its Humvees with MRAPs, MARCENT increased its requirement from 1,022 to 3,700.¹³⁴ One month later, the Marine Requirements Oversight Council validated its requirement of 3,700 vehicles, bringing the joint requirement to 6,738 vehicles.¹³⁵

The services may have validated the requirement, but they still required funding. Consequently, on March 2, General James Conway, who had replaced Hagee as the Commandant of the Marine Corps, urgently appealed for funding from the Chairman of the Joint Chiefs of Staff. In his memorandum, Conway emphasized the game-changing potential of the MRAP, stating that the Marine Corps “estimates that the use of the MRAP could reduce the casualties in vehicles due to IED attacks by as much as 80%.” He concluded, “Getting the MRAP into Al Anbar province is my number one unfilled warfighting requirement at this time. I request your support in fielding this force protection capability.” At this point, of the \$7.18 billion required to field the 6,738 vehicles, only \$2 billion had been requested in the fiscal year 2007 and fiscal year 2008 budgets, meaning only 1,700 MRAPs could be fielded.¹³⁶

¹³⁰ Jankowski, interview by author.

¹³¹ Jankowski, “Disruptive Technology.”

¹³² James T. Conway, Memorandum for the CJCS, “Mine Resistant Ambush Protected (MRAP) Vehicle” (Washington, DC: Headquarters, United States Marine Corps, March 1, 2007).

¹³³ *USA Today*, “U.S. Military Struggles to Adapt.”

¹³⁴ Conway, “MRAP Vehicle,” and David Wood, “Marines to Replace Humvees in Iraq,” *The Baltimore Sun*, February 15, 2007, accessed December 21, 2023, <https://www.baltimoresun.com/news/bs-xpm-2007-02-15-0702150153-story.html>.

¹³⁵ Conway, “MRAP Vehicle.”

¹³⁶ The breakdown by services for the requests were 1185 (USMC: 805, USA/USN: 380); 4060 (USMC: 1022, USA: 2500, USN:

Later that month, the requirement grew to 7,774 when the Air Force and USSOCOM added to the requirement.¹³⁷

Despite taking over as the Secretary of Defense on December 18, 2006, Robert Gates only became aware of the MRAP when reading about them in a *USA Today* article on April 19, 2007.¹³⁸ Gates was in Iraq when the article was published. Lieutenant General Peter Chiarelli, who was serving as Gates' military assistant, saw the article and pulled it for Gates to read.¹³⁹ The article highlighted that not a single Marine had been killed while riding in MRAPs over the past year despite over 300 attacks. The article also reported a much lower casualty rate.¹⁴⁰ Intrigued, Gates requested a briefing on the MRAP from his staff and was quickly convinced of its necessity. General Robert Magnus, the Assistant Commandant of the Marine Corps, briefed Gates on April 27, revealing that the services had ordered 6,000 MRAPs but only had enough funds to build 1,300 in 2007.¹⁴¹

On May 2, Gates declared that "the MRAP program should be considered the highest priority DoD acquisition program" in a one-page memorandum.¹⁴² That same day, the Joint Requirements Oversight Council ratified the requirement for 7,774 MRAPs, with an estimated cost of \$8.4 billion.¹⁴³ Gates' memo also expressed his concern that the Army was not buying enough vehicles.¹⁴⁴

At this point, Jankowski had successfully convinced every forward deployed commander of the need to replace their entire Humvee fleet, leading to USCENTCOM's request for 17,700 MRAPs for the Army, or "enough to place every soldier operating outside a fortified base in an MRAP."¹⁴⁵ However, the Army had not yet validated this requirement. In the days following Gates's memorandum, the Army tripled

538); 6738 (USMC: 3700, USA: 2500, USN: 538). Conway, "MRAP Vehicle."

137 Jason Sherman, "MRAP Requirement Rises 15 Percent as Navy, Air Force, SOCOM Weigh In," *Defense Daily*, March 23, 2007.

138 Tom Vanden Brook, "Gates praises MRAPs as lifesavers," *USA Today*, May 11, 2008.

139 E-mail with the article's author, Tom Vanden Brook, June 10, 2015.

140 Tom Vanden Brook, "General: No deaths in 300 attacks on MRAP," *USA Today*, April 19, 2007.

141 Barno and Bensahel, *Adaptation Under Fire*, 150.

142 Gates, "MRAP Acquisition;" and Sherman, "Gates Calls MRAP Pentagon's Highest Priority."

143 Jason Sherman, "JROC Ratifies MRAP Requirement, Krieg Weighs New Program Designation," *Inside Defense*, May 8, 2007.

144 Jason Sherman, "Army Eyes \$10 Billion in Procurement Cuts to Fund Larger MRAP Fleet," *Inside the Pentagon*, 23, no. 20 (2007): 14-17, <https://www.jstor.org/stable/insipent.23.20.03>.

145 Sherman, "Gates Calls MRAP Pentagon's Highest Priority."

its requirement to more than 8,000, but that was still roughly half of what USCENTCOM requested. The Army feared that procuring the required 17,700 MRAPs would erode funding and political support for the Joint Light Tactical Vehicle, which the Army sought as the Humvee replacement. The Army did not view the MRAP as a long-term replacement to the Humvee; it viewed it as a vehicle specific to operations in Iraq.¹⁴⁶

DoD sought to fund the initial 7,774 MRAPs through supplemental appropriations, but further increases would necessitate reallocating funds from existing programs within the services' base budgets. With the additional MRAPs requested by the Army, the total cost now exceeded \$24 billion, necessitating cuts from other programs that the Army was hesitant to reduce.¹⁴⁷ On May 25, the Senate approved an additional \$4 billion in the fiscal year 2008 Defense Authorization Bill for MRAPs.¹⁴⁸ In June, the Joint Requirements Oversight Council approved the Pentagon's need to increase its MRAP requirement but resisted setting the number.¹⁴⁹

Funding the MRAPs was only the first step; Gates still needed to get the MRAPs produced. On May 30, Gates directed the services to establish an MRAP Task Force with one objective: "Get as many of these vehicles to our Soldiers and Marines in the field as is possible in the next several months."¹⁵⁰ The purpose of this task force was to "integrate the planning, analysis, and actions necessary to accelerate acquisition of MRAP vehicles."¹⁵¹ On June 1, Gates assigned the MRAP program a DX rating, signifying it was deemed to be "of the highest national defense urgency." This designation required industry to give

146 Jason Sherman, "Army Triples Its MRAP Requirement to More Than 8,000 Vehicles," *Inside the Army* 19, no. 19 (2007): 6-6, <http://www.jstor.org/stable/24824611>.

147 Sherman, "Army Eyes \$10 Billion."

148 Carl Levin, Chairman, Committee on Armed Services, Press Release, *Senate Armed Services Committee Completes Markup of National Defense Authorization Bill for Fiscal Year 2008* (Washington, DC: Senate Armed Services Committee, May 25, 2007), 3, <https://www.armed-services.senate.gov/imo/media/doc/08mark.pdf>.

149 Jason Sherman, "JROC Backs Larger Army MRAP Fleet with Option to Curtail Total Size," *Inside the Navy*, 20, no. 26 (2007): 5-6, <http://www.jstor.org/stable/24845183>.

150 Seth Blakeman et al., *Arming America at War: A Model for Rapid Defense Acquisition in Time of War* (Charlotte, NC: Information Age, 2010), 57.

151 U.S. Government Accounting Office, Statement of Michael J. Sullivan, Director Acquisition and Sourcing Management, Testimony Before the HASC, Defense Acquisition Reform Panel, "Rapid Acquisition of MRAP Vehicles" (Washington, DC: Government Accounting Office, October 8, 2009), 4.

the MRAP program preference for material and production over other defense and commercial orders. The Secretary was particularly concerned about production delays for tires, armor, and steel plates.¹⁵² The demand for this new vehicle far outpaced production capacity. The Joint Requirements Oversight Council did not approve the initial requirement until December 2006; hence, contracts were not awarded until January 2007. Procurement finally started after the Pentagon awarded contracts totaling \$34 million to nine companies.¹⁵³ These contracts stipulated that each company produce four MRAPs for testing and evaluation. Round-the-clock testing at the Army's Aberdeen Proving Ground began on March 27 and concluded in late May.¹⁵⁴

The Marine Corps could not wait for testing to finish; it needed the vehicles immediately. As a result, it started large-scale orders in February: \$44.3M for 90 MRAPs from BAE, \$67.4M for 125 from Force Protection, \$11M for 20 from General Dynamics, \$30.6M for 100 from Oshkosh, and \$37.4M for 60 from Protected Vehicles.¹⁵⁵ In April, the Marines placed an order for another 1,000 MRAPs from Force Protection.¹⁵⁶ In May, the Marines placed an order for another 1,200 MRAPs, worth \$623 million, from International Military and Government.¹⁵⁷

Despite the Congressional hearings dating back to the beginning of the year, it was not until May 22 that elected officials finally became aware of the 2005 urgent universal need statement request. They had been operating under the assumption that the first large-scale MRAP request was the joint urgent operational need submitted in May 2006.¹⁵⁸

152 Emilie Rutherford, "Gates Approves DX Rating for MRAP," *Inside Defense*, June 4, 2007, accessed December 20, 2023, <https://insidedefense.com/daily-news/gates-approves-dx-rating-mrap>.

153 *USA Today*, "U.S. Military Struggles to Adapt," and J. Young et al., Statement Before the Subcommittees on Seapower and Expeditionary Forces and Air and Land Forces of the HASC (Washington, DC: House Armed Services Committee, November 8, 2007), 3.

154 Jason Sherman, "Pentagon Begins Blast, Ballistic Testing of MRAP Prototypes," *Inside the Pentagon* 23, no. 13 (2007): 13, <http://www.jstor.org/stable/insipent.23.13.13>; and Jason Sherman, "Giambastiani, Vice Chiefs to View Final Rounds of MRAP Testing," *Inside Defense*, May 17, 2007, accessed December 20, 2023, <https://insidedefense.com/daily-news/giambastiani-vice-chiefs-view-final-rounds-mrap-testing>.

155 Jason Sherman, "Lawmakers Consider \$311 Million Boost to Speed Army, Marine MRAP Buy," *Inside the Army* 19, no. 10 (2007): 1-9, <http://www.jstor.org/stable/24824061>.

156 United States Marine Corps, "Marine Corps Places Additional Order for Life Saving Vehicles," *Marines.mil*, April 23, 2007, accessed December 20, 2023, <https://www.marcorssyscom.marines.mil/News/Article/509447/marine-corps-places-additional-order-for-life-saving-vehicles/>.

157 Jason Sherman, "IMG Nabs Largest MRAP Award to Date: \$623 Million, 1,200 Vehicles," *Inside Defense*, May 31, 2007, <https://insidedefense.com/daily-news/img-nabs-largest-mrap-award-date-623-million-1200-vehicles>.

158 Jason Sherman, "Marines Rejected Original Request for MRAP in 2005; Biden 'Shocked,' 'Sickened,'" *Inside Defense*, May 23,

Frustrated with the Marine Corps's failure to procure the MRAP sooner, a science advisor within the Marine Corps named Franz Gayl made the 2005 urgent universal need statement public. Gayl, who had retired after 22 years in the Marine Corps in 2002 and worked as a science advisor to the Marine Corps at the Pentagon since his retirement, was instrumental in bringing this issue to light. Lieutenant General Richard Zilmer, Gayl's former commander at the Pentagon, was commanding the Marines in Iraq, and he had brought Gayl over to help because he knew that Gayl "knew how to get money...how the Hill operated, [and] how the Pentagon operated."¹⁵⁹ By the time Gayl redeployed to the Pentagon in the spring of 2007, he had become convinced that project managers at the Combat Development Command were intentionally hampering the MRAP effort because it threatened their "pet programs."¹⁶⁰ He also learned of McGriff's earlier efforts.

In April, some of Gayl's allies arranged for him to brief senior defense officials, but a senior Marine general canceled the briefing.¹⁶¹ Gayl decided to become what some might consider a whistleblower after reading an article in *Inside the Pentagon*. The article quoted Conway telling the Chairman of the Joint Chiefs of Staff that the first MRAP request had been submitted in 2006. Conway also told the Senate Armed Services Committee that the first MRAP request had been made in 2006 because he was unaware of the 2005 request. Gayl asked *Inside the Pentagon* to correct the article to state that the first request had been made in 2005, but when no correction appeared, he e-mailed Sharon Weinberger, a journalist who wrote for *Wired* magazine's national security blog, *Danger Room*, and sent her the 2005 MRAP urgent universal need statement.¹⁶² That afternoon, *Danger Room* published an article, which made the February 2005 need statement public for the first time.¹⁶³

2007, <https://insidedefense.com/daily-news/marines-rejected-original-request-mrap-2005-biden-shocked-sickened-updated>.

159 James Verini, "The unquiet life of Franz Gayl," *Washington Monthly* 43, no. 7 (2011): 21-28, <https://washingtonmonthly.com/2011/06/24/the-unquiet-life-of-franz-gayl/>.

160 Verini, "The unquiet life of Franz Gayl."

161 Gayl, interview by author.

162 Verini, "The unquiet life of Franz Gayl."

163 Sharon Weinberger and Noah Shachtman, "Military Dragged Feet on Bomb-Proof Vehicles (Updated Again)," *Wired* magazine's *Danger Room*, May 22, 2007, accessed December 20, 2023, <https://www.wired.com/2007/05/military-dragge/>.

Upon discovering that the 2005 urgent universal need statement had been ignored, Senator Joe Biden (D-DE) issued a statement saying, “I am absolutely sickened,” and remarked, “It’s easy to throw around words like outrageous and shocking, but this is both.”¹⁶⁴ The statement further underscored the criticality of the situation:

We were told that Marine Corps commanders in Iraq made the first request for Mine Resistant Vehicles on May 21, 2006, for 185 vehicles. Now we learn that Marines on the ground in Iraq made an urgent request to their commanders for 1169 Mine Resistant Vehicles as early as February 2005 but nothing happened. How is it possible that a request that is literally life or death got lost?¹⁶⁵

In a press briefing the next day, Biden urgently called on President Bush to get personally involved and immediately wrote a letter to Bush asking him to make the MRAP a “national priority” given the production capacity obstacles.¹⁶⁶

Biden also stated he was “deeply troubled...that the military leadership ignored an urgent need from commanders in Iraq...in 2005.”¹⁶⁷ In addition, he wrote a letter to the Secretary of Defense asking for an investigation.¹⁶⁸ The next day, an aide to Biden reached out to Gayl to see if he would brief their staffs, to which he immediately agreed. Extremely frustrated by this time, Gayl was willing to brief anyone who would listen.¹⁶⁹ In 2008, Gayl published a lengthy report that was critical of the Marine Corps’ MRAP efforts and alleged “gross mismanagement” of the program to field the vehicles quickly.¹⁷⁰

Gayl’s actions did not come without a cost. The Government Accountability Project reported, “From 2007-2014, Gayl endured a

164 Sherman, “Marines Rejected Original Request;” and Joseph R. Biden, “Biden Calls on President to Make Mine Resistant Vehicles a National Priority,” The American Presidency Project, May 23, 2007, <https://www.presidency.ucsb.edu/documents/biden-campaign-press-release-biden-calls-president-make-mine-resistant-vehicles-national>.

165 Biden, “Biden Calls on President.”

166 Sherman, “Marines Rejected Original Request;” and Joseph Biden, “Letter to the President of the United States” (Washington, DC: United States Senate Committee on Foreign Relations, May 23, 2007).

167 Biden, “Letter to the President of the United States.”

168 Joseph R. Biden, “Letter to the Secretary of Defense” (Washington, DC: United States Senate, June 28, 2007).

169 Verini, “The Unquiet Life of Franz Gayl.”

170 Tom Vanden Brook, “Marines Halt Study Critical of MRAP Program,” *USA Today*, February 28, 2008.

reprimand, several suspensions, a criminal investigation, threats of removal for unacceptable performance, removal of duties, partial loss of his security clearance credentials, proposed demotion and salary cutoff, and other forms of harassment,” due to his report. He eventually won a settlement with the Marine Corps in 2014, which allowed him to keep his job, receive an award, and become part of a team to help the Marine Corps develop and recommend policy guidelines on whistleblower rights and responsibilities.¹⁷¹

Gayl’s actions likely contributed to Congress’s support for funding the vehicles, which remained the biggest challenge. Despite the Joint Requirements Oversight Council’s approval of the various requirements, they remained unfunded. The military had to gain approval from Congress to reprogram money from the current fiscal year, to get supplemental funds, and to reprogram money from future fiscal years to fund the vehicles. The Marine Corps had allocated approximately \$500 million in the fiscal year 2007 supplemental budget for MRAPs. Yet, the Army had reprogrammed only \$20 million.¹⁷² Following the approved increase to 6,738 vehicles, DoD asked Congress in February to reprogram \$2.1 billion from fiscal year 2007 and \$5 billion from fiscal year 2008 to purchase the vehicles.¹⁷³ As of July, only \$2.4 billion had been approved. Gates went to Congress to shift another \$1.3 billion from other programs, but that still left the MRAP far short.¹⁷⁴ Later that month, Congress increased the supplemental budget to provide an additional \$3 billion for the vehicles.¹⁷⁵ In August, the House Armed Services Committee added another \$4.1B to purchase MRAPs in fiscal year 2008, finally providing the funding that the services needed.¹⁷⁶

By the end of 2007, 3,498 MRAPs had been successfully produced.¹⁷⁷

171 Jeff Schogol, “MRAP whistleblower scores victories in settlement with Marine Corps,” *Marine Corps Times*, September 25, 2014, <https://www.marinecorpstimes.com/news/your-marine-corps/2014/09/25/mrap-whistleblower-scores-victories-in-settlement-with-marine-corps/>.

172 Jason Sherman, “Army, Marine Corps Short \$5 Billion for New Armored Vehicles in FY-08,” *Inside Defense*, February 14, 2007, accessed December 20, 2023, <https://insidedefense.com/daily-news/army-marine-corps-short-5-billion-new-armored-vehicles-fy-08-updated>.

173 Sherman, “Lawmakers Consider \$311 Million Boost.”

174 Tom Vanden Brook and Kathy Kiely, “Defense Wants \$1.3B for Safer Vehicles,” *USA Today*, July 18, 2007.

175 Young et al., Statement Before the Subcommittees, 4.

176 Jason Sherman, “Army Eyeing Replacement of All Humvees in Iraq with MRAP Vehicles,” *Inside the Pentagon* 23, no. 18 (2007): 1-11, <http://www.jstor.org/stable/insipent.23.18.01>.

177 Jason Sherman, “MRAP Builders Deliver 1,187 Truck in December, Short of Gates’ Goal,” *Inside the Navy* 21, no. 2

It is somewhat ironic that the surge of forces employing the new counterinsurgency doctrine had significantly reduced the violence by the end of 2007; thus, there was less of an urgent need for vehicles by the time many arrived in Iraq. Over the next five years, the military purchased a total of 27,740 MRAPs for \$47.7 billion.¹⁷⁸

Analysis

A senior military leader did not play a role in the formulation phase, but this case, once again, demonstrated that the senior military leader plays a critical role in the adoption phase. Without a senior military leader as its advocate, the MRAP was doomed to failure during the first two attempts. This case demonstrates just how hard innovation is without a senior military leader taking an active role. Leaders in both the Army and the Marine Corps knew that soldiers were getting killed in under-protected vehicles every day and that these deaths could undermine the war effort. Yet the leaders refused to embrace the MRAP because it threatened existing programs or did not fit their vision for a future war. Had it not been for a general officer riding safely across a minefield in an MRAP, it is doubtful the innovation champions would have ever built the vertical coalition necessary to get a senior military leader to adopt it.

Formulation

The idea for the MRAP was generated in response to a recognized performance gap: the casualties being suffered from IED attacks. As discussed in the AWG case study, knowledge accumulation occurred quickly and simultaneously at all levels of the organization. It was easy to see that

(2008): 13, <http://www.jstor.org/stable/24844712>; and Jason Sherman, "Pentagon Delivers First Batch of MRAPs to Afghanistan," *Inside Defense*, October 30, 2007, accessed December 20, 2023, <https://insidedefense.com/daily-news/pentagon-delivers-first-batch-mraps-afghanistan>.

178 Brett Friedman, "MRAPs on the Way Out," U.S. Naval Institute News, October 3, 2012, accessed December 20, 2023, <https://news.usni.org/2012/10/03/mraps-way-out>.

unarmored vehicles did not offer soldiers adequate protection, but only a few produced the idea of the MRAP as a solution to the IED problem. This case, once again, demonstrates that an individual's education, training, and experience constrain their solution set. When the IED problem became apparent, a V-shaped hull vehicle was a potential solution to the problem, but only to those previously exposed to it. A vast majority of the military had no experience with V-shaped hull vehicles; thus, an MRAP was not part of their solution set. Instead, they turned to solutions they knew, such as strap-on armor or armored Humvees.

Schneck did not develop the idea of mine-resistant vehicles on his own, but he was the first person in the U.S. military to promote them. He gained his knowledge after serving as a countermine expert for the Army and studying overseas operations. Sinclair and DeWet had seen MRAPs while growing up in South Africa. McGriff learned of the MRAP from his School of Advanced Warfighting classmate and then spent a year studying the vehicle. Through frequent discussions at the Quantico Officers Club, McGriff introduced the idea to Allena, who then passed it on to Jankowski. This chain of personal connections was absolutely vital in shaping the promotion strategy and keeping the momentum going for the pro-innovation coalition. Had this chain broken at any point, it seems unlikely the military would have procured the vehicles.

While it is easy to trace the idea's generation or flow, it is more difficult to explain why they viewed the MRAP as a potential solution when others did not, especially considering the evidence demonstrating the superiority of fourth-generation vehicles dated back to the 1970s. There is nothing unique about McGriff and Allena that would explain why they grasped the MRAP as a solution beyond their interaction with Sinclair. One explanation is that McGriff fundamentally viewed the operational environment differently than his fellow Marines, believing that the biggest threat in the ship-to-objective maneuver environment would be mines and rocket-propelled grenades and MRAPs were essential for mission success. By contrast, his peers were perhaps biased by a doctrine that prioritized the mobility of vehicles by the entire Marine fleet. Thus, they rejected the MRAP because it could not be easily transported

and, therefore, did not fit with their vision of war. This view, of course, ignored the fact that their vision of war was not consistent with the war their nation was waging at that time, or the environment described in their own documents.

Explaining why Alderson and Jankowski viewed the MRAP as a solution is a little easier. As a scientist, Alderson was less biased by doctrine or preconceived notions about how the future vehicle fleet should be constructed. Instead, she conducted a quantitative analysis that demonstrated MRAPs were superior to other vehicles. Jankowski's background as a technology and strategy consultant made him unique. He understood how to employ technology to improve organizational performance effectively. Also, he was a professional consultant who specialized in advising companies on employing disruptive technologies to improve performance. Accordingly, he was not predisposed to the widely accepted solution of simply armoring Humvees. He quickly grasped that fourth-generation vehicles were far superior to other generations and recognized how acquiring them would significantly improve organizational performance.

Like the previous cases, this situation underscores how an individual's position within the organization and the individual's time horizon influence their solutions. The adage, "Where you stand depends on where you sit," is particularly relevant here. Civilians and officers in the Combat Development Command and Systems Command, as well as other similar organizations within the Army, were wedded to the regimented multi-year Program of Record process to see the MRAP as a viable solution. They viewed it as a threat to their existing programs. Their focus on producing a "future" vehicle that could be transported by the existing fleet of air and sea vehicles prevented them from addressing the immediate needs of the current conflict.

It is also possible that time horizons may have affected people's solution sets. In 2003 and 2004, many senior military officials believed the military would not be in Iraq very long.¹⁷⁹ Anyone thinking this would have ruled out the MRAP as a solution, given the limited

179 Cody, interview by author, and others.

industrial capability to produce the vehicle in 2004. Why produce it if the war is over before it is delivered? Regardless of the reasons, only a small minority viewed the MRAP as a solution to the IED problem, and because they were relatively junior officers, they needed to find a way to reach a senior military leader who had the authority to adopt their proposed solution.

Adoption

As with the previous case studies, this case finds that a senior military leader is critical for adoption. Bottom-up innovations can be adopted only if the innovators can develop an effective promotion strategy and build the necessary coalition to reach a senior military leader with the authority to adopt the innovation. The first two attempts failed because the innovators employed the wrong strategy and failed to build an effective coalition. The third attempt succeeded because the innovators employed a strategy that built the necessary vertical coalition to reach the Commandant of the Marine Corps.

The MRAP had two innovation champions: McGriff and Jankowski. McGriff championed the first two attempts and Jankowski the third. McGriff's first strategy was to justify the MRAP by tying it to an operational concept and trying to make it a program of record within the peacetime acquisition process. However, he failed to build a horizontal or vertical pro-innovation coalition; as a result, the request never made it past the Combat Development Command and Systems Command, which were wedded to existing programs.

Learning from his failed attempt, McGriff realized he needed a different strategy in 2005. During one of his meetings with combat developers, a senior DoD civilian showed McGriff a diagram explaining the acquisition process. McGriff quickly understood that there were multiple decision points and, hence, rejection points, along the process. Each one often involved the decision of a 2- or 3-star general. McGriff realized that he needed a general officer as an advocate to have any chance for success. Rather than trying to go through the

normal peacetime acquisition processes, he would have better luck trying to procure the vehicles through the Marine Corps wartime acquisition process.¹⁸⁰

During his second attempt, McGriff argued that MRAPs were an urgent operational need that was morally and financially justified. But once again, he failed to build the coalition necessary to overcome the bureaucratic resistance within the Combat Development Command. Mattis, had initially agreed to pursue the vehicles at the March 2005 Marine Corps Safety Conference, but he failed to make it a priority. The absence of a senior advocate, a crucial element in such processes, led to the requirement becoming lost in the combat development tracking system and was never pushed to the Marine Requirements Oversight Council for a decision.

Jankowski was successful because he employed a third strategy and built the necessary coalition. He had learned from McGriff's failed efforts and described how his strategy differed:

They were the Greeks, philosophically advocating MRAPs almost as if logic was useful in convincing the Pentagon Establishment to change course. We were the Romans, constructing all the arguments to go directly to those who could overrule the Pentagon Establishment obstructions, and then standing guard over those requirements so they could not be deferred for study again.¹⁸¹

Recognizing that the Combat Development Command was hindering innovation, Jankowski deliberately bypassed the Marine Corps wartime procurement process by pursuing the joint wartime procurement process. He still faced opposition, but Allena was a valuable mentor and helped develop strategies to bypass obstructionists.

After a particularly frustrating phone conversation, Jankowski approached Allena for help. Allena told Jankowski to list the organizations he needed to coordinate with and the individuals within each organization that were relevant. He then had Jankowski color-code each

¹⁸⁰ McGriff, interview by author.

¹⁸¹ Jankowski, "Disruptive Technology."

officer: green if they supported the MRAP and red if they opposed it. Allena advised working with only those in green and bypassing those in red unless absolutely necessary since they could never convince the obstructionists of the MRAP's merits. Allena also helped Jankowski develop his MRAP argument and translate it into the "Marine speak" that was necessary to influence opinions.¹⁸² He argued that combined operations are conducted simultaneously, not sequentially. Likewise, the counter-IED effort should be pursued in a simultaneous fashion. Jammers, up-armored Humvees, and MRAPs should be pursued simultaneously, not sequentially with MRAPs being pursued only after all else has failed.¹⁸³ In this way, Allena helped Jankowski expand his horizontal coalition.

Jankowski was able to expand the pro-innovation coalition from the start when his team discovered that General Anthony Jackson was a big supporter of the MRAP following his ride in Afghanistan. With Jackson, the pro-innovation coalition finally had a general officer as a badly needed proponent. However, they still needed to get the decision before the senior military leader with the authority to adopt the innovation, in this case, the Commandant of the Marine Corps. Jackson helped facilitate that. This allowed Jankowski to bypass many would-be obstructionists.

The counter-MRAP coalition remained strong and constant throughout. Program managers within the Combat Development Command and the acquisition community within the Army feared it would erode funding and political support for the Joint Light Tactical Vehicle; hence, they actively opposed the vehicle. As predicted by theory, some argued that MRAPs cost too much. As McGriff describes it, "To a man...the reaction to the MRAP was, 'It's too expensive, we'll never do it.'"¹⁸⁴ While the counter-coalition was successful in thwarting earlier efforts, it failed to stop the third attempt because the innovators built a vertical coalition, to include Jackson and Sattler, that was able to get the decision before the Commandant of the Marine Corps.

¹⁸² Allena, interview by author.

¹⁸³ Ibid.

¹⁸⁴ Jankowski, interview by author.

As with the previous cases, this case finds that elected and appointed officials have a role in adoption, but their role is primarily as steadfast supporters. Contrary to the view of some, that a reluctant military adopted the MRAP only after being forced to by Gates, the evidence shows that Gates's primary role was to secure funding for vehicles that his military leaders were asking for, as opposed to forcing unwanted vehicles on them. While the innovators had the Commandant's support, they still needed to gain the support of the Chairman of the Joint Chiefs of Staff because it was a joint requirement. Also, with the cost now exceeding \$10 billion, the military could not fund the program without the support of elected and appointed officials.

Months before Gates, or any other policymaker, took an active role in advocating for the MRAP, the military had already approved a requirement for thousands of MRAPs. The original Marine request in May 2006 may have started with 185 vehicles, but the services had approved the procurement of more than 7,000 before any elected or appointed officials were involved. By March 2007, the military's validated requirement stood at 7,774 vehicles. This is the same month Conway sent a memo to the Chairman asking for funding assistance. Congress got involved only when the requirement grew so large that hearings were required to fund the request. However, these hearings were designed only to justify the requirement and reallocate funds from other projects or obtain supplemental funds, instead of hearings intended to convince the military to purchase the vehicles.

Civilian policymakers became actively involved only when the validated requirement exceeded \$7 billion. Biden's involvement started with the hearings, but his role is also best described as an adherent supporter.¹⁸⁵ Gates became deeply involved only after reading the *USA Today* article in April. The evidence suggests that Gates forced the Army to purchase more vehicles than it likely would have otherwise. Before Gates got involved, USCENTCOM had already requested 17,700 MRAPs for the Army, but Army leaders were only endorsing a total of 2,500.¹⁸⁶ Gates's pressure likely resulted in the Army increasing

185 Sherman, "JROC Ratifies MRAP Requirement."

186 Paul McLeary, "Majority of US MRAPs to Be Scrapped or Stored," *Defense News*, January 5, 2014.

its requirement to 8,000 in May 2007. But, at best, pressure from Gates and Biden resulted only in the military purchasing the additional vehicles, not the initial 7,774 vehicles. There is no evidence that civilian policymakers were actively involved prior to this point. Gates claimed that “to my chagrin, not a single senior official, civilian or military, supported my proposal for a crash program to buy thousands of these vehicles,” but that simply is not true.¹⁸⁷ Conway had sent his memorandum to the Chairman asking for his help to secure the \$7.18B that was required to procure 6,738 vehicles more than six weeks prior to Gates even knowing such a vehicle existed.¹⁸⁸

Thus, despite what was a much more active role by civilian officials in this case than in previous ones, this case once again demonstrates that civilian officials can best be described as steadfast supporters of the military’s innovative efforts. It took months of testimony, but Congress eventually supported the multi-billion-dollar request. While Gates and Biden pressured the military to purchase additional MRAPs, they had no role earlier in the process. They got involved after the military had already validated the request for nearly 8,000 vehicles.

Implementation

This case is unique in that once the innovation was truly adopted, the only real obstacle for the military was to secure funding, ensuring implementation was not an issue. It was easy for commanders to know if their subordinates were following their directive to use the MRAP. No one wanted to be in the unenviable position of reporting to their commander that their troops had suffered casualties hitting an IED in a Humvee after they had been directed to use an MRAP. Thus, it was easy for commanders to overcome the principal-agent problem and know if the vehicle was being used. Additionally, there were few “martyrs” that wanted to ride in a vehicle protected by hillbilly armor when they could instead ride in an MRAP.

187 Robert Gates, *Duty: Memoirs of a Secretary at War* (New York: Vintage, 2015), 122.

188 Conway, “MRAP Vehicle.”

Effectiveness

There are two primary ways to view effectiveness: cost-effectiveness and mission effectiveness. The evidence clearly demonstrates that the MRAP significantly reduced fatalities and other casualties. While the fatality rate was not reduced to near zero, as the Rhodesians had experienced, this should not be surprising. The IEDs the U.S. faced in Iraq and Afghanistan were much more sophisticated than the mines the Rhodesians faced in the 1970s.¹⁸⁹ Between January 2009 and July 2010, nearly 80 percent of roadside bomb attacks on Humvees in Afghanistan killed at least one occupant. During that same time, only 15 percent of attacks on MRAPs resulted in a fatality.¹⁹⁰ In his memo to the Chairman when he was the Commandant of the Marine Corps, Conway stated that the Marine Corps “estimates that the use of the MRAP could reduce the casualties in vehicles due to IED attacks by as much as 80%.”¹⁹¹ Other data showed that the number of troops killed per IED attack in Iraq was 14 times higher for Humvees than MRAPs.¹⁹² Anecdotally, soldiers also believed that MRAPs saved their lives.¹⁹³ One Buffalo MRAP had been hit by more than sixty bombs without any fatalities or permanent damage to the body of the machine.¹⁹⁴

The evidence also tends to support the claim that MRAPs, despite their cost, were more cost-effective, though this claim is tougher to prove. McGriff’s predictive analysis back in 2005 found the MRAPs to be more cost-effective in the long term. Alderson came to the same conclusion after analyzing data in 2006. One challenge is that the analysis is based on assumptions that are open to debate: estimating the number of lives saved, the replacement cost of a soldier, the lifetime health care cost for injured service members, etc.

189 McGriff, “MRAP Vehicles,” 15-16.

190 Tom Vanden Brook, “Armored Vehicles Cut IED Deaths,” *USA Today*, September 7, 2010.

191 Conway, “MRAP Vehicle.”

192 Tom Vanden Brook, “Officials Say MRAPs Made the Difference in Wars,” *USA Today*, September 30, 2012, accessed December 20, 2023, <https://www.usatoday.com/story/news/world/2012/09/30/mraps-saved-lives/1600693/#:~:text=WASHINGTON%20%2D%2D%20Data%20collected%20from,2%20official%20told%20USA%20TODAY>.

193 See, for example, LEAD Public Affairs, “MRAPs on the move,” Army.mil, January 13, 2008, accessed October 25, 2023, http://www.army.mil/article/9979/MRAPs_on_the_move/; David Axe, “The Great MRAP Debate,” *Breaking Defense*, October 1, 2012, accessed October 25, 2023, <http://breakingdefense.com/2012/10/the-great-mrap-debate-are-blast-resistant-vehicles-worth-it/>.

194 Hasik, *Arms and Innovation*, 118.

Chris Rohlfs and Ryan Sullivan, economics professors at the Naval Postgraduate School and Syracuse, respectively, made headlines when they argued that the MRAP was not worth its price, claiming that it provided only marginally more protection than an up-armored Humvee and, thus, the \$47.7 billion that was ultimately spent was not worth the cost.¹⁹⁵ However, Ashton Carter, as Deputy Secretary of Defense, and Michael Gilmore, as Director of Operational Test and Evaluation at DoD, pointed to several methodological arguments that undermined their analysis.¹⁹⁶ Gayl also pointed out a number of methodological flaws in their analysis.¹⁹⁷

In 2011, the Pentagon's Joint Program Office for MRAPs estimated that the MRAP saved as many as 40,000 lives. Gates also stated, "Thousands and thousands of lives have been saved and multiples of that in terms of limbs." The Pentagon has since backed off these high numbers, but Michael O'Hanlon, a military analyst with the Brookings Institution, stated that if MRAPs had saved "even 3,000, it's clearly worth it."¹⁹⁸ From an economic perspective, the MRAP appears to have been cost-effective. If other factors are considered, such as the moral imperative of saving lives, it only bolsters the case that the MRAP improved performance. Also, from a policy perspective, soldiers killed by IEDs were the single greatest factor in undermining support for the war and the Bush administration. Hence, the MRAP, by saving lives, was also politically beneficial.

A final question that must be addressed is whether the MRAP improved mission effectiveness. Even if the MRAP saved lives, how did it impact the operational mission? Some, like counterinsurgency theorist Andrew Krepinevich, question the MRAP's effectiveness in counterinsurgency, stating, "MRAPs seem to run counter to U.S. counterinsurgency doctrine, which encourages soldiers and Marines to 'get out and walk.'" He believed that "MRAPs may provide better

195 Chris Rohlfs and Ryan Sullivan, "The MRAP Boondoggle," *Foreign Affairs*, July 26, 2012, accessed December 20, 2023, <https://www.foreignaffairs.com/world/mrap-boondoggle>.

196 Ashton B. Carter and J. Michael Gilmore, "Running the Numbers on MRAPs," *Foreign Affairs*, October 9, 2012, <https://www.foreignaffairs.com/united-states/running-numbers-mraps>.

197 Axe, "The Great MRAP Debate."

198 Vanden Brook, "Officials Say MRAPs Made the Difference;" and Tom Vanden Brook, "Gates: MRAPs Save 'Thousands' of Troop Lives," *USA Today*, June 26, 2011.

protection for troops at the expense of accomplishing the mission.”¹⁹⁹ On the other hand, then Deputy Secretary Carter and others argued that the “MRAP provided another benefit, too, one that is not as easy to quantify with statistics but is important in modern warfare. As the ability of vehicles to keep soldiers safe was proved, troops and commanders became more confident.”²⁰⁰

What is often ignored by those arguing against the MRAP is that, had the U.S. continued to sustain casualties at a high rate, the public’s support for the war might have waned, and a loss of public support could have caused a premature withdrawal, which would have adversely affected the mission. Also, if troops felt safer, it likely positively impacted their morale, which cannot “be underestimated.”²⁰¹

Ultimately, it is tough to know for certain whether the MRAP improved or hampered combat effectiveness in Afghanistan and Iraq, but it is reasonable to conclude that it improved performance. If commanders thought MRAPs saved lives, then it likely encouraged them to patrol more, conduct more meetings, and conduct other tasks that should positively impact counterinsurgency operations—with the caveat that the vehicles were used primarily to transport personnel or equipment from point to point and not as a replacement for foot patrols. Ultimately, the soldier must still get out and walk. If the MRAP simply became a mobile base from which soldiers never leave, then the MRAPs would hamper counterinsurgency operations—but this was not how the U.S. military employed them.

Conclusion

The MRAP is a stark example of a failure to innovate. Some might give the U.S. military the benefit of the doubt and argue that it never could have anticipated the IED threat it would face in Iraq. However,

199 See, for example, Andrew Krepinevich and Dakota Wood, *Of IEDs and MRAPs: Force Protection in Complex Irregular Operations* (Washington, DC: Center for Strategic and Budgetary Assessments, 2007), 60, <https://csbaonline.org/uploads/documents/2007.10.17-Of-IEDs-and-MRAPs.pdf>.

200 Carter and Gilmore, “Running the Numbers on MRAPs.”

201 Vanden Brook, “Gates: MRAPs save ‘thousands’ of troop lives.”

the military did not need a crystal ball to predict it. All it needed to do was examine the conflicts it had been involved in during the previous 30 years or review its own documents to know that its current fleet of vehicles was not survivable. The military rejected the MRAP because it did not fit its vision and culture for an expeditionary war.

When it comes to wartime innovation, the MRAP initially failed during the adoption phase because its supporters could not overcome the institutional resistance, a formidable obstacle that stood in the way of reaching the senior military leader capable of adopting it. Despite overwhelming evidence demonstrating the lifesaving value of the MRAP, programmers remained wedded to the Joint Light Tactical Vehicle and viewed the MRAP as a direct threat to their project. Thus, the innovation champions were unable to get the decision to procure the vehicles in front of the senior military leader who could have adopted them.

The innovation was successful only when the pro-innovation coalition employed an effective strategy to bypass institutional resistance and build the necessary vertical coalition to reach the senior military leader. Learning from the earlier failed attempts, the innovation champions used the joint wartime procurement process to bypass the Combat Development Command. They also expanded their pro-innovation coalition vertically, which allowed them to get the request to the Commandant of the Marine Corps. The Commandant fully recognizing the value of the vehicles, threw his support behind the request and made the procurement of the vehicles a top priority for the Marine Corps.

At this juncture, the focus shifted to securing the support of Congress to fund the request. While civilian policymakers played a crucial role in providing the funding, they became involved only after the military made a request exceeding \$7 billion. Gates, in particular, may have forced a reluctant Army to purchase more than it otherwise would have. Like Congress, however, he became involved only after the military had alerted policymakers of the need to procure thousands of vehicles. This case underscored once again the pivotal role of the senior military leader during the innovation process's adoption phase.

This chapter summarizes the study's major findings on leadership and innovation, military innovation, and innovation in a broader context. It also presents a set of recommendations that hold the potential to significantly enhance the development of military leaders who are more innovative.

Leadership and Innovation

All four cases demonstrated the pivotal role of the senior military leader in determining the fate of an innovation. The senior military leader's influence is critical during each phase of the innovation process (see Table 7-1). During the formulation phase, the senior military leader can facilitate or impede the development of innovative ideas through their influence tactics. During the adoption phase, the senior military leader must make a deliberate decision to adopt an innovation. Once adopted, the senior military leader must often garner the support of policymakers who can authorize the change and appropriate the necessary resources to implement the innovation. During the implementation phase, the leader must employ the right influence tactics to overcome resistance from within their organization to ensure that innovation is implemented.

Formulation

In two of the cases examined within this study, problem identification was immediate. In the case of the AWG and the MRAP, knowledge accumulation about the vulnerability of existing vehicles to IEDs was rapid and uniform across the Army. In the case of counterinsurgency doctrine and the F3EA cycle, knowledge accumulation about the insurgency and al Qaeda in Iraq was slower and far from universally recognized. In each case, the accumulation of knowledge eventually led to the recognition that a performance gap existed. For each, the gap was primarily due to an enemy capability that the U.S. military was unable to counter effectively. This, in turn, led to a search for solutions. Some solutions were innovative, such as new doctrine or new organizational constructs, while others were adaptive, such as thicker armor or better jammers.

An individual's potential solution to a problem is constrained by the technical expertise they have gained through their education, training, and experience; their creative thinking skills; and their position within the organization. Even if multiple individuals identify the same gap, they develop different solutions because they have different perspectives, creativity, and experiences. During war, organizations lack the luxury of time necessary to develop new knowledge; therefore, individuals are constrained by the solution set that they already possess. Similarly, organizations are constrained by the people that they have assigned to various divisions.

The cases support earlier research findings that the most critical traits for leaders of innovative efforts are domain-specific technical expertise, creative problem-solving skills, and openness. General Petraeus and other successful experimenters of counterinsurgency doctrine gained their expertise during their studies at civilian graduate schools. This allowed counterinsurgency theory to be part of their solution set. In contrast, their peers lacked this expertise, consequently, their solution set did not include counterinsurgency theory.

While technical expertise can be gained, this clearly takes time. General Odierno has been criticized for failing to adopt counterinsurgency principles as a division commander early in the war but

embraced the doctrine during subsequent deployments. Similarly, Task Force 714 needed time to gain technical expertise in searching for targets before it could develop the F3EA cycle. Its experience pursuing Saddam Hussein was essential in this regard.

Given that innovation is rooted in domain-specific expertise that can only be acquired over time, it is not surprising that the bulk of innovative ideas, as opposed to adaptive ones, originate from seasoned military leaders. This also explains why the innovative ideas examined in this study were developed from within the military instead of outside policymakers or industry. Quite simply, military innovation requires a level of domain-specific expertise that is best, and maybe only, gained through military experience. As military operations become increasingly complex, this seems even more likely in the future.

The years spent in special operations provided General Cody and General McChrystal with the creative problem-solving skills and the technical expertise relevant to the performance gaps that the U.S. Army faced. They both had experience pursuing unconventional threats. Thus, Cody understood it was essential to get “left of boom” and go after the IED network. Likewise, Colonel Hughes’s earlier experiences in the Combating Terrorism Directorate gave him the technical expertise to understand the IED network and search for a solution that focused on the enemy rather than the tactic. In contrast, the majority of the Army lacked this experience and searched for technical solutions to defeat the IED or mitigate its effects.

Another reason individuals and subunits develop different solutions to the same problem is explained by where they sit within the larger organization. Individuals in research and development units are likely to focus on technical solutions, soldiers at the lowest level focus on immediate solutions requiring relatively few resources, and members of Congress gravitate toward solutions that require funding. At the same time, doctrinal proponents search for doctrinal solutions. Conventional units had no understanding of al Qaeda; therefore, it is not surprising that the innovative solution was developed by Task Force 714, whose primary focus was al Qaeda. Likewise, counterinsurgency doctrine was expected to be developed by the Combined Arms Center, which

is responsible for much of the Army's doctrine. It also explains why the Combat Development Command did not view the MRAP as a solution to the IED problem—the developers were instead wedded to existing projects and prioritized these projects over warfighter needs.

An individual's position within the organization also determines the resources that they have available to dedicate toward innovative efforts. Individuals will often self-constrain their search for a solution to those they believe they can feasibly execute. Cody had the entire Army at his disposal; hence, his potential solution set was broad. Thus, creating a new organization with hundreds of people and costing millions of dollars was a possible solution for him. By contrast, a lower-level leader, such as a lieutenant or captain, would not consider this a feasible option. They would immediately discard it as a potential solution, if they considered it at all, and instead pursue something like hillbilly armor.

Regardless of where the idea originates, the cases support the postulate that senior military leaders play an important role in formulating innovative ideas. Petraeus, Cody, and McChrystal may have provided the initial idea or vision, but they had to rely on their subordinates to develop their respective innovations. Each selected the right projects to invest in: counterinsurgency doctrine, the IED Task Force/AWG, and the F3EA cycle and the network. Each was deeply involved in their project's development and frequently interacted with their team. Yet they allowed their team sufficient freedom. For each, the innovation was clearly a priority. Each also established or maintained a culture in which innovation was encouraged. An innovative culture already existed in Task Force 714 when McChrystal arrived; he simply perpetuated it. Cody and Petraeus had to change the culture of their organizations. Cody's creation of the Rapid Equipping Force and Strategic Planning Board made it clear that the status quo was unacceptable, and innovative ways to accomplish the mission were the new norm. Likewise, Petraeus's methods in creating a manual—such as including outsiders—fostered a culture more conducive to innovation.

In contrast, actions by General Wallace and General Casey impeded innovation. Wallace lacked the domain-specific expertise required to provide the intellectual stimulation to develop innovative

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TABLE 7-1. Leadership model of military innovation applied to the cases

doctrine. This contributed to his lack of involvement during the manual's development. He also failed to provide Colonel Horvath with the necessary intellectual resources to develop an effective doctrine. This is not a critique of Wallace as a leader. The Army failed to provide Wallace and most Army leaders with technical expertise in counterinsurgency because the Army had purged it from its training, doctrine, and education. Wallace did the best he could and at least recognized the need for doctrine, but he simply lacked the expertise to develop it. Thus, he failed to develop an innovative doctrine.

Casey's influence tactics were much more detrimental to innovative efforts in Iraq. One of the critical tactics is selecting the right projects. By pulling troops out of populated areas and consolidating them onto large bases, he effectively stifled any real innovation with counterinsurgency and, in effect, discarded counterinsurgency as an idea that subordinates could develop, with exceptions like Colonel McMaster notwithstanding. Casey was under immense political pressure to consolidate the forces and turn over security to the Iraqis, but it made concepts being taught at his counterinsurgency academy impossible to implement.

Likewise, Army and Marine Corps leaders failed to pursue the MRAP because they selected the wrong projects. They were too focused on developing expeditionary vehicles that were not survivable in Iraq's combat environment. Consequently, they remained wedded to a slow bureaucratic and decades-old acquisition process that was the antithesis of innovation. The project teams, far from being diverse, were detached from the operational environment and largely disconnected from operational commanders. Despite operating in this anti-innovative environment, a handful of Marine Corps majors were able to develop the MRAP as a solution to the IED problem. However, the stifling environment also made the struggle for adoption especially challenging.

General Sanchez's leadership is worthy of a separate discussion. By most accounts, he provided little guidance to his subordinates. Thus, his five division commanders operated with significant autonomy, and each operated very differently. Despite Sanchez failing to employ any of the important influence tactics, Petraeus was able to experiment with

counterinsurgency doctrine effectively. This demonstrates that formulating innovative ideas may be possible without employing many of these influence tactics. Yet, at the same time, these ideas are not likely to expand beyond the experimenting organization.

This study strongly supports previous research findings that the success of an innovation depends heavily on how well it is communicated. This is especially important for complicated innovations, which are less likely to be adopted and implemented because people may not be able to grasp them. Petraeus, recognizing this challenge, strategically leveraged the media and Internet during the adoption phase and used command letters during the implementation phase to ensure the doctrine was clearly understood. Despite Colonel Miller coming up with the F3EA construct months earlier, the concept became clear to McChrystal only when Colonel Sacolick presented him with a simple slide. This provided McChrystal with a way to articulate the concept to people inside and outside his command. Likewise, Major McGriff realized that mine-resistant vehicles required a name; hence, he coined the term “MRAP.”

Adoption

The cases confirmed that the senior military leader serves two critical roles during the adoption phase. First, they decide whether to adopt the innovation. Second, they must gain the support of civilian policymakers if required to fund or authorize a major military innovation. Thus, the senior military leader's most important efforts during the adoption phase are primarily external to the military. This study also reveals that the struggle for adoption becomes even more critical when innovations are developed from the bottom up. A pro-innovation coalition often requires an innovation champion to develop an effective strategy to expand the pro-innovation coalition horizontally and vertically to reach the senior military leader whose approval is required for adoption. If the coalition does not expand, then the idea will die during the adoption phase. During this phase, the senior

military leader may have to build his own external pro-innovation coalition to gain the support of policymakers.

The initial failure of counterinsurgency doctrine and the three attempts to procure the MRAP demonstrate the critical role of strategy and coalition building for bottom-up innovations. Counterinsurgency doctrine initially languished because no one was championing its cause, even as some were successfully experimenting with it in Iraq. McGriff's first two attempts failed because he employed the wrong strategy—using the peacetime acquisition process and the Marine Corps wartime acquisition process—and because he failed to build the necessary coalition. Colonel Jankowski was effective because he used the joint wartime procurement process and built the necessary vertical coalition to reach the senior military leader who could adopt the innovation.

This study supports the postulation that the adoption of a major military innovation requires the deliberate decision of a senior military leader. This is consistent with the findings of many studies that innovation is unlikely to succeed without the support of top management. Most major military innovations—including the four in this study—involve new doctrine, new goals, new organizations, and new high-cost items that only a senior military leader can direct. For instance, adopting counterinsurgency doctrine required both the Combined Arms Center commander (a three-star general) and the Multi-National Force – Iraq commander (a four-star general). The Army's G-3 (a three-star general) or vice chief of staff (a four-star general) was required to create the AWG. The Task Force 714 commander (a two-star general) was required to adopt the F3EA cycle and its supporting network. And the Commandant of the Marine Corps (a four-star general) was required to procure the MRAP.

The innovations of counterinsurgency doctrine under Wallace and Casey are listed on the table as being partially adopted "(Y/N)." They would be considered partially adopted since both attempted to adopt the doctrine—Wallace with the development of the interim manual and Casey with the creation of the counterinsurgency academy—yet both were so flawed in execution that neither could be considered a successfully formulated innovative idea. Since both innovations failed

at the formulation phase, it was simply impossible to truly adopt and implement the proposed change. Neither could produce “a major change that improved organizational performance” which is necessary to be considered an innovation. In effect, if an innovative idea fails to be developed, it is impossible to adopt and implement something that could be considered innovation. The change will fail to significantly improve organizational performance, even if the senior military leader carries out actions such as adopting the change or taking actions to enforce its implementation.

This study also found that while the senior military leader is critical for adoption, the proponents often require the support of policy-makers to fund or authorize the desired change. Without President Bush’s nomination of Petraeus to take command of the Multi-National Force—Iraq and Bush’s authorization for the additional troops required to implement the doctrine, it is highly questionable whether the doctrine would have been implemented in Iraq. The creation of the AWG required the support of the Secretary of the Army to sign the charter and congressional approval to authorize its funding in the annual appropriations bill. Fielding the MRAP required the support of the Secretary of Defense and congressional funding approval. While the F3EA doctrine did not require direct support from outside the military, the network that McChrystal built to execute the strategy required the support of Congress to authorize its funding and manpower growth.

Thus, civilian policymakers were almost always directly involved in the major military innovations studied here, but their role is best described as supportive of the military’s efforts as opposed to a more active role of directing a reluctant military to change. As discussed earlier, one reason could be that civilian policymakers lack the domain-specific expertise to take a more active role in the innovation process.

Representative Duncan Hunter emerged as one of the more proactive policymakers. While his efforts sometimes were at odds with those of General Votel, the disagreements had more to do with the fielding of specific equipment than the direction of the broader innovative effort. Likewise, Cody described having a great relationship with Congress

and commented that the Army always got more than it requested. Votel also found Congress supportive, remarking that its members encouraged him to be “extremely risk tolerant.”¹ Only Air Force Secretary Roche attempted to impede any of the innovative efforts studied here, but he lacked the ability to stop Cody because Cody had the support of more senior policymakers.

Bush and Secretary Gates played important roles, but again, it was not until late in the adoption phase and only after the senior military leader had adopted the innovation. Both could be described as steadfast supporters of the military’s innovative efforts. For instance, Bush’s nomination of Petraeus to take command of the Multi-National Force—Iraq was critical to the successful implementation of counterinsurgency doctrine. Yet, this was the first time Bush became involved with anything related to counterinsurgency doctrine. Bush never pushed the military to develop or implement doctrine that it did not want. Similarly, Gates was unaware of the MRAP until the military had already approved the procurement of nearly 8,000 MRAPs. He may have forced the Army to purchase more than it might have otherwise, but by that time, the request had been generated entirely within the military without any civilian policymaker involvement.

The cases also found that senior military leaders may have to employ influence techniques to gain the support of policymakers—either directly or indirectly—through the media or other measures. Petraeus used *Military Review*, actively engaged media members, posted the doctrine online, used Nagl to help his unofficial media campaign, and placed respected members of his pro-innovation coalition on General Pace’s “Council of Colonels.” During the adoption phase, Cody’s role consisted primarily of engaging members of Congress for their support. As commander of Task Force 714, McChrystal was not able to engage with Congress directly, but he did leverage the opportunity when members or staffers traveled to Iraq. McChrystal would politely tell them that he would not pretend to know how to do their job, but he would add, “It’s amazing

1 Votel, interview by author.

in World War II that we made 4-5 liberty ships a day; why aren't we doing the same with Predators? If you could do more, it would be Predators.”² For the MRAP, the Commandant of the Marine Corps was actively pursuing members of Congress for funding, but as soon as Gates became aware of it, he became an instant advocate for the vehicle. Thus, the Commandant's work was done when the policy-maker pursued the required funding.

Implementation

This research is consistent with previous studies that find successful implementation is largely determined by the leader's ability to overcome the principal-agent problem. Leaders who employ successful techniques to overcome the information asymmetry problem make it much harder for subordinates to impede change. In the cases studied here, successful techniques included selecting and empowering trusted agents into critical positions, making innovation a clear priority, communicating innovation is a priority, and obtaining unfiltered access to information through videoconferences, battlefield circulation, debriefs, or direct reporting.

Petraeus, Cody, and McChrystal brought in trusted agents to serve in critical positions. Petraeus brought in Nagl, Meese, Rapp, Mansoor, and other “Sosh” alumni who had taught in the same department at West Point that he had. Cody brought in Hughes and Votel. McChrystal brought in Flynn and Fuller and assigned his best officers to the most critical liaison positions. Each, in their own way, anticipated resistance and developed a plan to overcome it. When it came time to implement the innovation, each ensured that it was clear the innovation was one of their top priorities—if not their top priority. On Petraeus's first day of command in Iraq, he sent the first of what would be many letters to his subordinates emphasizing the importance of providing security to the Iraqi people. McChrystal's chief of staff made it clear: “You are

2 Wall, interview by author.

either a martyr or a zealot” when it came to embracing change. By contrast, Wallace never made the development of the doctrine a top priority, thus, it was easier for his subordinates to resist the implementation of the interim doctrine.

Each senior military leader overcame information asymmetry by gaining access to unfiltered information to assess and ensure the innovation’s implementation. Petraeus and McChrystal used daily videoconferences as forums to get their message out and assess their subordinates’ actions. They both used frequent battlefield circulation to personally assess the implementation within subunits and to solicit unfiltered information from the lowest levels. By the nature of his position within the Pentagon, it was impossible for Cody to conduct battlefield circulation; therefore, he did the next best thing—he had the field teams send their reports directly to the Pentagon. Cody had the teams personally debrief him or Votel immediately after redeploying from Iraq, and he ensured all decision briefs went to him personally. Petraeus solicited information from his team of “informants” and experts like Federick and Kimberly Kagan. Likewise, Cody directed Hughes to be his “scout” to identify dissenters within the Pentagon. While all three had to remove some obstructionists from their positions, firing individuals was the exception and was used as a last resort. By contrast, Wallace was unable to implement the doctrine into professional military education because he could not overcome the institutional resistance of his instructors. Petraeus overcame this resistance by closing the school for three weeks and having the students help develop new instruction to force the new doctrine’s implementation in the classroom.

In some ways, McChrystal’s task could have been the most difficult. He knew he had to get an entire organization of headstrong individuals to buy into his concept. He also knew that talk was cheap, so the only way to win them over was to demonstrate effectiveness. His subordinates were initially hesitant to give up any control to an unproven headquarters, but they quickly saw the benefits. McChrystal’s biggest challenge, however, was gaining and maintaining the support of outside agencies whose partnerships were critical to the innovation’s

success. Recognizing this challenge, he dedicated most of his efforts here. He placed his best officers as liaisons at the most critical partnerships—like Flynn to the CIA—and conducted routine visits to partner headquarters to keep the partnerships strong.

Although Wallace failed to develop an innovative doctrine, he did attempt to implement the flawed doctrine he had developed. In this regard, he was only partially successful. He brought in Darley as editor of *Military Review* to help elevate the Army's knowledge of counterinsurgency. However, that appears to be his only significant attempt at appointing someone to help implement change. While the doctrine was important to him, he did not prioritize it as Petraeus did and so he failed to force instructors to implement the doctrine into the Army's professional military education. He undoubtedly used videoconferences and "battlefield circulation" to assess his command. However, since he did not use these to prioritize implementing change directly related to counterinsurgency doctrine, they are listed as "no" on the table. Wallace did, however, successfully implement counterinsurgency scenarios into training and scenarios in addition to his changes with *Military Review*; thus, the innovation of counterinsurgency doctrine could be considered partially implemented.

Likewise, Casey may have created a counterinsurgency academy, but this was the extent of his efforts at implementing counterinsurgency doctrine. For him, implementing counterinsurgency doctrine was a lower priority than consolidating forces on large bases and turning security over to incapable Iraqi forces. Like all good commanders, Casey used different techniques to gain access to unfiltered information, but he did not use these techniques to help implement counterinsurgency doctrine; therefore, they are listed as "no" on the table. Thus, establishing a counterinsurgency academy by itself is not enough to be considered a successful or even a partially successful innovation.

Resistance to the MRAP was most apparent during the adoption phase by program managers and other officers who were afraid the MRAP would cause their projects to lose funding. During the implementation phase, resistance was muted because it was easy to

overcome the information asymmetry of the principal-agent problem. It was easy for commanders to know if MRAPs were being used. Given the requirement to report all IED attacks, no one wanted to report that they hit an IED in anything other than an MRAP. As Commandant of the Marine Corps, Conway effectively communicated that the MRAP was his “number one unfilled warfighting requirement” in his letter to the Chairman of the Joint Chiefs of Staff.

Ultimately, the cases vividly illustrate the indispensable role of senior military leaders in every phase of the innovation process. They also underscore the effectiveness of the leadership model of military innovation in comprehending and explaining the intricacies of war-time innovation.

Evaluating Other Models of Military Innovation

This research finds that most other models for military innovation either fail to explain or are not particularly applicable to the cases of wartime military innovation within this study.

Civil-Military Model

The civil-military model does not explain any of the cases that were studied. While civilian policymakers did play a role in all four innovations, it would be difficult to argue that they followed the role prescribed by this model. There is no evidence that policymakers tried to force the military to develop any of the innovations. In all cases, Congress is best described as an ardent supporter of the military's aspirations.

A proponent of this model might argue that the civil-military model applied in the case of counterinsurgency doctrine and the MRAP. According to this model, the innovation of counterinsurgency failed from 2003 to 2006 because the innovators could not overcome the military's resistance to change. It was successful only in 2007, when

President Bush found a military maverick, Petraeus, and appointed him the Multi-National Force – Iraq commander so that Petraeus could force the military to change. While the argument is logical, it is undermined by the weight of the evidence. First, it assumes that Petraeus is a maverick, and it would be hard to describe Petraeus or any four-star general as a maverick. By the very nature of the Army's promotion system, it would be difficult for a true maverick to achieve such a high rank.

Even if one were to make the argument that Petraeus was a maverick, the theory still rests on the supposition that the policymaker is forcing the change on a reluctant military. However, Bush's decision to appoint Petraeus as the Multi-National Force – Iraq commander to execute the surge came after the military had already developed and implemented the doctrine nearly everywhere except Iraq and Afghanistan. This was a case of a pro-innovation coalition, led by the military, convincing Bush to adopt the doctrine, as opposed to Bush pushing a reluctant military to develop the doctrine.

Similarly, Gates and other elected officials became involved with the MRAP only after the military requested nearly 8,000 vehicles costing more than \$7 billion. This was a case of the military taking the initiative and asking Congress for help, not the other way around. Thus, the civil-military model does not explain any of the cases in this study.

Interservice Model

The interservice model also fails to explain any of the cases in this study. The case of counterinsurgency doctrine is characterized more by cooperation than competition between the services since the Army and the Marines collaborated closely to produce the doctrine. While the Air Force did have some opposition to the manual, there is no evidence to indicate that the Army and Marines developed the doctrine in an attempt to secure resources. On the contrary, all the evidence suggests that the doctrine was developed to resolve the capability gap resulting from the insurgency in Iraq.

Likewise, no evidence was found to support the claim that interservice rivalry led to the creation of the F3EA cycle and its supporting network. In this case, the “service” is special operations, which in many ways can be considered a fifth service. It has its own headquarters, the USSOCOM, and its own funding and authorities. While special operations forces grew significantly during the war, the evidence indicates that they grew as a response to mitigate a capability shortfall and not as an attempt to secure resources.

For the AWG, some might argue that the Army saw the emergence of IEDs and asymmetric threats more broadly as a new mission area and, thus, the Army sought to take ownership of the new mission to maintain or expand its budget. But the evidence does not support this claim. While the actions of Secretary Roche demonstrate that interservice rivalries exist, there is little evidence to indicate that the Army’s reasons for creating the AWG had anything to do with gaining additional resources. The Army suffered a vast majority of the casualties caused by IEDs, consequently, the more plausible explanation is that Cody was trying to mitigate a capability gap. While the USSOCOM did put up some resistance to the AWG—fearing the AWG would compete with USSOCOM for some of its human resources—this resistance does not indicate that the development of the AWG resulted from interservice rivalry. Quite the contrary, Hughes and his staff approached the USSOCOM to take ownership of the AWG, and it declined. If it were really a battle over resources, then the Army would never have approached the USSOCOM to take such a role, and, given the opportunity, the USSOCOM would have immediately seized it.

The model also fails to explain the fielding of the MRAPs. If it had been an attempt by the services to gain resources, then we would have seen the services fighting to gain the primacy of the vehicles, but just the opposite occurred. Neither the Army nor the Marines initially wanted them, and the request that was finally successful went through the Joint Staff as opposed to a service. Thus, the interservice model does not seem to apply to any of the cases.

Intraservice Model

The intraservice model also fails to explain any of the cases, except counterinsurgency doctrine. If the innovations resulted from intraservice competition, then the innovations should have been developed by a branch proponent, such as the Maneuver Center of Excellence, which is the home of the Infantry and Armor branches. Instead, the innovations emanated from the Combined Arms Center, joint task forces, and the Pentagon. For the AWG, the innovation developed from the Army Staff, not branches within a service. In fact, neither of the two “branches” that would seem most likely to compete for the mission, the U.S. Army Special Operations Command and CBRNE, wanted it.

The only visible opposition falling along branch lines for counterinsurgency doctrine came from the Military Intelligence branch, but its objections were relatively minor. Petraeus described the opposition as stemming from a “parochial military intelligence issue.” It was not, however, a major issue as Petraeus was able to resolve the dispute with a quick phone call to the commanding General of the Army’s Intelligence Center of Excellence.³ Also, if the doctrine was an attempt by a branch to gain a new mission set, then the doctrine would have been developed by a branch proponent, such as the Maneuver Center of Excellence, not the Combined Arms Center. The U.S. Army Special Operations Command, which had prepotency for counterinsurgency doctrine previously, was more than willing to concede the development of the doctrine to the Combined Arms Center rather than fight for control and the resources that might come with it.⁴ While there was clearly opposition to the doctrine, it did not fall along branch lines. The opposition appears to have come from a wide variety of sources who were not trying to protect their “turf” or resources but instead had legitimate concerns with the doctrine.

Rosen’s intraservice model is the only intraservice model that holds some merit. He argues that innovation is successful only if the advocates can establish a new theory of victory and new promotion

3 Petraeus, interview by author.

4 Horvath, interview by author.

pathways.⁵ The innovation of counterinsurgency doctrine met both requirements. First, the doctrine was created to achieve a new theory for victory in a war that had bottomed out. Second, the promotion of counterinsurgency proponents offered a visible promotion pathway for junior officers, even if it was not a new pathway in the form of a new branch or functional area. The Brigadier General promotion board of 2008 is particularly telling. In November 2007, the Army made the surprising move of bringing Petraeus, who was still commanding forces in Iraq, back to Washington to preside over the promotion board. This was a visible vote of confidence by officials for his doctrine and his conduct of the war. Retired Major General Robert Scales, the former head of the Army War College, called it “unprecedented for the commander of an active theater to be brought back to head something like a brigadier generals board.”⁶ McChrystal was also called back from Iraq to serve on that same board.⁷ The change in the composition in the promotion board supports Rosen’s assertion that policymakers can influence innovation by protecting the innovating officers.

The results of the board demonstrated that counterinsurgency success would be rewarded. Petraeus’s board selected 40 from more than 1,000 colonels for promotion to brigadier general. McMaster, widely regarded as “one of the most creative strategists of this ‘new’ style of warfare,” was finally promoted after being passed over for promotion in 2006 and 2007 despite his success in Tal Afar.⁸ Many of the others selected for promotion were of a similar breed, such as Sean MacFarland, who restored order to Ramadi, and Michael Garrett who turned around the “Triangle of Death” south of Baghdad. By contrast, in the previous year’s board, serving as an executive officer for a commanding general was the key determinant for promotion.⁹

5 Rosen, *Winning the Next War*, 8-20.

6 Ann Scott Tyson, “Petraeus Helping Pick New Generals,” *The Washington Post*, November 17, 2007.

7 Fred Kaplan, “Annual General Meeting: Finally, the Army Is Promoting the Right Officers,” *Slate.com*, August 4, 2008, accessed November 2, 2023, http://www.slate.com/articles/news_and_politics/war_stories/2008/08/annual_general_meeting.single.html.

8 *Ibid.*

9 *Ibid.*

Cultural Model

The cultural model does not explain successful innovation in the cases studied—at best, the model can explain why innovation was so difficult. Few would describe the Pentagon as having a culture conducive to innovation. For many, it is the epitome of entrenched bureaucracy. As a result, innovation emanating from the Pentagon would be extremely unlikely; hence, the cultural model cannot explain the innovation of the IED Task Force and the AWG.

The cultural model accurately predicts that the Army and Marine Corps would not want the MRAP. Given their expeditionary bias, they did not want a vehicle that could not be easily transported. However, the model fails to explain how it could have ultimately been adopted. Likewise, the model can explain why the U.S. military was so ill-prepared for counterinsurgency, given its cultural bias toward mass, firepower, technology, and conventional conflict. It can explain why much of the military and Congress were focused on technical solutions to the IED problem, as opposed to doctrinal or organizational solutions like the AWG. But it fails to explain how counterinsurgency doctrine was ultimately implemented.

The one case that the model can explain is the F3EA cycle. McChrystal's task force was unique within the military. Its culture encouraged dissent and debate, conducted honest experimentation, inspired risk-taking, and administered thorough after-action reviews. Therefore, innovation should have been most likely within this unit. Task Force 714 possessed an innovative culture before McChrystal's arrival, and he made a deliberate effort to intensify it. The core of his task force was made up of elements from the JSOC, which is charged "to study special operations requirements and techniques, ensure interoperability and equipment standardization, plan and conduct special operations exercises and training, and develop joint special operations tactics."¹⁰ Thus, much of his task force had an assigned task of innovating training, techniques, tactics, procedures, and equipment for the military. McChrystal

¹⁰ The mission has since changed, but this was the mission at the time. U.S. Special Operations Command, "Joint Special Operations Command," SOCOM.mil, accessed January 15, 2012, <http://www.socom.mil/pages/jointspecialoperationscommand.aspx>.

continued to foster an innovative command climate by encouraging his personnel to be creative, pushing them to try new ideas that might work, accepting mistakes and failures, and ultimately being willing to change.¹¹ A clear sense of purpose further stimulated innovation. The task force's sole purpose was the degradation of al Qaeda, with all efforts devoted to this singular mission.

Yet, even in this case, the cultural model fails to explain the innovation process. While it can shed light on why some innovations are more challenging to develop, adopt, and implement, its utility is limited beyond this. This is perhaps why Barno and Bensahel “believe that culture is an integral element of [doctrine, technology, and leadership] rather than a separate component with independent explanatory power.”¹²

Principal-Agent Model

This principal-agent model is nested within the leadership model of military innovation presented in this research. As such, it was thoroughly analyzed within each of the cases. As a stand-alone model, however, it is useful only to explain the implementation phase of the innovation process. Despite this limitation, the model proved effective in explaining the implementation of all four cases, as discussed earlier.

Bottom-Up Model

The bottom-up model is most applicable to the MRAP case and counterinsurgency doctrine. It does not apply to the other two cases since they were top-driven innovations. The MRAP case demonstrated the importance of selecting an effective strategy and building a pro-innovation coalition. The first two attempts failed because McGriff failed on both accounts. Jankowski was successful because he tried a third strategy—using the joint wartime procurement process—and

11 Former JIATF director, interview by author.

12 Barno and Bensahel, *Adaptation Under Fire*, 28.

he was able to build the vertical coalition necessary to reach the Commandant of the Marine Corps. In the case of counterinsurgency doctrine, experimenters started employing counterinsurgency tactics as early as 2003, but the mid-level leaders employing those tactics made no attempt to institutionalize their gains. Petraeus, Chiarelli, McMaster, and MacFarland were likely too busy fighting a war and so lacked the capacity to build the horizontal and vertical coalitions required to get Sanchez or Casey to adopt and implement counterinsurgency tactics on a theater scale.

The bottom-up model, however, can explain only the formulation and adoption phases of the innovation process; it is not meant to describe the implementation phase. Likewise, it is not particularly useful at explaining top-down innovation, which characterized most of the cases studied here. This should not come as a surprise given that major military innovations are more likely to be generated from higher levels in the organizations because senior leaders are more likely to have the requisite technical expertise and access to greater resources required to develop innovative solutions to the problem at hand.

Wartime Innovation and Peacetime Innovation

Given the limited research into wartime innovation, one of the purposes of this study was to provide insight into wartime innovation and to see if its process fundamentally differs from the peacetime process. This study considered only cases of wartime innovation; therefore, it is impossible to reach conclusive findings. However, some postulates can be made. This study does indicate that wartime innovation has some fundamental differences, which is consistent with the findings of other scholars. Many of the military innovation models—models largely based on peacetime innovation—fail to explain these cases of wartime innovation. This is one indicator that wartime and peacetime innovation may be different. This study leads to five postulates about wartime innovation.

***The time constraint is more prevalent in war,
which lowers the aspiration level.¹³***

The cases indicate that aspiration levels fall in a time of crisis, as demonstrated by Abizaid's directive to implement any "51% solution," which indicates how low aspiration levels can drop in war. Rather than searching for the perfect solution that might take years to develop, individuals implement any solution better than the status quo. This is consistent with Simon's finding 45 years ago that aspiration levels rise in benign environments and fall in harsher environments. Yet he acknowledged that the selected alternative becomes the new status quo, and a search for a better alternative begins anew.¹⁴ This may be the reason that Murray, along with Barno and Bensahel, do not believe innovation is even possible in war, instead arguing that militaries can only adapt. The cases presented in this study make a compelling case that innovation is possible in war, even if the larger innovation is a series of smaller incremental innovations or adaptations.

***Resources may be more abundant in war,
which should facilitate innovation in war.***

Many scholars find that organizational slack or excess resources—particularly wealth—positively correlate with innovation. Other researchers find that it is often easier for organizations in crisis to innovate because they find it easier to define problems when they recognize that a performance gap exists. The survival of the organization may depend on successful innovation. Thus, it is relatively easy to rally the company's limited resources for survival.¹⁵ The Iraq War presented a situation of both crisis and slack simultaneously, providing a perfect combination for innovation. The IED attacks, high casualty rates, and growing insurgency presented a clear crisis. Congressional plus-ups

13 Rosen also brings up the idea that time horizons are different in peace and war but does not relate it to aspiration levels. Rosen, *Winning the Next War*, 22.

14 Simon, "Rational Decision Making in Business Organizations," 502-503.

15 Tushman and O'Reilly, *Winning Through Innovation*, 18 and 221-222.

that exceeded more than \$100 billion annually provided the slack.¹⁶ Therefore, monetary resources were not a constraint. If the Army was short of anything, it was short of intellectual capital that it could dedicate toward innovative efforts. But, as demonstrated in the case of the AWG, this shortfall could also be purchased by leveraging contractors. If Cody had relied on military personnel alone, he never would have been able to design the IED Task Force and get it deployed in 45 days. Likewise, McChrystal relied on contractors to help build his network, and Petraeus leveraged intellectual capital outside of the military to help develop the doctrine. Thus, the wartime combination of crisis and slack likely facilitated innovation. But slack may not always be abundant in war. Expenditures were massive during World War I, but they had to be used to keep an Army of more than two million running. The military had limited slack to take a flyer on a new idea. Accordingly, it may not be the case that there is always excess slack in war, especially a large conventional war. A war like Iraq—one in which there was a national interest to prevail but one that was not all-consuming in terms of resources—may be unique, resulting in the perfect situation for excess slack.

Only in war is it possible to test an innovation against a real enemy, and the constant ability to test should make innovation faster in war.

Several authors have noted that the fundamental problem for militaries is that they can rarely replicate the actual conditions of war in times of peace.¹⁷ Unlike most organizations that execute their assigned functions on a day-to-day basis, the military is rarely “in business” and able to learn from operational experiences. Thus, it must anticipate what the enemy will be like.¹⁸ War provides the ultimate testing ground in a way no training or simulation can replicate. The ability to test, refine, and test again should accelerate innovation even if aspiration levels

16 Anthony H. Cordesman and Arleigh A. Burke, “The U.S. Cost of the Afghan War” (Washington, DC: Center for Strategic & International Studies, 2012), 7.

17 See, for example, Murray, “Thinking About Innovation,” 122.

18 Rosen, *Winning the Next War*, 8.

fall. Like other studies, this study finds that innovation is more evolutionary than revolutionary.¹⁹ This evolutionary process was present in the three successful cases analyzed in this study. The F3EA cycle and its supporting network was one of constant innovation. As soon as the task force fielded or expanded one capability, it would identify a gap that would spur innovation in another area. The IED Task Force and the AWG were constantly evolving in response to a continually changing enemy situation in Iraq. Likewise, several commanders conducted successful experiments with counterinsurgency tactics in Iraq before Petraeus produced the doctrine. The MRAP also demonstrates that procurement in war is also quicker. Even though the MRAP was invented in the 1970s, it was not embraced by the U.S. military until well into the Iraq War decades later.

During war, a perceived performance gap is almost always the proximate cause of innovation.

In each case analyzed in this research, innovation resulted from a performance gap relating to the enemy: an insurgency was inflicting significant casualties on U.S. forces, primarily through its use of IEDs. History is ripe with cases of wartime innovation, and almost all result from capability shortfalls. For example, the innovation of stormtroop tactics to overcome trench warfare, submarine warfare to degrade Japan's war industry, jungle warfare to defeat the Japanese in the Pacific, and strategic bombing to degrade Germany's war production. By contrast, peacetime innovation may be spurred by other proximate causes, as demonstrated by several authors in the literature review. Interservice competition was the proximate cause of the Polaris missile, as well as the Jupiter and Thor missile systems. Intraservice competition led to the development of Special Forces within the Army. Changes in U.S. and NATO doctrine caused the Soviets to produce doctrinal innovation.

¹⁹ See, for example, Murray, "Innovation: Past and Future," in *Military Innovation in the Interwar Period*, ed. Williamson Murray and Allan R. Millett (New York: Cambridge University Press, 1996), 306-310.

The civil-military dynamic is different in peace and war: in war, civilian policymakers often defer to military experts and are best described as steadfast supporters; during peacetime, they are more likely to take an active role in military affairs.

In all four cases, both elected and appointed officials were found to be strong supporters of the military's innovative efforts. Still, they did not take an active role in pushing the military to develop any of the innovations that were studied. Secretary of State Condoleezza Rice advocated a "clear, hold, and build" policy with the Senate, but no evidence indicates she was pushing the military to pursue counterinsurgency doctrine. Representative Hunter forced the military to purchase specific jammers, but the disagreement had to deal with which jammer to purchase instead of a fundamental difference in strategy. In the case of the F3EA cycle and the network, McChrystal was pulling the interagency team together. No one in the government directed him to do it. For the MRAP, Gates was unaware of the vehicle until 8,000 had already been requested. In all four cases, the senior military leaders found members of Congress to be steadfast supporters who provided the approvals and funding required to implement the innovations. Civilian policymakers generally lack expertise in military affairs; thus, they are less likely to take an active role when the military is "in business" and defer to the military professional. The fact that the proximate cause of many wartime innovations emanates from a performance gap makes it unlikely for policymakers to develop innovative solutions and to push the military to pursue them. The military is typically the first to recognize that a performance gap exists, and only the military possesses the domain-specific expertise to identify the needed solution. By contrast, in times of peace, when the military is not "in business," everything is open to debate, and the price for being wrong is greatly reduced. The future enemy and the form that future combat will take are open to debate, and the risks of being proven wrong in the short-term election cycle are much lower. Theoretically, this allows policymakers to take a more active role in times of peace, which might explain why some studies of peacetime innovation find the policymakers' role so important.

Facilitating Future Innovation

*“Americans will always do the right thing only
after they have tried everything else.”²⁰*

This quote by Winston Churchill is well-known and relevant to military innovation. The military implemented a counterinsurgency doctrine and fielded MRAPs in Iraq in 2007—nearly 3½ years after the insurgency started. The military may not have exhausted all the alternatives prior to implementing the doctrine and fielding the vehicles, but it took much longer than it should have, especially given the demonstrated successes of McMaster and Petraeus years earlier and the performance of the vehicles in South Africa decades earlier. Had the counterinsurgency doctrine been developed and implemented sooner, the war likely would have ended sooner, and the human and material costs would have been greatly reduced. Likewise, had the military adopted the MRAP earlier in the war, many more lives would have been saved. By the time the military widely fielded it, violence had already decreased.

Over the past century, the U.S. has been engaged in a major war on average of every sixteen years, with the wars lasting an average of more than five years. If history is any indication of the future, then the U.S. will probably find itself involved in a war in the not-too-distant future, and that conflict will be one that the U.S. is not entirely prepared to fight. This is increasingly likely given the present and future operating environment that the military’s *Capstone Concept for Joint Operations* describes as “increasingly complex, uncertain, competitive, rapidly changing, and transparent...characterized by security challenges that cross borders.”²¹

As the Capstone Concept has recognized, the challenges of future wars will grow only worse. During the Cold War, there was one dominant threat to prepare against. Now, Russia has re-emerged,

20 Scott Horsley, “A Churchill ‘Quote’ The U.S. Politicians Will Never Surrender,” NPR, October 28, 2013, accessed June 1, 2024, <https://www.npr.org/sections/itsallpolitics/2013/10/28/241295755/a-churchill-quote-that-u-s-politicians-will-never-surrender>.

21 The most recent 2030 *Capstone Concept for Joint Operations* remains classified, so the 2020 concept is cited here. Joint Chiefs of Staff, *Capstone Concept for Joint Operations: Joint Force 2020* (Washington, DC: Chairman of the Joint Chiefs of Staff, 2012), 15, https://www.ndu.edu/Portals/59/Documents/Incoming/cjco_2012.pdf.

and China threatens the global influence of the U.S. in ways Russia never did. The proliferation of nuclear weapons has made lesser powers a greater threat. At the same time, the threat from terrorist groups has only grown due to the proliferation of arms and the democratization of technology. When the U.S. military and NASA developed many of the world's most advanced technologies, the U.S. maintained a technological advantage over its adversaries—sometimes, these advantages could be measured in years. This is no longer the case. With a few hundred dollars, anyone can purchase commercial off-the-shelf technologies and weaponize them or purchase a 3D printer to manufacture them. Anyone with the requisite skills can hack into a computer network. The scale and speed of technological change continue to accelerate, meaning that uncertainty and vulnerability correspondingly increase. The emergence of the space and cyber domains have made strategic uncertainty and vulnerabilities more significant, while simultaneously making war more complex.

Thus, it is more important than ever to prepare leaders to be innovative and adaptable instead of preparing them to fight a specific type of war for two reasons. First, militaries rarely anticipate the next war correctly. The Gulf War was one of the few exceptions. But that was also a limited war—had the U.S. invaded Iraq in 1991 as it did in 2003, it likely would have similarly struggled. When militaries focus too much on one conflict and do not get it right, innovation takes longer than it otherwise would. By focusing almost exclusively on a ground war against Russia in Europe, the U.S. military was completely unprepared for its counterinsurgency war in Vietnam, and it never figured out how to fight it before leaving. Likewise, the U.S. military was overly prepared for another Gulf War in 2003, leaving it ill-prepared for the actual war in Iraq. Unlike what happened in Vietnam, the U.S. military figured it out, but it took much longer, and it was more costly than it should have been. A second reason a nation should not overly prepare for a single type of war is because its adversaries are not stupid. They watch and learn and will try to fight differently, in a way their opponent is unprepared to meet. After the Gulf War, Iraq learned not to fight an open tank battle in the desert. Thus, when the U.S. invaded,

Iraqis went to ground to fight as an insurgent force and in a manner the U.S. was ill-prepared to fight.

While the exact nature of the future war may not be predictable, it is possible to provide a framework for engendering innovation in an unpredictable environment. This study shows that to produce a military which is capable of innovating quickly and effectively in times of crisis, the U.S. must produce leaders who can effectively facilitate the development of innovative efforts, garner necessary policymaker support to fund and authorize the efforts, and overcome internal resistance required to implement change. This study also supports previous research in finding that some of the most essential character traits for leaders of innovative efforts are domain-specific expertise, creative problem-solving skills, and openness. As a result, efforts to improve developing leaders capable of innovating must focus on developing the right technical expertise, encouraging creative-problem skills, and expanding their openness. These leaders, when exposed to a complex problem in a combat environment, would have the necessary intellectual capacity to develop an innovative solution to the problem. When the military thinks about the development of its officers, it should intentionally think about how to broaden their officers' solution sets to problems.

The good news is that developing the traits required for innovation and leading innovative efforts is possible. Research has consistently shown that individuals inherit only 40 to 60 percent of their personality traits, therefore, the remaining 40 to 60 percent can be developed.²² Hence, militaries have the potential to impact the traits of their officers through the education, training, and operational experiences they provide. The five-factor model is one of the more widely accepted models to describe the human personality. It consists of the following personality traits: openness, conscientiousness, neuroticism, agreeableness, and extraversion.²³ The trait most relevant to innovation is openness,

22 Thomas J. Bouchard Jr. and John C. Loehlin, "Genes, Evolution, and Personality," *Behavior Genetics* 31, no. 3 (2001): 253, <https://doi.org/10.1023/a:1012294324713>.

23 Leonard Wong and Stephen J. Gerras, "Changing Minds in the Army: Why It Is So Difficult and What to Do About It" (Carlisle, PA: U.S. Army War College Press, 2013), 8, <https://press.armywarcollege.edu/monographs/515/>; and Jesus F. Salgado, "The Five Factor Model of Personality and Job Performance in the European Community," *Journal of Applied Psychology* 82, no. 1 (1997): 30, <https://doi.org/10.1037/0021-9010.82.1.30>.

which is defined as “the recurrent need to enlarge and examine experience.”²⁴ Individuals high in openness are more creative, more likely to hold unconventional beliefs, more likely to search for relevant and conflicting perspectives, generally more receptive to change, and able to work with symbols and abstractions.²⁵

As discussed in the literature review, studies find that innovators are often engaged in high-risk activity, erratic and unpredictable, attached to their work, receptive to all kinds of ideas, reliant on free exploration, likely to be nonconformists, questioning authority and existing problem-solution, more cosmopolitan, more intelligent, more favorable to change, better able to cope with uncertainty and risk, and more positive in their professional orientation. These innovators have a high degree of openness. Thus, the military must seek to develop the openness of its officers at the same time it is developing domain-specific expertise.

Research also finds that senior decision-makers who have greater openness are more likely to make better judgments.²⁶ Yet, the officers that the Army routinely selects to serve at the strategic level, where uncertainty and complexity are the greatest, have the lowest levels of openness, when it is especially needed at this level.²⁷ A U.S. Army War College study found that most senior officers score lower in openness than the general population. More importantly, officers who are selected for brigade command, which is basically a prerequisite for becoming a general, score lower than their peers within the Army.²⁸ It should, therefore, come as no surprise that many of these leaders have difficulty leading innovation, as they are more closed to new ideas and more likely to limit their potential solution set to what they know. Thus, to produce leaders who are more capable of leading innovation, the Army must consider better ways to develop openness, creative problem-solving skills, and the right technical expertise and then promote those having these skills and traits.

24 Robert R. McCrae and Paul T. Costa Jr., “Conceptions and Correlates of Openness to Experience,” in *Handbook of Personality Psychology*, ed. Robert Hogan, John Johnson, and Stephen Briggs (New York: Academic Press, 1997), 826.

25 Wong and Gerras, “Changing Minds,” 8.

26 Philip E. Tetlock, *Expert Political Judgment: How Good Is It? How Can We Know?* (Princeton, NJ: Princeton University Press, 2005), 67-120; and Wong and Gerras, “Changing Minds,” 9.

27 Wong and Gerras, “Changing Minds,” 9

28 Ibid.

This study also found that culture—which the leader plays a considerable role in shaping—heavily influences innovation. This study supports the common finding that innovation is more likely to occur in cultures that tolerate and encourage dissent and debate, embrace rigorous professional military education, and conduct honest experimentation in their preparations for war. The military has made significant progress in recent years to produce more innovative leaders, but more must be done. What follows are some recommendations on how the military should adjust its organizational structure, training, education, promotion system, and culture to enhance wartime innovation.

Expand the technological and data literacy of the officer corps.²⁹

This study demonstrated that leaders must possess the relevant technical expertise to lead innovation, yet many senior military leaders lack sufficient technological and data literacy. While technological literacy may not have been as crucial for the wars in Afghanistan and Iraq, given the limited technological sophistication of those enemies and the fact those wars were more than a decade ago, this will not be the case in future wars. With the expansion of war into the cyber and space domains and an increasing reliance on technologies, it would be unwise for operational commanders to completely outsource all understanding of these challenges to specialty staff members. Operational commanders must have basic technological literacy, just as they have basic military intelligence literacy. They still need their resident Military Intelligence expert, but they must have a basic understanding of the enemy. Data literacy is the same. Officers must have a basic data literacy to anticipate vulnerability and challenges and still operate effectively in a degraded environment. They cannot wholly defer all understanding to their resident Cyber or Signal officer. Suppose senior military leaders cannot read data, work with data, analyze data, or argue with data. In that case, it is difficult to see how they can effectively lead innovative

29 Barno and Bensahel make this same recommendation in *Adaptation Under Fire*, 283.

efforts relating to data.³⁰ The same goes for technology. Yet, combat arms officers (such as Infantry, Armor, Field Artillery, and Special Forces) who disproportionately fill senior positions across the Army generally have the least technological and data literacy compared to officers from other career fields. The military must invest in the technological and data literacy of all its officers and consider assessing this competency as part of the promotion to senior ranks. Just as officers must have a minimum amount of joint time before being promoted to general or admiral, they should have a minimum level of technological and data literacy, given the speed and lethality of war and the increasingly rapid rate of technological change.

Send more officers to civilian graduate schools.³¹

It may be counterintuitive, but the contraction often following conflicts is the best time to invest in intellectual capital. Since technical expertise takes time to acquire, investment in intellectual capital must be made during times of peace. These investments place the military in a better position to anticipate potential threats and respond accordingly when required. The military should send more officers to civilian graduate schools in history, political science, international relations, security studies, terrorism studies, and economics. This study demonstrated the importance of developing officers with in-depth knowledge of those subjects. The Army's investment in the General Wayne A. Downing Scholarship Program in 2009 and the Advanced Strategic Planning and Policy Program in 2012 are two positive changes. The Downing Program selects up to eight captains each year to pursue a two-year master's degree "to study terrorism, counterterrorism, and other complex and evolving national security threats."³² The Advanced Strategic Planning and Policy Program

30 Erik Davis, "The Need to Train Data-Literate U.S. Army Commanders," *War on the Rocks*, October 17, 2023, accessed December 11, 2023, <https://warontherocks.com/2023/10/the-need-to-train-data-literate-u-s-army-commanders/>.

31 Barno and Bensahel make this same recommendation in *Adaptation Under Fire*, 282.

32 U.S. Army Human Resources Command, Draft Broadening Opportunity Programs (BOP) Catalog (Fort Knox: KY: Human Resources Command, 2023).

selects about a dozen field grade officers each year to pursue a PhD in strategy-related disciplines.³³ These programs are a step in the right direction, but these types of programs should be expanded, especially considering the vital role that graduate school played in shaping many of the officers discussed in this study. Graduate school expands the officer's creative thinking skills, exposes them to a broad diversity of thought as opposed to the groupthink common to many professional military education courses, and helps to develop openness. The military, however, cannot invest in everything. Hence, it must be deliberate about investing in the graduate school programs that are most likely needed. In addition to the subjects listed above, other disciplines such as regional studies, artificial intelligence, and other technology programs are subjects in which the military should make a greater investment.

Reform professional military education.³⁴

The weaknesses of the military's professional military education system have been documented at great length. A House Armed Services Committee report in the 1980s blasted the military's professional military education. Williamson Murray's studies in the 1980s and 1990s found military culture to be "profoundly anti-intellectual and ahistorical."³⁵ The 2018 *National Defense Strategy* criticized the professional military education system for having "stagnated, focused more on the accomplishment of mandatory credit at the expense of lethality and ingenuity."³⁶ Many have noted a lack of rigor in the

33 U.S. Department of the Army, Milper Message Number 13-114, "School of Advanced Military Studies (SAMS) Advanced Strategic Planning and Policy Program, (ASP3) 2014 Cohort Selection" (Washington, DC: Headquarters, Department of the Army, 2013); and School of Advanced Military Studies, "Advanced Strategic Planning and Policy Program (ASP3)," PowerPoint presentation, no date; and "School of Advanced Military Studies (SAMS)," Armyuniversity.edu, accessed November 2, 2023, <https://armyuniversity.edu/CGSC/SAMS/SAMS>.

34 Barno and Bensahel make this same recommendation in *Adaptation Under Fire*, 280-2.

35 Murray, "Does Military Culture Matter?" 38-39; Williamson Murray, "Grading the War Colleges," *National Interest* no. 6 (1986): 12-19, <https://www.jstor.org/stable/42894497>; and Williamson Murray, "How Not to Advance Professional Military Education," *Strategic Review* (Summer 1997): 73-77.

36 U.S. Department of Defense, *Summary of the 2018 National Defense Strategy of the United States* (Washington, DC: Department of Defense, 2018), 8, <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>.

program.³⁷ The Command and General Staff Colleges and the War Colleges must increase their academic rigor with higher standards for writing and critical thinking skills. They need to diversify their faculty to resemble the faculty of a civilian graduate school more closely. They should put students in exercises that simulate the complexities of the contemporary environment, forcing students to think innovatively instead of placing them in stagnant scenarios that have been wargamed many times over. To incentivize learning, the evaluation reports that officers get at professional military education institutions should carry the same weight as the evaluations that they receive in operational units.

Rethink broadening assignments to encourage innovation.

The concept of a broadening assignment in the Army is so extensive that few can define it. This should not be surprising given the Army's definition of "broadening opportunities" is a whopping 178 words in length!³⁸ Basically, broadening assignments allow officers to expand their capabilities and understanding "through opportunities internal and external to the Army."³⁹ They typically fall into one of four categories: functional or institutional, academia and civilian enterprise, joint or multinational, and interagency or intergovernmental.⁴⁰ In reality, the concept is so wide-ranging that any assignment that is not directly related to an officer's career field is considered broadening.⁴¹ These assignments have enormous potential to expand the intellectual horizon of officers by exposing them to new ideas and new perspectives that expand their solution sets for future problems. A 2014 RAND study found that "broadening experiences are

37 See, for example, Barno and Bensahel, *Adaptation Under Fire*, 262.

38 See paragraph 3-4b(2)(f) of Department of the Army, DA Pamphlet 600-3, Commissioned Officer Professional Development and Career Management (Washington, DC: Headquarters, Department of the Army, 2014), 12, <https://api.army.mil/e2/c/downloads/376665.pdf>.

39 Ibid.

40 Ibid.

41 Even the director of the Officer Personnel Management System Task Force stated that "any of those types of assignments that are outside their typical branch experience is a broadening experience." Gary Sheftick, "Task Force Aims to 'Broaden' Officers, Manage Talents," Army.mil, May 19, 2010, accessed November 2, 2023, <http://www.army.mil/article/39411/>.

crucial to preparing officers for [joint, interagency, intergovernmental, multinational] contexts.”⁴² The study found that it is not enough for these experiences to be “different.” Officers must be put in new and different situations they cannot master by relying on past experience, skills, knowledge, and branch or functional area expertise. The experiences must immerse the individual in an environment in which the comfortable military hierarchy is removed, assumptions are tested, and success requires engaging with individuals from different organizations or cultures.⁴³ In other words, not all broadening assignments are the same—some are going to be more effective at producing adaptable officers than others. Broadening experiences that produce more innovative officers should be prioritized for the best officers to increase the likelihood that those selected for general have experiences that truly expand their intellectual horizons. This is crucial for increasing openness and developing the skills necessary for leading innovation. While great strides have been made in the past two decades, such as the expansion of interagency fellowships to majors in 2009, too few officers are selected for the fellowships each year.⁴⁴ The military should also do a better job with its talent management to track these various specialties and specialty experiences; hence, it can rapidly leverage them when required.

Assign innovation advisors to major combat formations in wartime.⁴⁵

The IED Task Force may have started by focusing on the IED and the IED cell, but it quickly transitioned into an element that also educated and trained the force and shared best practices across the formation. It became an accelerant for diffusing innovations and adaptations not just

42 M. Wade Markel et al., *Developing U.S. Army Officers' Capabilities for Joint, Interagency, Intergovernmental, and Multinational Environments* (Santa Monica, CA: RAND, 2011), 49, <https://www.rand.org/pubs/monographs/MG990.html>.

43 Ibid.; and Wong and Gerras, “Changing Minds,” 25.

44 Christopher Paone, “An Alternative to Traditional ILE,” *Army Sustainment* 45, no. 3 (2013): 43, https://alu.army.mil/alog/PDF/MayJun2013/An_Alternative_to.pdf.

45 Barno and Bensahel make a similar recommendation in *Adaptation Under Fire*, 287.

for IEDs but also for a wide variety of challenges, ranging from counter-sniper techniques to Company Intelligence Support Teams. By all accounts, the IED Task Force and AWG field teams were effective at a low cost and without draining critical manpower since many were contractors who had retired from the Army. In the next war, it is reasonable to conclude that individuals and units will once again learn at different speeds and implement different solutions. Accordingly, the Army should have the capability to help facilitate rapid wartime innovation and diffusion of those innovations into its doctrine, training, and professional military education. The Army already has a successful model for doing this: the AWG field teams. The military should have a plan in place to rapidly seed units with innovation advisors at the onset of the next conflict. Sometimes contractors get a dirty name, but for the type of professionals that the military requires for this function, it may be the best place to find people with the relevant expertise without removing servicemembers from combat formations. Additionally, contractors are often faster and more flexible than military personnel. Regardless of where combat innovation advisors come from, the military should have a plan to implement them before the start of the next war.

Bring back rapid-innovation organizations like the Rapid Equipping Force and the Asymmetric Warfare Group.⁴⁶

The Asymmetric Warfare Group was created to facilitate innovation. Although created in war, it continued to serve as an innovation accelerator after the Iraq War. Although the Rapid Equipping Force was not established to facilitate innovation, it could—even if indirectly—facilitate innovation by more rapidly equipping units with technology and equipment that they might employ in unique and novel ways. Despite both organizations continuing to demonstrate success long after the Iraq War, the Army shuttered both in 2021. These organizations may have been established during a counterinsurgency war, but they served

46 Barno and Bensahel make a similar recommendation in *Adaptation Under Fire*, 276-7.

a valuable role as an innovation accelerator for all types of conflict. There is no doubt that when, not if, the U.S. finds itself involved in its next major conflict, it will once again be forced to build these organizations from scratch, which will delay necessary innovation. Thus, the Army should bring these organizations back now to accelerate innovation both prior to and from the onset of the next major conflict. During a U.S. visit to Ukraine in 2023, one Ukrainian defense official noted that Ukraine needed a way to disseminate innovations and adaptations across its military rapidly. This official sketched out a concept and organization that looked remarkably similar to those of the Asymmetric Warfare Group.⁴⁷ This is further evidence of how valuable these types of organizations are in wartime.

***Adopt innovation as a principle of war.*⁴⁸**

For decades, the U.S. military has recognized nine principles of war as being “the most important factors that affect the conduct of operations.”⁴⁹ It derived these principles “from the study of history and experience in battle.”⁵⁰ These nine principles include maneuver, objective, offensive, surprise, economy of force, mass, unity of command, security, and simplicity.⁵¹ These principles are taught to leaders from the very beginning, reinforced through training, and become part of the military’s psyche. Yet, innovation has been a critical component of warfare dating back centuries, and given the speed and lethality of warfare and the rate of technological change, it has only become more important. Thus, it is time to consider adding innovation as a tenth principle of war. This study demonstrated how essential innovation was to achieving success in Iraq, more so than many of the other fundamental principles. Making innovation a principle of war would force the military to think about how to better develop innovative leaders and force planners to consider

47 Interview with senior Ukrainian defense official in Kyiv.

48 Barno and Bensahel make a similar recommendation in *Adaptation Under Fire*, 272.

49 Department of the Army, FM 3-0, 1-7.

50 Ibid.

51 Ibid., 1-8.

how to incorporate innovation into their planning. It would also force them to remember that quick victories are rarely achieved, even if that is the dominating belief at the onset.

***Conduct staff exercises, wargames, and training that forces units to operate under realistic threat environments.*⁵²**

Too often, there is a disconnect between the enemy's stated capabilities and the type of threat the U.S. designs, trains, and prepares its military to face. As this study demonstrated, in the early 2000s, the Marines developed a ship-to-objective maneuver concept of operations that was not survivable against the most likely enemy threat identified within its own strategic documents. The military recognized and described the landmine threat but it ignored it because it did not fit the expeditionary concept of the war the military wanted to fight, given its existing fleet of transport vehicles. Had the military included this threat in its staff exercises, wargames, and training, it would have discovered long before the Iraq War that its existing vehicle fleet was not survivable. The military did not include it because that scenario ran counter to its desired type of war. After Russia invaded Ukraine in 2014, many lessons were identified in terms of Russia's capabilities. For example, its ability to use unmanned aerial vehicles, electronic warfare, and artillery to decimate field headquarters were well known.

Yet, little changed at the U.S. Army's combat training centers. Battalion and brigade tactical operations centers continued emanating massive electromagnetic signatures without real effort to reduce, camouflage, or use deception to hide their location. When a combat training center commander was queried as to why they did not simply destroy the entire headquarters so that they could learn a lesson about their vulnerability, the response was, "If we did that, they wouldn't get

52 This supports Murray's recommendation that, "The services must think in terms of fighting real opponents, with real capabilities and real strategic and political objectives." Murray, "Innovation: Past and Future," *Joint Force Quarterly* 34 (1996): 59, <https://ndupress.ndu.edu/portals/68/Documents/jfq/jfq-34.pdf>. Barno and Bensahel make a similar recommendation in *Adaptation Under Fire*, 274-5.

any training while they were [out of training for 24 hours].”⁵³ They seemed incapable of understanding that taking a commander out of training for 24 hours is perhaps the most powerful way to change behavior. This ran counter to their norms, which seem to reinforce a certain style of warfare while ignoring enemy capabilities that are well known and espoused in their own documents. Recognizing this vulnerability, one brigade commander asked to have a part of his headquarters not deploy to the training center and instead serve as an alternative command and control center from its home station. He was refused.⁵⁴ This innovative officer realized that the non-deployed command element might still be susceptible to cyberattack. Still, it would be immune to all lethal attacks and, therefore, it was a concept worth testing. These small examples illustrate the disconnect between recognized enemy capabilities and how the military operates. If the military conducted more realistic wargames, exercises, and training, it could learn its doctrinal, manpower, and capability shortfalls prior to the war as opposed to during it.

Promote officers to senior ranks who possess greater innovative capacity.

Several studies have shown that the tactical, operational, strategic, and institutional echelons require distinctly different knowledge, skills, and abilities and differ in kind, not just in degree. A combatant command staff is not simply bigger; it is exponentially more capable than a brigade staff.⁵⁵ As mentioned earlier, studies have found that leaders with higher levels of openness are both more innovative and make better judgments. Yet, the War College survey found that the Army has been promoting officers with less openness to the highest levels.⁵⁶ Absent outside influence, as characterized by the 2008 Brigadier General promotion board, the Army seems destined

53 Former combat training center commander, interview by author.

54 Former brigade commander, interview by author.

55 Markel et al., “Developing U.S. Army Officers’ Capabilities,” xvi.

56 Wong and Gerrass, “Changing Minds,” 9

to promote officers who are great tacticians when things are going well, but unable to adapt when things do not go as planned. Thus, the Army must make a conscious effort to promote officers with creative thinking skills and higher levels of openness. Clearly, it is difficult to assess these traits. One way to accomplish this is to emphasize promoting officers with the right broadening experiences and discourage promoting officers who have done little outside their basic branch. Another option is to add innovation or adaptability as an attribute that must be addressed on evaluation reports and place more weight on this attribute at promotion boards.

Cultivate an open culture that encourages disagreement and dissent.

The cases in this research support the findings of other studies that innovation is more likely to occur in an environment that tolerates and encourages dissent and debate. Schoomaker emphasized a “culture of innovation” that allowed innovation to flourish.⁵⁷ Before Petraeus took command of the Combined Arms Center, Schoomaker told him to “Shake up the Army.” Petraeus responded almost immediately by publishing Aylwin-Foster’s critical article in *Military Review*. This type of debate was critical for fostering the development of effective doctrine. Despite the public critique of the Army’s poor performance, Petraeus was never admonished for publishing it. After Petraeus informed Schoomaker that the Field Artillery Captains Career Course was shut down for three weeks to rewrite the course curriculum, Schoomaker told him that he was happy for three reasons: “(1) He did it, (2) he didn’t ask permission and had the confidence to do it, and (3) he didn’t ask for money or people.” Likewise, when Flynn produced a report for the Center for a New American Security in 2010 that was highly critical of America’s intelligence efforts after nearly a decade of war in

57 Tim Kane, “Why Our Best Officers Are Leaving,” *The Atlantic* 307, no. 1 (2011): 80-85, <https://www.theatlantic.com/magazine/archive/2011/01/why-our-best-officers-are-leaving/308346/>.

Afghanistan, he was not admonished.⁵⁸ These examples illustrate the vital role that the Chief of Staff of the Army can take in facilitating innovation. A leader's actions—encouraging, rewarding, or punishing dissent and disagreement—are more important than rhetoric. Forums like the Modern War Institute's online publishing platform provide excellent opportunities for commentary and analysis and help develop the intellectual capital of the force. These are critical parts of developing an innovative culture.

Change the culture to focus less on technology and firepower and more on the management of uncertainty.⁵⁹

Several prominent scholars have noted the Army's cultural bias on firepower and technology.⁶⁰ For the U.S. Army, this culture that developed following World War II was useful during the Cold War. Unfortunately, this "conventional supremacy" approach to war is often counterproductive for all but conventional wars. This cultural bias results in weapons, organizational structures, training, and education with excessive focus on one specific threat. This impedes the ability of the Army to consider other threats. One only needs to look at the first Iraq War rotation to see what happens with this current cultural bias: Petraeus was the only one of five division commanders to anticipate the insurgency and effectively deal with it. Just as the Army's culture shifted to firepower and technology to counter the Soviet threat, the Army must now change its culture given the current threat environment characterized as "increasingly complex, uncertain, competitive, rapidly changing, and transparent...[and] security challenges that cross borders."⁶¹ Forty years ago, Rosen came to a similar conclusion when recommending that the military should "focus on the management of

58 See Matt Pottinger et al., *Fixing Intel: A Blueprint for Making Intelligence Relevant in Afghanistan* (Washington, DC: Center for a New American Security, 2010), <https://www.cnas.org/publications/reports/fixing-intel-a-blueprint-for-making-intelligence-relevant>; and Flynn, interview by author.

59 "Management of uncertainty," comes from Rosen, *Winning the Next War*, 259.

60 See, for example, Weigley, *The American Way of War*; Record, "The American Way of War;" Gray, "The American Way of War;" and Mahnken, "The American Way of War in the Twenty-First Century."

61 Joint Chiefs of Staff, *Capstone Concept for Joint Operations: Joint Force 2020*, 115.

uncertainty, rather than on the construction of new capabilities tailored to predictions of what future wars will look like.”⁶²

One of the challenges the military faces when trying to change its culture is that it operates within a political system that encourages a technology-and-firepower-based culture. There is little constituency for investments in intellectual capital. Congress is much more inclined to purchase expensive weapon systems such as the F-22 fighter aircraft and AH-64 attack helicopter, with parts produced in 49 of the 50 states and 367 of the 435 Congressional districts.⁶³ The military must remain prepared to deter and defeat Russia or China, but it must also consider other threats. Even if the military found itself in a war with either, it would be better served if the leaders were prepared to operate in an uncertain environment. Major concepts that shape the military’s doctrine, procurement, and warfighting strategy, such as netcentric warfare at the turn of the twenty-first century, or the current concepts of Multi-Domain Operations, Force Design 2030, and Combined Joint All Domain Command and Control, are all predicated on the assumption that the military can see and know a lot more than it actually will and, therefore, is likely to face a steep learning curve when it is not prepared to operate in an environment with so much uncertainty.⁶⁴ These major concepts are born from a culture with an inherent technology and firepower bias. This culture can change only if leaders make a concerted effort to alter and convince policymakers that change is necessary.

62 Rosen, *Winning the Next War*, 259.

63 Sapolsky et al., *U.S. Defense Politics*, xii.

64 For see more on each, see, Edward A. Smith Jr., “Network-centric Warfare,” *Naval War College Review* 54, no. 1 (2001): 59-75, <https://digital-commons.usnwc.edu/nwc-review/vol54/iss1/5>; Andrew Feickert, *Defense Primer: Army Multi-Domain Operations (MDO)* (Washington, DC: Congressional Research Service, 2011), <https://apps.dtic.mil/sti/pdfs/AD1129374.pdf>; Department of the Navy, *Force Design 2030: Annual Update* (Washington, DC: Headquarters, United States Marine Corps, 2022), https://www.marines.mil/Portals/1/Docs/Force_Design_2030_Annual_Update_June_2023.pdf; and Department of Defense, *Summary of the Joint All-Domain Command & Control (JADC2) Strategy* (Washington, DC: Headquarters, Department of Defense, 2022), <https://media.defense.gov/2022/Mar/17/2002958406/-1/-1/1/SUMMARY-OF-THE-JOINT-ALL-DOMAIN-COMMAND-AND-CONTROL-STRATEGY.PDF>.

Remember the lessons from Iraq and Afghanistan.

The Army cannot afford to do what it did after the Vietnam War and purge hard-won lessons. Failing to understand past successes and failures provides a less capable military and a less innovative one as well. When it comes to lessons learned, militaries should focus on more than simply validating doctrine and processes.⁶⁵ If lessons learned focus exclusively on doctrine and processes, then innovation is impeded as the Army's soldiers fail to be exposed to new concepts and ideas. Instead, they are simply provided with slightly better ways to perform existing tasks. While it is important to capture these lessons, other lessons involving emerging threats and asymmetric capabilities are of critical importance. The military must resist the tendency to eliminate insurgents, guerrillas, criminal networks, and other nontraditional military threats from the training centers as a cost-saving measure to focus solely on its core mission of facing a near-peer enemy. If it does, the Army will return to its pre-2001 days as the world's premier force at fighting conventional foes but relatively incapable at performing other missions. Likewise, some staff exercises at all levels should include these threats the military has recently faced, currently faces, and is likely to face in the future and resist the temptation to return to scenarios with an exclusive focus on conventional military forces.

Policymakers must understand their role in military innovation.

With war becoming increasingly complex and fewer policy officials having military experience, it becomes increasingly difficult for policymakers to assume a role beyond enthusiastic supporters of the military's innovation efforts, but there is much they can do to facilitate military innovation. First, policymakers must understand the role that innovation plays in war (as previously argued, it should be a tenth principle of war) and the innovation process as outlined in

65 Murray, "Innovation: Past and Future," *Joint Force Quarterly*, 59.

this study. Congressional leaders can then direct significant changes through the annual National Defense Authorization Act to make the military more innovative. Likewise, appointed officials or civil servants within DoD can also do more to produce and promote more innovative leaders. For example, both could do more when it comes to mandating enhanced civilian graduate educational opportunities, mandating professional military education reform (such as increasing technological and data literacy), and developing human resource systems that help identify pro-change leaders. In short, policy officials have an indirect but very important role in helping build a military institution that is more innovative, even if they have a lesser role in terms of influencing specific innovations. But even here, they have an important role when selecting military leaders for the most senior positions and the specific projects they fund.

Conclusion

This study demonstrated the critical role that leadership and innovation play in prevailing through a crisis. The U.S. was teetering on the edge of defeat in Iraq in late 2006: insurgents and terrorists were inflicting a high level of casualties on coalition forces, Iraq was on the verge of a civil war, and there seemed little political will to remain. However, the innovations of counterinsurgency doctrine, the F3EA targeting cycle and its supporting network, the Asymmetric Warfare Group, and the fielding of the MRAP turned the tide and allowed the U.S. to decimate al Qaeda in Iraq and quell the insurgency. Ultimately, this allowed the U.S. to withdraw in 2011, which could be considered a success.⁶⁶ Leadership from Generals Petraeus, McChrystal, and Cody were instrumental in this accomplishment.

This study demonstrated that the leadership model of military innovation explains wartime innovation better than existing models.

⁶⁶ That the Islamic State emerged and took over large parts of Iraq in 2014 does not undermine the success of the war. The emergence of the Islamic State had more to do with Shia-dominated government policies that disenfranchised a large portion of the population and instability in Syria than anything else. The fact remains that Iraq had a stable government and a functional military in 2011, and the U.S. made a political decision to pull out all forces and let the sovereign Iraqi government make its own decisions.

It also showed the important role that the senior military leader plays throughout the innovation process and just how critical that leader is to the success or failure of innovation. During the formulation phase, senior military leaders affect the likelihood of innovation and the form that it takes. Their actions and influence tactics can spur or impede the innovative efforts of their subordinates. Leaders should possess openness, creative problem-solving skills, and domain-specific expertise to lead innovative efforts. Thus, an innovative leader in one domain cannot simply be transplanted into another and be expected to have the same success. They might be able to promote an innovative culture, but they can only provide the necessary intellectual stimulation or appropriate level of oversight if they possess the relevant technical expertise.

During the adoption phase, a senior military leader's role is obvious. The success of a major military innovation depends on the senior military leader adopting it. Lesser innovations, such as how to conquer hedgerows in Normandy during World War II, may diffuse on their own.⁶⁷ But major innovations require new doctrine, new organizations, or new systems that can be implemented only if the senior military leader makes the deliberate decision to adopt the innovation and then pursue the resources and authorities from policymakers necessary to implement it. Civilian policymakers have an important role, but at least in times of war, their role appears to be primarily steadfast supporters of the military's innovative efforts.

During the implementation phase, the senior military leader is faced with significant challenges. They must employ the right tactics to successfully overcome internal resistance to change. They must communicate that implementing the major change is a top priority, and they must gain access to unfiltered information to ensure the innovation is being implemented.

In short, the senior military leader and their leadership play a critical role in facilitating the development of innovative ideas, garnering policymaker support to adopt the innovation, and successfully

67 Mark J. Reardon, "Conquering the Hedgerows," in *A History of Innovation: U.S. Army Adaptation in War and Peace*, ed. Jon T. Hoffman (Washington, DC: Center of Military History, 2009), 93-102.

overcoming internal resistance to implement the innovation. All three are necessary for successful implementation.

While this study has focused exclusively on cases of wartime innovation, there is no reason to believe that the findings do not apply more broadly to peacetime innovation or innovation in other fields. Drawing on the broader innovation and leadership literature to produce the model increases its external validity. First, the cases in which the model might not be valid are worth noting. It may not work in nations that have a different civil-military dynamic. If a nation has policymakers that are much more directive in both peace and war, then parts of the model may not apply. Likewise, as discussed earlier, policymakers in the U.S. may take a more active role in peacetime. While this might lessen the senior military leader's role during adoption, there is no reason to believe it would diminish their role during the formulation or implementation phases.

There is no reason to believe that the role of the senior leader in leading innovation in nonmilitary organizations is vastly different from that of the senior military leader in leading innovation in the military. The three phases of the innovation process—formulation, adoption, and implementation—remain the same; thus, it is useful to examine the role of the senior leader in other organizations. During the formulation phase, innovation in military and nonmilitary organizations starts with the accumulation of knowledge that identifies a performance gap. Alternatively, a possibility or opportunity might emerge due to some new technology or situation leading to innovative ideas. This idea may originate from the top or bottom of the organization, but even if generated at the top, the senior leader must direct others to develop the idea. The leader influences tactics that facilitate innovation—selecting the right projects; selecting and empowering the right team; providing the necessary intellectual stimulation; providing the necessary ideational, work, and social support; and balancing freedom and oversight come directly from the broader organizational literature and have already been shown to be effective for nonmilitary organizations.

In both military and nonmilitary organizations, it is generally true that only senior leaders have the power to adopt major changes,

be they structural, process, organizational, product, etc. As a result, adoption requires the deliberate decision of a senior leader. While the senior military leader must often go to an outside entity to implement change, so must the leaders of many publicly held corporations. Just as the senior military leader must garner the approval of civilian policymakers (in terms of funding or authorities) to implement major changes, a corporation's president or chief executive officer must go to their board of directors to get major changes approved. Most governmental organizations are beholden to civilian policymakers like the military. Therefore, only private corporations seem to have a process that has significant differences from the military, which occurs only during the adoption phase.

During the implementation phase, military and nonmilitary leaders face the same principal-agent problem and must employ similar tactics to overcome this challenge. There is no reason to believe the influence tactics—selecting and empowering trusted subordinates into critical positions, making and communicating the innovation as a top priority, and obtaining access to unfiltered information—would not be just as effective in other governmental, public, or private organizations. Thus, the only significant difference is that innovation should be slightly easier in a private organization because its senior leader may have the sole authority to adopt a change. Accordingly, the leadership model of military innovation should broadly apply to many organizations, and any organization that wishes to pursue innovative efforts should focus on having leaders capable of leading these efforts. Consequently, organizations wanting to innovate should seek or develop leaders possessing the following traits: domain-specific expertise, openness, creative problem-solving skills, communication skills, persuasive skills, social skills, and planning skills.

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