

A Muse of Fire: Why the U.S. Military Forgets What It Learns in War

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Abstract

Wars are expensive and relatively rare, and so states have strong incentives to learn from war and improve their military performance over time. And yet, even in highly capable great power militaries, the lessons of previous wars are routinely lost. Why do militaries forget what they learn in war? Examining evidence from two cases across the American experiences in Vietnam and Iraq, I find that the strongest causal evidence for why the US military forgets what it learns in war is in organizational selection. The demobilization and post-war retooling process destroys the specific sub-organizations which learn in war, namely joint task forces and ad hoc task-built organizations. This research has the potential to make a significant and novel contribution both to our understanding of repeated American foreign policy mistakes and to the broader literature on military adaptation and effectiveness.

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Chapter 1

Introduction

If we remember the past, we are
condemned to misread it.

—Samuel Huntington

1.1 Principal Questions

This thesis addresses the sources of military organizational forgetting. Why do military organizations often forget the lessons they have learned in war (especially unconventional wars)? And why do they selectively retain some lessons, beliefs, or changed practices but not others? In order to answer these questions, I have to address how it is that militaries actually learn in war: for organizations as for organisms, forgetting processes and memory processes are intrinsically related.

This matters for international relations because it suggests another important factor in the analysis of military effectiveness and military innovation, literatures which are key parts of theories of democratic peace, great power politics, and studies of international conflict. Moreover, studies of political decision-making around war often emphasize the role that historical analogies play in decisions about how to fight a war or whether to go to war in the first place. While I am addressing a different kind of memory, the organizational narratives about past wars which military leaders bring to bear in advising political leadership affect how wars are fought. Questions of organizational memory within militaries are especially important for my case studies of Vietnam and Iraq, as the memory of Vietnam (as the Army had retained it) weighed heavily on American decisions in Iraq.¹

¹Stephen Biddle. 'Seeing Baghdad, Thinking Saigon'. *Foreign Affairs* (March-April 2006).

The urgency of this question is underscored by the American military’s experience at war in the 21st century. By its own lights, by 2009 the US military had ‘re-learned’ the lessons of counterinsurgency in Iraq, both in general and in specific areas of tactics, military assessments, combating IEDs, and more. Training, doctrine, force structure, procurement, and more had been tailored to maintain this knowledge. Speaking of himself and fellow “COINdinistas” in Kabul in late 2010, David Kilcullen said that, “We cleaned up their mess in Iraq, and now we’ll do it here”.² And yet, the pivot to Afghanistan less than a year later immediately revealed that much of what had worked in Iraq did not work in Afghanistan; in fact, much of what was attempted based on direct experience and ‘lessons learned’ proved counterproductive.³ None of the current models of military adaptation or learning can explain why this is, given that the inter-service, civilian-military, intra-service, and strategic cultural factors remained essentially the same. The obvious answer - much of what was learned was specific to Iraq - immediately raises questions about what *exactly* it means to adapt, learn, and remember in wartime, questions which have been under-theorized in the existing literature.

1.1.1 Overview of the Argument

This thesis argues that the same characteristics that make an organization generally good at adaptation make it bad at organizational memory. Organizational adaptation and forgetting are both rooted in the way modern militaries go to war. By building ad hoc structures, processes, and sub-organizations, militaries discover problems, search for solutions, and diffuse the most promising solutions. As time goes by, what the military has “learned” about a war is embedded in these ad hoc structures and processes. During post-war demobilization, these ad hoc structures and processes are nearly always destroyed, and most of the information they had encoded in their processes and missions is lost. What the military calls ‘lessons learned’ and what shapes post-war or peacetime responses to experiences at war in fact rely

²Celeste Ward Gventer. ‘Counterinsurgency and Its Critics’. *Journal of Strategic Studies* 37.4 (7th June 2014), pp. 637–663.

³That this should prove true regarding social and political structures is perhaps not immediately surprising. But nearly everything that the United States had successfully done to counter IEDs in Iraq failed in Afghanistan, and soon Afghan casualties due to IEDs were reaching levels unseen since Iraq before the counter-IED effort had shown fruit. IEDs remain a powerful tool of the insurgency in Afghanistan, and the US has managed to reduced casualties only by putting more emphasis on Afghan forces and reducing coalition deployments (Jason Shell. ‘How the IED Won: Dispelling the Myth of Tactical Success and Innovation’. *War on the Rocks* (1st May 2017); John Kester and Jana Winter. *Pentagon Report: IED Casualties Surge in Afghanistan*. 20th Oct. 2017. URL: <https://foreignpolicy.com/2017/10/20/pentagon-report-ied-casualties-surge-in-afghanistan/>).

on an *entirely separate* memory process. What is ‘remembered’ over time - and how and where it is remembered - is explained by the inner workings of these *two* memory processes.

However, under a specific set of organizational circumstances, wartime ad hoc structures and processes can be routinized and brought into the larger organization, in which case what was learned is retained and remembered. This thesis also provides an organizational mechanism explaining why unconventional wars seem to be more readily forgotten than conventional ones. Because military structures are designed to fight the highest-risk (conventional war), they must be more heavily modified for unconventional wars, and so the difference between the wartime and peacetime organization is greater. Operating within an evolutionary model, this thesis views temporary adaptation as inherently valuable, and, against the conventional view, raises questions about the utility of a “robust” organizational memory.

1.1.2 Structure of the Thesis

Following a theory chapter examining in detail the evolutionary, organizational mechanisms that generate both adaptation and memory (and therefore forgetting), this thesis falls into two specific problem sets across two cases (Iraq and Vietnam). Each problem set is a particular, unexpected challenge to which the US Army had to adapt in both wars.

Chapter Three: Assessing the Battlefield The first case is the problem of analysis: how do I know if I’m making progress? I demonstrate that, in both wars, senior commanders quickly realized the inadequacy of their sense-making and evaluation processes and began searching for better ones. I show how the joint task force staffs adopted a variety of approaches to this, which improved over time but never completely fit the environment, due to ambiguous selection pressures. Because adaptation to analysis problems was nearly completely ad hoc, what was learned was jettisoned after both wars. Despite the reputation of Iraq as a “victory”, I also show how the American theory of victory and progress assessment system still faltered in Iraq, to essentially the same degree as Vietnam. The relevant organizations studied here are Military Assistance Command, Vietnam (MACV) and MNF-I, which were joint task forces (Commands) dominated by the Army and run by Army generals.

Chapter Four: Surviving on the Battlefield The second case is the problem of acculturation to the battlefield: how do I survive this war? I show how American soldiers at every level displayed tremendous resourcefulness and improvement over time in adapting to the

problem of survival. I show how military leaders created ad hoc structures and organizations to assist and shape further adaptation, and provided resources to those ad hoc structures and task forces. In both wars, ad hoc and informal adaptation was more or less forgotten after the fact, but after Iraq (but not Vietnam) some of these ad hoc organizations survived for reasons I address. I also speculate on why counterinsurgency “best practices” fail to emerge on the battlefield. The organizations studied are US Army forces in the field, with some reference to the Marines and Air Force when their missions influenced Army adaptations.

I sum up by looking at how different political and strategic environments shaped post-war demobilization, such that American adaptations in Vietnam were forgotten to a greater extent than in Iraq. I then briefly lay out future lines of research and policy prescriptions.

1.2 Summary of Main Existing Views

This thesis primarily addresses itself to the military innovation and adaptation literature, although it also contributes to open questions in the study of military effectiveness and counterinsurgency.

1.2.1 Military Innovation and Adaptation

Twentieth century warfare made starkly clear the importance of innovation and adaptation to success on the battlefield. In World War I and World War II, states which chose not to adopt or had difficulty adopting new ways of warfare, such as tank warfare or naval aviation, struggled on the battlefield, and some even faced the possibility of state death. As a result, international relations scholars began studying how militaries adopted new ways of warfare, what factors affected their ability to do so, and the implications this had for military effectiveness. While definitions vary and there remains a tendentious distinction made between “innovation” and “adaptation,” the field generally studies innovation as “a change in operational praxis that produces a significant increase in military effectiveness as measured by battlefield results”.⁴ Studies of innovation have tended to fall into five major approaches.

⁴Adam Grissom. ‘The Future of Military Innovation Studies’. *Journal of Strategic Studies* 29.5 (1st Oct. 2006), pp. 905–934.

The Civil Military Model of Innovation

The first approach examines the role of civil-military relations (and regime structures) on influencing and constraining military adaptation. Barry Posen's work from the 1980s, most notably *The Sources of Military Doctrine*, set the pace for the field, arguing that innovation occurs when civilian leaders pressure militaries to adapt in the face of perceived threats.⁵ If there exist individual officers (usual marginalized figures or "mavericks" within the organization) who can take up the mantle of the perceived necessary change, pressure and resources from political leaders can transform doctrine and military practice. While Posen examines the advent of German Blitzkrieg and British aviation (and "failed innovation" by the French), the civil-military model has been taken up by other scholars. Beard addresses the US Air Force's adoption of the Intercontinental Ballistic Missile (ICBM) mission, and Zisk argues that Soviet civilians pressured the Soviet military to continuously adapt to changes in NATO doctrine. Deborah Avant and others have developed one of the implications of Posen's theory: that regime structures will influence the likelihood of an innovation being adopted. Avant argues in a study of British and American approaches to counterinsurgency that parliamentary structures give more agency to civilian leaders than presidential structures with robust legislatures, where military leaders can exploit divisions between legislators and the executive to exert influence.⁶ The Civil-Military model connects with an ongoing debate in studies of international conflict about the role which regimes play in preparing for, choosing, and prosecuting conflicts. As part of a broader discussion of democratic peace theory, scholars have identified a variety of mechanisms linking regime-type to war choice, including coup-proofing,⁷ adoption of the "modern system",⁸ credibility of threats, and even choice of operational structures in light of the selectorate. The link between regime structures, ability

⁵Barry R. Posen. *The Sources of Military Doctrine: France, Britain, and Germany Between the World Wars*. Ithaca, NY: Cornell University Press, 1986.

⁶Deborah D. Avant. *Political Institutions and Military Change: Lessons from Peripheral Wars*. Ithaca, NY: Cornell University Press, 1994, pp. 6–18. Stulberg and Salomone, along with Posen, have pointed out that Avant provides surprisingly little evidence for the notion that American executive-legislative structures damaged the ability to negotiate with principals (Adam N. Stulberg and Michael D. Salomone. *Managing Defense Transformation: Agency, Culture and Service Change*. Ashgate Publishing, Ltd., 2013, p. 155; Barry R. Posen. 'Review of Political Institutions and Military Change: Lessons from Peripheral Wars'. *Political Science Quarterly* 110.2 [1995], pp. 319–320)). And, in fact, a review of the historical evidence suggests that Congress was uniquely pliable in this timeframe; that there are no substantial instances of military agents exploiting executive-legislative divide in the period in question; and that McNamara, one of the most powerful Secretaries of Defense in history, had little difficulty forcing far more dramatic changes on the Army, making it suspect that he could not accomplish a relatively minor change in doctrine.

⁷James T. Quinnivan. 'Coup-Proofing: Its Practice and Consequences in the Middle East'. *International Security* 24.2 (1st Oct. 1999), pp. 131–165.

⁸Ryan Grauer and Michael C. Horowitz. 'What Determines Military Victory? Testing the Modern System'. *Security Studies* 21.1 (1st Jan. 2012), pp. 83–112.

to innovate in war-fighting, and victory, is one of growing interest in the literature. Besides Avant, Horowitz and Grauer's research program connects regime structures to the ability to adopt new ways of war; while they have focused primarily on diffusion, the mechanisms they look at apply equally to innovation.⁹ However, the mechanisms they include are tremendously undertheorized and underspecified. Though Horowitz includes organizational capacity on equal footing with financial capacity as a factor shaping military knowledge diffusion, he has far better sourcing on the latter than the former only examines veto points and organizational age, dismissing a variety of other organizational concerns as "likely unrelated to the transformational capacity of organizations," for no apparent reason.¹⁰ Bukkvoll, expanding on Zisk, has looked at how the particular concerns of authoritarian regimes shape how they adopt new ways of warfare.¹¹

Inter-Service Competition

The second approach examines the role of inter-service competition and rivalry in driving military innovation. While building on a foundation laid in studies of US military bureaucratic politics throughout the early Cold War,¹² this literature focuses on why some military services choose to take on some resource-intensive missions but not others. Most of this work has focused on the United States, which has the services, expansive mission and the budgets to support robust service rivalries. Studies have examined the development of the Navy's strategic nuclear missile mission,¹³ the Army's development of an air wing,¹⁴ and the Army's search for a nuclear-era mission.¹⁵ Inter-service approaches generally operate within the realm of bureaucratic politics, specifically examining how military services increase their autonomy, resources, and prestige vis-a-vis the other services, with Congress, the executive branch, and the public as a kind of strategic audience. While there may be some inter-service

⁹Michael C. Horowitz. *The Diffusion of Military Power: Causes and Consequences for International Politics*. Princeton University Press, 2010; Grauer and Horowitz, 'What Determines Military Victory?'; Ryan Grauer. 'Moderating Diffusion: Military Bureaucratic Politics and the Implementation of German Doctrine in South America, 1885–1914'. *World Politics* 67.2 (Apr. 2015), pp. 268–312.

¹⁰Horowitz, *The Diffusion of Military Power*, p. 43.

¹¹Tor Bukkvoll. 'Military Innovation Under Authoritarian Government – the Case of Russian Special Operations Forces'. *Journal of Strategic Studies* 38.5 (29th July 2015), pp. 602–625.

¹²Sapolsky's work, for example, was considered part of bureaucratic politics at the time, but has proved influential in military innovation studies.

¹³Harvey M. Sapolsky. *The Polaris System Development: Bureaucratic and Programmatic Success in Government*. Cambridge, MA: Harvard University Press, 1972.

¹⁴Frederic A. Bergerson. *The Army Gets an Air Force: Tactics of Insurgent Bureaucratic Politics*. Baltimore: The Johns Hopkins University Press, 1980.

¹⁵Andrew Bacevich. *The Pentomic Era: The US Army between Korea and Vietnam*. Washington, D.C.: National Defense University Press, 1986.

competition around doctrine (especially with the rise of joint doctrine), inter-service rivalries have primarily taken the form of a competition for resources, sometimes tied to a mission which demands certain resources.

Intra-Service Competition

The third approach to military innovation examines the way that individuals, networks, and sub-organizations within services compete to control doctrine, promotion, training, resources, and processes. Since almost everything a military service does it does internally, there is a tremendous latitude for change and adaptation within the services. Moreover, with the increase in the technical complexity of warfighting, within each service there exist a plethora of sub-missions which must be emphasized to greater or lesser degree. Whereas the first two models treat military services more or less as “black boxes” operating in their own interests, the third approach begins to break open the black box and look at military organizations as not unitary actors but sites of activity and competition. Making this process more complicated is the fact that these military organizations contain not only discrete individuals (with their own goals and beliefs) but also sub-organizations which act with their own ideas and interests. Stephen Rosen’s *Winning the Next War* is the seminal work in this part of the literature.¹⁶ In a survey of over twenty innovations, he identifies a model of military change linking senior service leadership, mid-career officers, and organizational structures. Specifically, he argues that change happens when some senior leaders develop a new ‘theory of victory’, a way the service must fight in the next war. They then will seek to convert some mid-career officers to their cause, for whom the senior leaders must work to provide high-quality career opportunities. This is often institutionalized through the creation of a new sub-organization or branch of service. Williamson Murray and Allen Millet’s volume on interwar adaptation in Western militaries work broadly confirmed this line of inquiry. These patterns contribute to our understanding of naval aviation, special operations, nuclear submarines, cruise missiles, and counterinsurgency doctrine.¹⁷

¹⁶Stephen Peter Rosen. *Winning the Next War: Innovation and the Modern Military*. Ithaca, NY: Cornell University Press, 1994.

¹⁷Gregory A. Engel. ‘Cruise Missiles and the Tomahawk’. *The Politics of Naval Innovation*. Newport, RI: US Naval War College, 1994, pp. 18–22; Benjamin Jensen. ‘Escaping the Iron Cage: The Institutional Foundations of FM 3-24. Counterinsurgency Doctrine’. *Journal of Strategic Studies* 39.2 (23rd Feb. 2016), pp. 213–230; Liam S. Collins. ‘Military Innovation in War: The Criticality of the Senior Military Leader’. Ph.D.. Princeton, NJ: Princeton University, 2014; Fred Kaplan. *The Insurgents: David Petraeus and the Plot to Change the American Way of War*. New York: Simon & Schuster, 2014.

While this literature began with a focus on intra-service competition for scarce resources (funding, prestige, and career advancement into senior positions), there is an emerging body of literature which focuses on intra-service change and adaptation that is not necessarily competitive. Military services are massive ecosystems, and there is room for cooperation as much as for competition. Searches for new theories of victory, ideas about the next war, and changes in overall doctrine are often coordination games as much as anything else; while some possible changes affect the axis of competition (changing the distribution of scarce resources), other possible changes work on the axis of cooperation (improving outcomes for everyone or arguing for aggregate increases in resources). Jensen looks at the way incubators (sub-units outside of the normal hierarchy devoted to experimentation) and advocacy networks (informal professional networks) in the US Army constantly modify doctrine in light of the perceived next war (to the tune of fourteen re-writes of the Army's primary doctrine manual since 1945).¹⁸ Jensen, in another article, uses these mechanics to illustrate the creation of the Army's new counterinsurgency doctrine (FM 3-24); rather than being a creation *ex nihilo* or the product of a major "internal insurgency", Jensen argues that 3-24 was the result of a search for a better way, supported by major players within the military.¹⁹ While these changes were controversial with some, they also had support from a variety of key actors: the promulgation of 3-24 was not a surprise coup but the culmination of a broad search for new strategy. J.R. Clark tells a similar story of doctrinal change through consensus-building, including a role for appeals to civilian authority.²⁰

Critically, how adaptations occur can depend on relatively arbitrary organizational relationships. Johnson finds that American deficiencies in tank warfare early on in the Second World War were due to the fact that the armor mission fell between infantry and cavalry. As a result, American tanks were designed for infantry and cavalry support (an example of sub-organizational cooperation) but not for tank on tank combat.²¹ Coffey found that the mechanized infantry's status between armor and infantry makes it an organizational orphan.²² Haworth argues that the input of too many branches dooms the US Army's Bradley fighting

¹⁸Benjamin M. Jensen. *Forging the Sword: Doctrinal Change in the U.S. Army*. Stanford, California: Stanford Security Studies, an imprint of Stanford University Press, 2016.

¹⁹Jensen, 'Escaping the Iron Cage'.

²⁰Joseph Roger Clark. 'Innovation Under Fire: Politics, Learning, and US Army Doctrine'. Ph.D.. United States – District of Columbia: The George Washington University, 2011.

²¹David E. Johnson. *Fast Tanks and Heavy Bombers: Innovation in the U.S. Army, 1917-1945*. Cornell University Press, 1998, p. 20.

²²Rod A Coffey. 'Doctrinal Orphan or Active Partner? A History of US Army Mechanized Infantry Doctrine'. MA Thesis. Leavenworth, KS: US Army Command and General Staff College, 2000.

vehicle to mediocrity.²³ While Grissom categorizes activities like this as part of “competition”, an examination of the organizational dynamics at play suggests structural neglect or failed coordination games rather than competition.²⁴

One of the things that stands out about the intra-service competition literature is a focus on detailed studies of organizational mechanisms. Because the civil-military and inter-service models deal with a narrow slice of the organizations involved (usually senior decision-makers), they tend to focus on principal-agent problems, bureaucratic politics, or interest-based arguments. But many of the mechanisms which the intra-service approaches identify are spread throughout the relevant services, in doctrine, organizational structure, promotion pathways, training, recruiting, procurement, and standard operating procedures. While a focus on these specific organizational mechanisms is lacking, three exceptions stand out. Tattar argues that the creation of an organizational subunit or a special commission is a critical differentiator of whether an innovation will be adopted.²⁵ Liam Collins’ study of American adaptation in Iraq addresses the way that senior champions work to create and protect innovations, including through the transition to peacetime.²⁶ Pete Dawkin’s Princeton doctoral dissertation deserves special notice.²⁷ Dawkins shows how informal and formal organizational processes scuttled an attempt by the Army brass to make the Vietnam district and provincial advisor mission equal in career advancement to the combat mission.²⁸ Despite substantial top-down pressure and a clear organizational imperative, mid-career officers still believed that an advisor tour would damage their careers relative to a combat tour. This thesis is situated within this literature, developing insights about how organizational structures shape adaptation, innovation, and memory.

²³W. Blair Haworth. *The Bradley and How It Got That Way: Technology, Institutions, and the Problem of Mechanized Infantry in the United States Army*. Westport, CT: Praeger, 1999.

²⁴Grissom, ‘Future’, pp. 916–7.

²⁵Matthew Alan Tattar. ‘Innovation and Adaptation in War’. Ph.D.. United States – Massachusetts: Brandeis University, 2011.

²⁶Collins, ‘Military Innovation in War’.

²⁷Despite being written by one of the most famous and accomplished Army officers of his generation (and one who was intimately involved in both Vietnam and the post-war reform process), this work has been almost completely forgotten in the literature, and even when referenced is unlikely to have actually been read, from the way its nuanced argument is usually butchered.

²⁸Peter M. Dawkins. ‘The United States Army and the “Other” War in Vietnam: A Study of the Complexity of Implementing Organizational Change’. Ph.D. Princeton, NJ: Princeton University, 1979.

Strategic Culture

The fourth approach to military innovation is strategic culture. In much the same way that constructivist approaches try to lay out the social ground of interpretations of interests and power, strategic and organizational culture models try to understand how services, militaries, or states interpret the opportunities for innovation or change they encounter. When an organization encounters an opportunity for change, what influences whether that organization perceives it to be in its interests? Theo Farrell suggests that culture can impact this decision in three ways.²⁹ First, senior leaders can push the organization over time to adopt a new innovation (planned change). Second, shocks from outside the organization (to include defeat in war) can reshape culture by discrediting old ways of doing things. Third, an organization can emulate another military organization, usually in another country. Farrell's work accords with Carl Builder's examination of how service missions and identities created distinct ways of embracing technological and doctrinal change.³⁰ Lock-Pullan shows how the US Army embraced the Revolution in Military Affairs and AirLand Battle as a way to overcome the organizational drift created by the defeat in Vietnam.³¹ Farrell's approach has found deep resonance, especially among students of recent wars in Iraq and Afghanistan (dealt with below). Austin Long explores how theories of victory are embedded in military organizations at the start and acculturated through military education, susceptible to change only through radical reform.³² Terriff argues that differences in organizational culture explain why the US Marines sought to incorporate lessons from Vietnam into their postwar doctrine, while the US Army largely returned to large-scale conventional war.³³ Adamsky examines how strategic culture shapes military's ability to instantiate new innovations, examining Russian skill in coming up with new concepts, American skill in operationalizing new concepts, and Israeli

²⁹Farrell is often seen as the instigator of this research program. See Theo Farrell. 'Culture and Military Power'. *Review of International Studies* 24.3 (July 1998), pp. 407–416; Theo Farrell and Terry Terriff, eds. *The Sources of Military Change: Culture, Politics, Technology*. Boulder, Colo: Lynne Rienner Pub, 1st Dec. 2001; Theo Farrell. 'Figuring out Fighting Organisations: The New Organisational Analysis in Strategic Studies'. *Journal of Strategic Studies* 19.1 (1st Mar. 1996), pp. 122–135; Theo Farrell. 'Improving in War: Military Adaptation and the British in Helmand Province, Afghanistan, 2006–2009'. *Journal of Strategic Studies* 33.4 (1st Aug. 2010), pp. 567–594

³⁰Carl Builder. *The Masks of War: American Military Styles in Strategy and Analysis: A RAND Corporation Research Study*. Baltimore: Johns Hopkins University Press, 1989.

³¹Richard Lock-Pullan. *US Intervention Policy and Army Innovation: From Vietnam to Iraq*. London ; New York: Routledge, 2006.

³²Austin Long. *The Soul of Armies: Counterinsurgency Doctrine and Military Culture in the US and UK*. Ithaca, NY: Cornell University Press, 2016. See also Matthew Jacob Schmidt. 'The Influence of Professional Culture on American Military Innovation in Counterinsurgency'. Ph.D. Washington, DC: Georgetown University, 2011

³³Terry Terriff. 'Innovate or Die': Organizational Culture and the Origins of Maneuver Warfare in the United States Marine Corps'. *Journal of Strategic Studies* 29.3 (1st June 2006), pp. 475–503.

skill at practical adaptation without theoretical structures.³⁴

Bottom-Up Innovation

In his seminal overview of the military innovation literature, Grissom pointed towards the then-nascent study of bottom-up adaptation.³⁵ The way that militaries grow and change during war did not seem to fit in with any of the existing approaches. Most change in wartime emerges in response to particular battlefield problems and searches for solutions to those problems. It is often the result of battlefield experimentation, not top-down processes. Grissom pointed to some historical work that touched on this sort of innovation: the US Marine's adoption of small wars doctrine, studies of American close air support in World War II, German experimentation on the World War I Western Front, and Cold War antisubmarine warfare experiments in the Pacific Fleet.³⁶

In the decade since Grissom's article, there has been an outpouring of work on bottom-up innovation and adaptation, often by scholars who spent time in these wars. A new generation of military innovation scholars has taken up the challenge. They are notable for examining bottom-up innovation processes with organizational approaches. James Russell wrote a detailed study of US Army adaptation to counterinsurgency in Iraq, arguing that improvement was continuous, rather than something brought on by the "COINdinita".³⁷ Chad Serena did studies of the War in Iraq from the perspectives of both the US Army and the insurgency, examining organizational structures that influenced how each adapted to the war (specifically, the degree of decentralization and hierarchy). Many of these implicitly drew upon the strategic culture approach. Farrell and others published studies of Western militaries in Afghanistan.³⁸ Farrell's contribution included the point that poor organizational memory seems to contribute to improved adaptability; lower knowledge of and investment in

³⁴Dima 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.

³⁵Grissom, 'Future'.

³⁶Keith B. Bickel. *Mars Learning: The Marine Corp's Development of Small Wars Doctrine, 1915-1940*. Boulder, CO: Westview Press, 2000; Thomas Alexander Hughes. *Overlord: General Pete Quesada and the Triumph of Tactical Air Power in World War II*. New York; London; Toronto etc: Free Press, 2002; Timothy T. Lufper. *The Dynamics of Doctrine: The Change in German Tactical Doctrine During the First World War*. 4. Fort Leavenworth, Kansas: Combat Studies Institute, US Army Command and General Staff College, 1981; Robert G Angevine. 'Innovation and Experimentation in the US Navy: The UPTIDE Antisubmarine Warfare Experiments, 1969-72'. *Journal of Strategic Studies* 28.1 (Feb. 2005), pp. 77-105.

³⁷James A. Russell. *Innovation, Transformation, and War: Counterinsurgency Operations in Anbar and Ninewa, Iraq, 2005-2007*. Stanford, CA: Stanford Security Studies, 2011.

³⁸Farrell, 'Improving in War'; Theo Farrell, Frans P. B. Osinga and James A. Russell, eds. *Military Adaptation in Afghanistan*. Stanford, California: Stanford University Press, 2013.

“the way we did things before” allows units to confront the challenges at hand, rather than fight the last war.³⁹ Raphael Marcus looks at how the IDF adapted to fighting Hezbollah, first in an informal and ad hoc fashion, and later with formal structures designed to capture tacit knowledge.⁴⁰ In a nearly forgotten work, Paul Kennedy examined how ‘muddling-through’ invention and adaptation proved a crucial supplement to Allied power in World War II, specifically in sea convoy operations, the invasion of Normandy, and the air war.⁴¹

Because they are primarily motivated by change and adaptation rather than success per se, and because they focus on detailed case studies, studies of bottom-up adaptation offer some radical directions for the entire military innovation literature, directions which this thesis hopes to take up. As Anthony King has astutely pointed out, there is a kind of Latour-style Actor Network Theory implicit in this work.⁴² Whereas the other four literatures discuss specific mid-range models of change that rely on specific actors, one way of reading the bottom-up literature suggests that any change can start anywhere in the network of a military organization. There are no intrinsic limits on which actors or institutions can work to derive and mobilize a change. Change may be environmental or endogenous, bottom-up, top-down, or middle-out, and driven by civilian leaders, military officers, field commanders, doctrine writers, foreign actors, etc.⁴³ In addition, these bottom-up approaches have often relied on organizational explanations of change and performance, using more tightly evidenced causal pathways than some of the peacetime adaptation literature.

Nina Kollars work exemplifies these qualities and is an important antecedent of this thesis. She looks at on the emergence of “gun trucks” in US Army transportation convoys in Vietnam and Iraq, as well as the creation of rapid procurement groups in Vietnam and Iraq. Kollars identifies a plausible and parsimonious organizational mechanisms but stops short of offering a broader theory incorporating that mechanism. She takes on an admirably detailed study of the emergence of “gun trucks” in convoy protection operations in the US Army in both Vietnam and Iraq, tracing how organizational structures drove more informal adaptation in

³⁹Farrell, ‘Improving in War’.

⁴⁰Raphael D. Marcus. ‘Military Innovation and Tactical Adaptation in the Israel–Hizballah Conflict: The Institutionalization of Lesson-Learning in the IDF’. *Journal of Strategic Studies* 38.4 (7th June 2015), pp. 500–528.

⁴¹Paul Kennedy. *Engineers of Victory: The Problem Solvers Who Turned The Tide in the Second World War*. New York: Random House, 2013.

⁴²Anthony King et al. ‘Military Adaptation in Afghanistan by Theo Farrell, Frans Osinga and James A Russell’. *International Politics Reviews* 1.2 (1st Dec. 2013), pp. 100–116.

⁴³For an example of an applied version of this approach, see Adam Joyce. ‘The Micropolitics of “the Army You Have”: Explaining the Development of U.S. Military Doctrine After Vietnam’. *Studies in American Political Development* 26.2 (Oct. 2012), pp. 180–204.

Vietnam than Iraq.⁴⁴ In a case study of rapid development, she looks at two nearly forgotten rapid-development agencies in Vietnam and Iraq: the Limited Warfare Laboratory in Vietnam and the Mobile Technology Repair Center (MTRC) in Iraq.⁴⁵ Kollars' article is the only example I could find of an international relations scholar focusing specifically on the difference that ad hoc structures make in war. She describes both of these units as "ad hocra-cies" - not only ad hoc organizations designed to fight the war, but organizations designed around ad hoc, collaborative, organic ways of acting, rather than pre-structured or program-matic ones (bureaucracies). The Limited Warfare Laboratory was shut down after Vietnam and essentially disappeared from the historical record: Kollars is not optimistic about the MTRC. The very characteristics that make them effective in war make them hard to justify during "regular activity" in peacetime. Kollars' work is an excellent example of what kind of empirically rigorous research is possible in the study of battlefield learning. She connects a specific problem-set to a solution search strategy, two variations of organizational mechanisms for distributing knowledge about possible solutions, and specific organizational processes which effect the longevity and storage of that information (though she leaves some intriguing threads untouched). This thesis hopes to expand on her method by pointing out some generalizable organizational mechanisms that regulate memory and forgetting and which are tied to adaptation.

1.2.2 Counterinsurgency

While the military innovation literature has been relatively disinterested in postwar forgetting, militaries' supposed counterinsurgency amnesia is the defining trope of the counterinsurgency literature. Much of the literature on counterinsurgency focuses not on teasing out mechanisms for fighting against insurgency but on explaining why counterinsurgents often fail to adopt what are argued (or presumed) to be the "best practices" of counterinsurgency.⁴⁶ In this way, counterinsurgency intersects with the military adaptation literature. Following Nagl, this strand of the counterinsurgency literature is interested in learning organizations (which identify problems in existing approaches and searches for solutions) and organizational learning (the processes by which the organization changes in practices, chiefly a change in

⁴⁴Nina Kollars. 'Military Innovation's Dialectic: Gun Trucks and Rapid Acquisition'. *Security Studies* 23.4 (2nd Oct. 2014), pp. 787–813.

⁴⁵Nina Kollars. 'Organising Adaptation in War'. *Survival* 57.6 (2nd Nov. 2015), pp. 111–126.

⁴⁶The quantitative and empirical work on counterinsurgency, such as that of Lyall, Biddle, Shapiro, Kalyvas, and Douglass, tends to be more focused on testing important hypotheses about how counterinsurgency works.

doctrine). Despite the fact that it begins from the premise that some organizations forget the counterinsurgency “lessons” they have learned, this literature rarely specifies why exactly that is, apart from vague notions of “strategic culture” or an organization’s “identity”.⁴⁷ Most of this work selects on the dependent variable: an organization has successfully “learned” when it has adopted counterinsurgency doctrine as a strategy, and for all the talk of “organizations,” actual organizational mechanisms are usually absent.

Colin Jackson’s dissertation on learning in counterinsurgency is the rule-proving exception in that it identifies forgetting how to do counterinsurgency as a commonality across all militaries across time (rather than something which varies between militaries) and actually offers a forgetting mechanism. He asks a) why counterinsurgents (including organizations with recent counterinsurgency experience) choose the same failed strategies time and again and b) why counterinsurgency performance does not appear to improve over time in the same organization (at least not in any reliable way). “Almost all militaries undergo substantial organizational change over the course of counterinsurgency campaigns, but this experience is ambiguous and subject to organizational interpretation. The real questions are what militaries learn from their exposure to counterinsurgency, what they do not learn, and why”.⁴⁸ His answer is the operational code common to militaries, specifically a mission rooted in the application of force. Militaries cycle between Model I strategies (the application of military force against insurgents in a “small war”, the default) and Model II strategies (the military organizations application of resources in non-force-based governance campaigns, which can be managed like traditional campaigns, in a one-way politics-as-resource-provision). Militaries rarely and only with extreme reluctance embrace Model III strategies, which are effectively armed political negotiations, because Model III strategies call into question the utility of the exercise of military power (as force or as governance). Interestingly, Jackson identifies resource scarcity as a positive factor leading to change; militaries only adopt Model III strategies under material and organizational constraints, usually led by civilian leaders (he does not think American efforts in Iraq achieved this). Jackson writes about post-war purges

⁴⁷Research in this vein includes John A. Nagl. *Learning to Eat Soup with a Knife: Counterinsurgency Lessons from Malaya and Vietnam*. Chicago: University of Chicago Press, 2005; Andrew F. Krepinevich. *The Army and Vietnam*. Baltimore: Johns Hopkins University Press, 1988; Kristen A. Harkness and Michael Hunzeker. ‘Military Maladaptation: Counterinsurgency and the Politics of Failure’. *Journal of Strategic Studies* 38.6 (19th Sept. 2015), pp. 777–800; Austin G. Long. *Doctrine of Eternal Recurrence: The U.S. Military and Counterinsurgency Doctrine, 1960-1970 and 2003-2006*. Santa Monica, CA: RAND, 2008

⁴⁸Colin F. Jackson. ‘Defeat in Victory : Organizational Learning Dysfunction in Counterinsurgency’. Thesis. Cambridge, MA: Massachusetts Institute of Technology, 2008, p. 97.

of counterinsurgency knowledge; while he establishes these as fact, he does not offer an organizational mechanism that actually does the purging, besides the generic operational code framework.

The trouble for those who wish to argue that the American military resisted change or doctrinal innovation around counterinsurgency is that the historians disagree, and with increasing vehemence.⁴⁹ Daddis contra Sorley has argued that Westmoreland took counterinsurgency and pacification seriously, and that most changes in the war effort after his replacement by Abrams were the result of gradual processes and environmental changes.⁵⁰ Those who want to ask why the Army did not “innovate” a counterinsurgency doctrine during Vietnam ignore the obvious reason: that it already had reasonably good counterinsurgency doctrine. Despite its polemic style, not for nothing was Summers’ claim that the Army had *overfocused* on counterinsurgency accepted by a generation of Army officers, for the simple reason that they remembered.⁵¹ Birtle exhaustively chronicles the Army’s acceptance of and enthusiasm for counterinsurgency, concluding that by 1965, “at no other time in its history had the Army been better prepared to wage a counterinsurgency campaign, if preparedness is measured in the amount of manual pages, classroom time, and training exercises specifically devoted to counterinsurgent warfare”.⁵² The causes of American difficulty making progress in Vietnam cannot be solved by the magic bullet of counterinsurgency doctrine.

1.2.3 Conclusion

The reader may have noticed that the primary research question - what causes militaries to forget what is learned in war - appears only infrequently in this review. On one hand, the military innovation literature has been surprisingly uninterested in temporary innovations: indeed, it is common to refer to them as “failed innovation,” as if their lack of permanence casts aspersion on their utility.⁵³ On the other hand, the literature interested in the forgetting of counterinsurgency doctrine tends to identify successful adaptation with an adoption of

⁴⁹This insight applies to the adoption of counterinsurgency practices and strategy, not the ‘armed political negotiation’ Jackson has in mind.

⁵⁰Greg Daddis. ‘Eating Soup with a Spoon: The U.S. Army as a “Learning Organization” in the Vietnam War’. *Journal of Military History* 77 (Jan. 2013), pp. 229–254; Gregory A. Daddis. ‘American Military Strategy in the Vietnam War, 1965–1973’ (2nd Mar. 2015).

⁵¹Harry G. Summers. *On Strategy: A Critical Analysis of the Vietnam War*. Novato, CA: Presidio Press, 1995.

⁵²Andrew J. Birtle. *U.S. Army Counterinsurgency and Contingency Operations Doctrine, 1942-1976*. Washington, D.C: Center for Military History, 2007, p. 278.

⁵³The only two authors here who really contend with the postwar demobilization process, Collins and Kollars, still share this teleological view.

counterinsurgency doctrine. This is methodologically and historically unsound, and the cases this thesis looks at explore the clash between the paper prescriptions of counterinsurgency gurus and battlefield realities. Moreover, these works tend not to specify the organizational mechanisms that might lead to forgetting. In Chapter Two, I examine the roots of this lacuna and the substantial implications it has for the validity of the literature as a whole. The thesis aims to address it.

1.3 Research Design

1.3.1 Methods

Process Tracing

Process tracing is especially useful as a method for this research because it allows us to parse causal chains in theoretically ambiguous evidence.⁵⁴ The literature so far has tended to posit vague mechanisms of organizational forgetting after wartime, such as strategic culture or bureaucratic interest. Though they gesture towards the empirics, scholars advancing these claims are generally content to observe the continuity between their theoretical predictions and the outcome (forgetting). While these claims cohere with the evidence in an impressionistic sort of way, process tracing allows us to zoom in to a level of detail that allows us to discern the evidence supporting different, superficially plausible interpretations of events. Studies of the lack of permanent learning following warfare have tended to emphasize strategic cultures or high-level strategic command decisions driven by bureaucratic interest. In other words, the claim is that cultural foreignness or strategic decision-making drove organizational dissolution and de-emphasis of certain missions. This thesis claims more or less the opposite. Organizational dissolution was more or less automatic, for processual/cybernetic reasons, and dissolution drove organizational forgetting over time, to include changes in strategic culture and bureaucratic interests.

Organizational/Cybernetic Analysis

The mechanisms this thesis will examine are primarily organizational; they involve organizations interacting with other organizations and with individuals, over time. The military

⁵⁴Andrew Bennett. ‘Process Tracing and Causal Inference’. *Rethinking Social Inquiry: Diverse Tools, Shared Standards*. Ed. by David Collier and Henry E. Brady. Lanham, Md: Rowman & Littlefield Publishers, 19th Aug. 2004.

innovation literature, like most of International Relations, has neglected the methods most appropriate to this sort of work: organizational analysis.⁵⁵ Studies of military innovation have tended to involve what Graham Allison calls Model I and Model III explanations: in the first instance looking at the rational/strategic decisions actors make or, in the second instance, looking at the interests of the various bureaucracies involved. While there has been some institutional work that brings in civil-military relations, few have looked at how the military's own processes and ways of working shape outcomes, quite independently of strategic choice.

Organizational analysis, sometimes called cybernetic analysis, takes as its point of departure the rules and standard operating procedures that an organization uses in its day-to-day activities.⁵⁶ While we will find departures from those procedures, we expect those departures to be meaningful, and for the defaults/status quos/preferences embedded in those procedures to exert a causal influence over time. As we will see, the organizational level provides a relatively comprehensive and parsimonious explanation for adaptation and forgetting. The cybernetic paradigm is especially appropriate for military organizations, which are enormously complex, under intense pressures, and rely heavily on defined processes and structures for decision-making.

1.3.2 Case Selection

In order to test my theory of organizational adaptation, I need to select cases with strong environmental pressures for learning, ones in which the organization was ill-equipped for the environment in which it found itself (and which the organization quickly recognized in light of bewildering experiences and confounded expectations).⁵⁷ America's wars in Vietnam and Iraq have a number of characteristics that make them useful for this project.

In both wars, the United States encountered similar problem sets (discussed below) related to the challenge of finding and confronting an elusive enemy in a battlespace not conducive to the military's normal techniques of evaluating progress and structuring operations. These wars were characterized by diverse physical and demographic terrains that challenged the

⁵⁵David Sylvan and Stephen Majeski. 'Reviving the Cybernetic Approach to Foreign Policy Analysis: Explaining the Continuity of US Policy Instruments'. Annual Convention of the International Studies Association, San Diego, CA. 2006.

⁵⁶John D Steinbruner. *The Cybernetic Theory of Decision: New Dimensions of Political Analysis*. Princeton, NJ: Princeton University Press, 2002.

⁵⁷It was these factors which dissuaded me from studying Afghanistan. The United States believed it had succeeded, lost focus, and moved resources to Iraq. In Iraq and Vietnam, political or organizational neglect was never an issue. In addition, Afghanistan is the most studied recent war regarding bottom-up adaptation, thanks to Farrell, Osinga and Russell, *Military Adaptation*.

organizational capacity of the military command and called forth diverse ad hoc responses. In both wars, the military organizations quickly recognized the inadequacy of their initial assumptions about the war they faced, but self-consciously struggled to make sense of the war that they faced. Both wars persisted long enough for the military organizations to experiment with a variety of responses and strategies.

Counterinsurgencies vary dramatically in size and intensity of military involvement, creating a number of theoretical issues for researchers. To wit, counterinsurgencies may not create the political and organizational imperatives for change that characterize the explanandum of the military learning literature. Success in small counterinsurgencies may not be salient for political or military leadership; lack of organizational stress or political will may thus explain failures to learn. America's wars in Iraq and Vietnam were at a large enough scale to avert these issues. The American political leadership in both wars took intense interest in these wars and understood progress in them to be important for their domestic political goals; indeed, both wars had substantial electoral effects. The scale of involvement demanded high-level and consistent attention throughout the military organization. Both wars involved substantial commitments of the primary land combat arms sub-organizations, rather than simply specialized units. In other words, these wars had the attention of the military organization at all levels, over time, in ways that American efforts in El Salvador, the Philippines, or Afghanistan did not.

Moreover, these wars are crucial cases for understanding American military responses to operational uncertainty. Regardless of accuracy or complexity of understanding, these two wars are highly likely to remain paradigmatic cases of "counterinsurgency" for American political and military leaders for years to come. Moreover, the importance of these cases extends into academia. Much ongoing discussion in international relations about military effectiveness, organizational learning, counterinsurgency, regime theory, and civil-military relations involves one or both of these cases.

Case Worlds

Vietnam Between 1960 and 1973, the United States fought a complex effort to bolster and build up the South Vietnamese government against Northern Vietnamese desires to reunify the country on the North's terms. The war involved both counterinsurgency against the National Liberation Front (aka the Viet Cong) and conventional operations (against the

North Vietnamese Army (NVA)), in several different phases. After a short period as an advisory group (Military Assistance Advisory Group (MAAG)), in 1962 the US established a joint command to oversee the entire war effort, the MACV.

Iraq Following the American toppling of Saddam Hussein, the United States soon found itself fending off an unexpected insurgency, fueled by and fueling in turn political, economic, and religious tensions between some Sunni and some Shia. American forces had been prepared for a conventional invasion followed by stability/peacekeeping operations; they lacked the resources, training, and manpower for the resistance they ended up facing, and were forced to rapidly adapt. The invasion and post-invasion counterinsurgency was overseen by MNF-I.

Problem Sets

Am I making progress? In both Vietnam and Iraq, senior military leaders were quickly flummoxed by the difficulty of simply assessing progress towards their strategic goals. They turned to very similar strategies of quantification, study, and reporting. I argue that, in both wars, the command leadership showed substantial adaptability and ingenuity. But in neither war was an equilibrium solution reached, and neither war has obvious ‘lessons’ to teach would-be observers at the command level. In both wars, with the dissolution of ad hoc command staff structures, organizational memory of the tasks associated with this kind of command leadership faded.

How do I survive on the battlefield? For the soldiers actually fighting the wars and their commanders, there are few questions more vital than that of surviving on the battlefield. In both wars, I found substantial tactical adaptation. This took the form of both informal “bottom-up” adaptation and organization into task forces and more technical adaptation through ad hoc research organizations. In Vietnam, these organizations disappeared after the war. However, I show how a network of ad hoc organizations from Iraq was able to make itself permanent, creating a long-term benefit for American tactical adaptability. I also discuss the impact of rotation policy on learning.

1.4 Account of sources used

The case studies on Vietnam generally make use of extensive archival work in the National Archives, as well as oral histories and reports stored at the Center for Military History, the Army Heritage and Education Center, and the Texas Tech Vietnam Archive. They also make use of electronic datasets created during Vietnam and scarcely used in the Vietnam or international relations literature. This work is buttressed by the extensive historiography on Vietnam. The case studies on Iraq make use of a variety of open source documents, first-hand reports, and the emerging secondary literature.

1.5 Summary of the Findings and Contributions to the Literature

This thesis makes a number of important contributions to the literature. It introduces a promising new line of analysis to studies of wartime innovation: the examination of how ad hoc structures and processes are mobilized and demobilized in war. It addresses a number of open questions in the literature, such as why some innovations fail to persist and others succeed and why organizations forget what they have learned in war. It provides organizational mechanisms that buttress or underlie existing claims in the literature that are made through the analysis of culture or interests but without organizational underpinnings.

This thesis argues that the same characteristics that make an organization generally good at adaptation make it bad at organizational memory. Adaptive organizations are able to rapidly iterate through a cycle of problem-recognition, solution-search, and solution diffusion, at a variety of levels throughout the organization. These solutions will almost always be instantiated through ad hoc structures and processes created for a specific conflict. Organizational/bureaucratic practices during demobilization militate against these ad hoc structures. Once they are destroyed, most of the information they had encoded in their processes and missions is lost.

This thesis addresses some major lacunae in the military innovation and adaptation literature. Perhaps because of the extensive focus on doctrine, it is remarkable how little attention has been paid to the actual organizational mechanisms which influence behavior: routines, processes, and organizational structures. For a variety of reasons examined in Chapter 2,

doctrine is not the primary tool by which military organizations adapt to specific challenges in war. This thesis adds an important mechanism to explain variation we see, helps connect “top-down” (doctrine) and “bottom-up” (adaptation/culture) approaches, helps move towards a more methodologically sound approach to the field. Moreover, this thesis provides an example of case selection not driven by the dependent variables of “success” or “failure” in war. On an empirical note, this thesis argues that most of the literature on counterinsurgency or organizational learning in Vietnam begins with a cardinal error which substantially colors interpretation and requires a deep abuse of the evidence: that the US Army in Vietnam did not adapt to counterinsurgency, or only did so late and reluctantly. Upholding this belief requires a highly selective reading of the evidence. Studies comparing American actions in Vietnam and Iraq have proliferated over the last several years.⁵⁸ But nearly all of them, influenced by perceived defeat in Vietnam and success in Iraq, read this largely extraneous factor (adaptation does not guarantee success) back into the cases, to conclude that: “The same military organization, facing a similar counterinsurgency challenge, within comparable domestic political contexts, in one case failed to innovate — but in the other did.”⁵⁹ This thesis tells a more complicated narrative. The Army proved adaptable in both conflicts, often in more or less the same ways. Success and failure in each war emerged from exogenous factors having little to do with Army adaptations. Where there were important differences, environmental and organizational contexts were the underlying mechanisms.

Besides its theoretical contributions, this thesis uses significant and underused primary sources which will be of value to historians. Ad hoc organizations often disappear or diminish in historical accounts. In many cases, they are small and their work is secret or classified, and so they often go unmentioned from the initial histories, creating a path-dependent amnesia. Unless they have achieved some notoriety, it is not clear to future historians why they are

⁵⁸Long, *The Soul of Armies*; Paul Yingling. ‘A Failure in Generalship’. *Armed Forces Journal* (May 2007); Lock-Pullan, *US Intervention Policy*; Nina A. Kollars. ‘War’s Horizon: Soldier-Led Adaptation in Iraq and Vietnam’. *Journal of Strategic Studies* 38.4 (7th June 2015), pp. 529–553; Kollars, ‘Organising Adaptation in War’; Kollars, ‘Military Innovation’s Dialectic’; Stathis N. Kalyvas and Matthew Adam Kocher. ‘Ethnic Cleavages and Irregular War: Iraq and Vietnam’. *Politics & Society* 35.2 (1st June 2007), pp. 183–223; Colin F. Jackson. ‘Information Is Not a Weapons System’. *Journal of Strategic Studies* 39.5-6 (18th Sept. 2016), pp. 820–846; David Fitzgerald. *Learning to Forget: US Army Counterinsurgency Doctrine and Practice from Vietnam to Iraq*. Stanford, CA: Stanford University Press, 2013; Biddle, ‘Seeing Baghdad, Thinking Saigon’; Lloyd C. Gardner and Marilyn B. Young, eds. *Iraq and the Lessons of Vietnam: Or, How Not to Learn from the Past*. New York: The New Press, 1st June 2008; Frank Hoffman. ‘Learning While Under Fire: Military Change in Wartime’. Ph.D.. Kings College London, 2015; Michael Hunzeker. ‘Perfecting War: The Organizational Sources of Doctrinal Optimization’. Ph.D.. Princeton, NJ: Princeton University, 2013.

⁵⁹Clark, ‘Innovation Under Fire’, p. 42. Tellingly, studies that do not begin with this conclusion do not arrive at it.

interesting or important. And, because they are set up in a wartime, high pressure environment, they are not as good at preserving their own history, and so archival materials may be scarce. This thesis provides valuable primary source information about five organizations which have had almost no scholarly work written about them. In fact, this thesis represents the first academic work to investigate the Army Concept Team in Vietnam (ACTIV), the Vietnam Laboratory Assistance Program, Army (VLAPA), and the Rapid Equipping Force (REF), and only the second to examine the Limited Warfare Laboratory (LWL) and the Asymmetric Warfare Group (AWG).

1.6 Limits to this approach

The chief limitation to this project is its exclusive focus on the United States military. While this focus allows me to employ Mill's Method of Difference and is appropriate for a single theory-building heuristic case study, other militaries may not build, retain, and demobilize their forces in the same way. Because the United States is a global superpower, the inner working of the United States military is a valuable and important subject for international relations by itself, but this thesis alone cannot prove its extensibility to other militaries. However, while the United States may be an extreme case, all modern militaries use similar organizational mechanisms to adapt to wars, and so some extensibility is predicted.

This project also cannot prove any claims about the relationship between organizational adaptability and success in war. While a relationship is usually presumed in the literature, the causes of victory and defeat are complex and obscure, and especially so for counterinsurgencies. Moreover, an excessive focus on victory and defeat has colored and distorted the military adaptation literature. And so this thesis does not make any definite claims about whether more adaptability leads reliably to greater probability of victory, whether the United States "adapted enough" in Vietnam and Iraq, or why the Wars in Iraq and Vietnam turned out the way that they did.

Lastly, this project generally leaves out the military forces whose adaptation influences American success or failure: the enemy. While enemy counter-adaptations necessarily pop up here or there in the narrative, an exhaustive account of NVA/Viet Cong (VC) and Iraqi insurgent adaptation is beyond the scope of this project.

Chapter 2

Theory: War and Organization

2.1 Problems in the Existing Literature

What factors influence how a military organization goes about adapting to its wartime environment? And why do militaries usually jettison much of what they have learned after the war? The existing literature is ostensibly interested in these questions, but conceptual confusions and selection bias prevent it from arriving at a robust picture of learning in military organizations over time. There are two major theoretical problems in the military learning and innovation literature, namely a) conceptual confusion and b) selection bias. The definition found in Adam Grissom's survey of the military innovation and adaptation literature, which reflects the most widely-cited literature on adaptation and is itself widely-cited, allows us see the origins of both: An innovation is "a change in operational praxis that produces a significant increase in military effectiveness".¹

2.1.1 Conceptual confusion

The military innovation literature is beset by conceptual confusion over a) what phenomena fall within its ken, b) levels of analysis and explanation, and c) the nature of the mechanisms it studies and sources of valid inference. These confusions do not mean that everything that has come before is worthless. Rather, excellent empirical research suffers from a lack of valid extensibility because of fundamental errors.

¹Grissom, 'Future'.

Background Phenomena

Theories of military innovation and adaptation are trying to explain slightly different things, somewhat disconnected from each other (in terms of goals and methods). In order of scale, these theories reference:

- Changes in grand strategy
- Major changes in overarching organizational structure (such as the creation of a new service)
- Adoption and exploration of new missions or mission sets for a military organization
- Substantial changes to military doctrine
- The creation of new sub-organizations
- The adoption of technologies which disrupt existing practices
- Substantial changes to an important organizational subprocess (like recruitment, training, or procurement)
- Temporary re-organization or the creation of ad-hoc groups to solve operational issues
- Adjustment of tactics or practices to the operational environment
- Adjustment, combination, or improvisation of weapons or technologies to solve an operational problem

The historical military innovation and adaptation literature has been interested in the larger-scale questions. Since the re-emergence of counterinsurgency in Western military thinking, there has been increasing interest in smaller-scale, ‘bottom-up’ adaptation. Often, this literature is sub-divided into “innovation” and “adaptation”. Whether and why a particular phenomenon falls into one category or another, and the relationship between the two categories, has emerged as one of many poorly-conceived Scholastic debates in this space. The differences between the processes assigned to “innovation” or “adaptation” is often arbitrary or incidental and not fundamental.

This binary typology exhibits poor conceptualization, because, of course, adaptation and innovation are not opposites.² Rather, they *share* an opposite: stasis. Viewed with this negative pole in mind, the positive pole - organizational change - becomes clear. And so while it may be helpful to view adaptation and innovation as two different regions of this spectrum, viewing organizational change (in all its potential variety) as the fundamental concept with which we are dealing offers us an improved “theory of the ontology of the phenomenon under consideration”.³ This, as Bennett and George suggest, is a fruitful way forward for the military adaptation literature.⁴

Levels of Analysis

The relatively arbitrary distinction between adaptation and innovation leads to another conceptual confusion over the appropriate levels of analysis with which to study organizational change in militaries. Militaries are large, complex organizations with numerous sub-organizations, and so we need to be careful to identify plausible causal pathways for change, and to make sure our models fit their organizational context. The literature is often guilty of mixing Allison’s Model 1 (rational actor- treating the cohesive organization as a strategic agent), Model 2 (organizational politics/cybernetics - standard operating procedures), and Model 3 (bureaucratic politics - interest group competition) with abandon, so that you have un-differentiated organizations ‘deciding’, ‘thinking’, or ‘learning’, individuals changing the thinking of an entire service, doctrine (decided by a network of individuals) changing organizational praxis, organizational praxis changing doctrine, etc. None of these factors are implausible in and of themselves. But given that they occur at different organizational scales, with different mechanisms, and over different time-frames, clarity and consistency in their use will improve the literature.⁵

So, for example, it should strike one as odd that the same study would employ “strategic

²Some have argued for a “spectrum” approach, which fails for the standard reason that the poles upon which the spectrum is based fails (Gary Goertz. *Social Science Concepts: A User’s Guide*. Princeton, NJ: Princeton University Press, 2006, pp. 31–32).

³Ibid., p. 44.

⁴Andrew Bennett and Alexander L. George. ‘Case Studies and Process Tracing in History and Political Science: Similar Strokes for Different Foci’. *Bridges and Boundaries: Historians, Political Scientists, and the Study of International Relations*. Ed. by Colin Elman et al. Cambridge, MA: The MIT Press, 2001, p. 161.

⁵As Jon Sumida said of social scientists using poor military history, “What they don’t realize is that if they get the facts a little wrong, they do not get the results a little wrong, they get them all wrong” (Quoted in John A. Lynn. ‘Reflections on the History and Theory of Military Innovation and Diffusion’. *Bridges and Boundaries: Historians, Political Scientists, and the Study of International Relations*. Ed. by Colin Elman et al. Cambridge, MA: The MIT Press, 2001, p. 366).

culture” (the context of the whole organization, relatively stable over time) and the specific actions of a norm entrepreneur both as independent variables in the same analysis. Or, alternatively, one study uses surveys of mid-level military officers to assess attitudes towards future threats and missions as a way of evaluating Barry Posen’s theory of external threat, which operates on civil-military mechanisms, not the beliefs of people in the military.⁶ The gap between the theory tested (what are the organizational and political mechanisms generating pressure to change based on threats) and the evidence used (beliefs of mid-level officers) goes unremarked. And, similarly, when we are studying change within a specific US military service or sub-organization, we should be wary of suddenly switching to “interests” or “beliefs” which “the United States” has about some matter.

Moreover, the difference between top-down and bottom-up approaches is generally under-defined and taken for granted.⁷ At first, the differences seem intuitive. Militaries have a “Great Chain of Being” stretching from the lowliest private to the Commander in Chief; they have a top, and they have a bottom (see Figure 2.1). Top-down changes are decided at the highest levels within the military-political system and enforced on the lower levels of the hierarchy. Bottom-up changes emerge in the field and are passed up the chain of command before being formally incorporated into doctrine, training, or practice. Some of the literature has also begun speaking of “horizontal innovation” - changes which occur “at bottom” but are then spread diffused through peer networks, rather than moving “up” the chain of command. This whole metaphor is built upon an ideal-typical notion of military hierarchy.

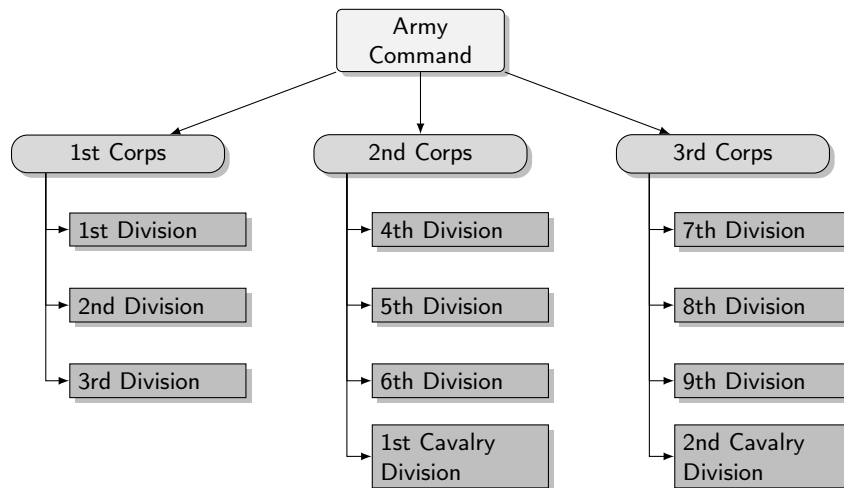
The problem is that modern militaries are structured in a more complex way that permits a variety of other kinds of moves within the organizational system.⁸ During a military campaign, a military sets up a Command - an ad hoc organization for coordinating unity of effort for all the forces in the theater (these often take the form of a Joint Task Force). More permanent field formations (corps, divisions, etc.) are placed under this command. These formations, in turn, themselves have staffs, HQs, and diverse components including support functions, intelligence, a variety of combat arms, etc. This in-theater coalition is, of course,

⁶Deborah Avant and James Lebovic. ‘U.S. Military Attitudes Toward Post-Cold War Missions’. *Armed Forces & Society* 27.1 (1st Oct. 2000), pp. 37–56.

⁷The major cited sources making this distinction do not bother with a definition, taking it as relatively apparent. See Grissom, ‘Future’; Farrell, ‘Improving in War’; Farrell, Osinga and Russell, *Military Adaptation*; Stuart Griffin. ‘Military Innovation Studies: Multidisciplinary or Lacking Discipline?’ *Journal of Strategic Studies* 40.1-2 (2nd Jan. 2017), pp. 196–224; Russell, *Innovation*.

⁸Chris C. Demchak. *Military Organizations, Complex Machines: Modernization in the U.S. Armed Services*. Ithaca, NY: Cornell University Press, 1991, pp. 132–150.

Figure 2.1: Classic Military Hierarchy



distinct from the general staff and all of the other functions of the military that allow it to train, equip, deploy, and sustain forces. Innovation and adaptation can occur in a variety of places, and in a variety of directions, within this structure. If a platoon leader has a bright idea, it is clearly "bottom-up" innovation. But how should we categorize a divisional commander experimenting with the disposition of his forces (tens of thousands of soldiers), or a major on an intelligence staff coming up with a new process in the combatant command? It's not clear that directional metaphors are useful here. Even the field/homefront distinction is blurrier than it has been in the past. Rotation means that individuals leave the battlefield for training and rest, to attend schools, or to move to different units; in recent years, individuals who have left the field to take command of training and doctrine units have been a vital catalyst for change. And so, the complexity of military operations routinely lead to situations like the following:

- A field commander experimenting with Tactics, Training, and Procedures (TTPs) across a large group of forces he commands, against institutional opposition.⁹
- An informal network of officers sharing experiences and ideas in journals and conversations, and pushing for the adoption of a doctrine unpopular with senior leadership.¹⁰
- A vice chief of staff empowering an enterprising mid-ranking officer to seek out problems to solve on the battlefield, leading to an ad hoc organization of soldiers and civilians.¹¹

⁹Hughes, *Overlord*, pp. 129–130.

¹⁰Bickel, *Mars Learning*, p. 6.

¹¹Kollars, 'Organising Adaptation in War'.

- A support-element commander setting up a field school to train incoming replacements.¹²
- A staff officer with field experience rotating home and joining a network of soldiers, policymakers, and academics intent on pressuring the political and military leadership to change doctrine.¹³

None of these experiences plainly fits the “top-down” or “bottom-up” pictures. This suggests we need to move away from structuring the literature around these needlessly binary, over-simplifying metaphors. Moreover, not only are these mechanisms not spatially binary: they are also not temporally bounded in any obvious way. As Michael Horowitz has shown, the organizational afterlife of even “major innovations” is just as interesting, challenging, and requiring of organizational commitment and creativity as the initial pursuit of that capability.¹⁴

Nature of Mechanisms

There is also substantial confusion over the nature of the mechanisms which the literature identifies as the sources of military innovation. Much of this revolves around what Jackson calls the “folk theories” of learning dysfunction: strategic/organizational culture, experience or history, and ex ante constraints.¹⁵

The military adaptation and learning literature is infected by the use of “institutional”, “organizational” or “strategic” culture as an explanatory variable. Almost universally, “culture” is used as a slightly more respectable rephrasing of the metaphysical notion of an organizational “essence”.¹⁶ The usual model is to give some kind of interpretive, narrative history of the organization and explain why this leads directly to success or failure in a particular situation. In this picture, the actual empirical characteristics of the military as an organization drop out, in favor of some kind of immanent relationship between the military as an under-differentiated agent and its environment. The resulting arguments are vague and impressionistic.

¹²Kollars, ‘War’s Horizon’.

¹³John A. Nagl. *Knife Fights: A Memoir of Modern War in Theory and Practice*. Place of publication not identified: Penguin Books, 2015, Ch. 4.

¹⁴Horowitz, *The Diffusion of Military Power*, p. 31.

¹⁵Jackson, ‘Defeat in Victory’, p. 554.

¹⁶Indeed, on one point Nagl slips from talking about culture to “essence” (Nagl, *Learning to Eat Soup with a Knife*, p. 6).

Consider this notion that, “Our culture has a powerful effect because our common underlying assumptions guide behavior and the way the Army processes information as organization”.

¹⁷ While not false, this statement is equally true in reverse: “the common underlying assumptions which guide behavior and the way the Army processes information as an organization has a powerful effect on Army culture.” So, for example, there is a tendency to read the way different services penalize taking “unconventional” postings as a product of culture rather than as a determinant of it,¹⁸ or American college staff rides of Civil War battlefields as a product of a cultural fixation on the Civil War rather than a producer of that fixation.¹⁹

This is not to say that culture is totally useless as a concept. Theorists of military adaptation would do well to read Colin Gray on “Culture as Context”. Strategic Culture can be a useful shorthand for those things which do not seem to change much over time, and for the aggregate effects of the many processes which shape individuals in the service. On rare occasions, there may be a specific norm or identity so deeply embedded everywhere that “culture” (properly caveatted) seems the best way to make sense of it. The progenitors of the notion mostly recognized its narrowness (even if they disagreed sharply on their understanding of culture). Jack Snyder later wrote that “Culture, including strategic culture, is an explanation to be used only when all else fails,” while Iain Johnston’s theory specifically examines systems of symbols that are “pervasive and long-lasting,” can be traced to specific socialization processes, and explain constraints on accepted choices, but only where strong, falsifiable causal links are identified.²⁰ But “culture”, as context, cannot also explain the sources of the context or changes to it.²¹ “Culture” cannot do the work that it is expected to, and the result in the literature has been underspecified mechanisms of change or learning that appear at first blush to be just-so stories, and which crumble upon deeper investigation.²²

The same issues lead to an over-reliance on a military’s history of or experience with

¹⁷Elizabeth Kier. ‘Culture and Military Doctrine: France between the Wars’. *International Security* 19.4 (1995), pp. 65–93, p. 66 quoted in Nagl, *Learning to Eat Soup with a Knife*, p. 6

¹⁸Avant and Lebovic, ‘U.S. Military Attitudes Toward Post-Cold War Missions’, p. 155; Long, *The Soul of Armies*, p. 59.

¹⁹Although on this fixation, Long does not persuade. There is an even simpler argument for Civil War staff rides- visits to European battlefields would be rather more expensive.

²⁰Quoted in Lawrence Sondhaus. *Strategic Culture and Ways of War*. New York: Routledge, 2009, pp. 4, 8, 125–6.

²¹For a deeper analysis of the theoretical and methodological problems with the strategic culture literature, see Iver B. Neumann and Henrikki Heikka. ‘Grand Strategy, Strategic Culture, Practice: The Social Roots of Nordic Defence’. *Cooperation and Conflict* 40.1 (1st Mar. 2005), pp. 5–23.

²²Jackson points out that, by Nagl’s standards, the US Army was a learning organization due to its “strategic culture” in World War II, ceased to be in Vietnam, but then became one again by the War in Iraq (Jackson, ‘Defeat in Victory’, pp. 18–19).

a conflict, as recorded in doctrine or formal lessons learned. The literature often identifies doctrine as either a mechanism or as evidence that a real change has taken hold. It tends to identify a change in doctrine with learning itself; learning is not substantial or lasting until it results in a change in doctrine, and changes in doctrine are *prima facie* evidence of learning.²³ The problems with this approach are manifold.

First, military doctrine is a multi-faceted, often polyphonic, body of discourse, the interpretation of which depends on other organizational factors. So, for example, while Krepinevich asserts that, prior to Vietnam, counterinsurgency was left out of the “truly important” doctrine of FM 100–5 Operations, he has to uncomfortably acknowledge the existence of other doctrinal manuals which do incorporate it.²⁴ Austin Long has shown the substantial gaps between counterinsurgency doctrine and praxis in Vietnam and Iraq, gaps which careful attention reveals to be far more common than the literature assumes.²⁵ Second, this approach obviously leaves out changes, however substantial, which fail to leave their mark on doctrine, to include shifting norms, training procedures, or organizational structures.²⁶ For example, JP Clark shows how a certain set of incremental changes in the 19th century Army resulted in the possibility of doctrine in the first place; these changes were not, obviously, contained in doctrine.²⁷ Third, this mechanism contributes to selection bias by selecting on doctrinal changes which are later seen to be important, somewhat ignoring the routine re-writing of doctrine that occurs at regular intervals within the military, and which can occur for essentially random or bureaucratic politics reasons, independently of the need to instantiate “learning.” Fourth, absent other detailed evidence, the causal relationship between doctrine and organizational learning can be murky. Sometimes, doctrine seems to presage or cause organizational change; in other cases, doctrine formalizes organizational change that has already happened.

And so “doctrine” is a mechanism much like culture. We can say that a change in doctrine may be evidence of something, but a mere change in doctrine, by itself, is not dispositive of a broader shift within the organization, and the lack of a change of doctrine, by itself, is not evidence that learning or adaptation has failed to occur. How we use doctrine to make sense

²³This certainly seems to be the case for Downie, Nagl, Posen, Kollars, etc.

²⁴Krepinevich, *The Army and Vietnam*.

²⁵Long, *The Soul of Armies*.

²⁶Sometimes these result in changes in doctrine, but oftentimes not.

²⁷JP Clark. ‘Prisoners of the Past, Preparing for the Future: The Influence of Institutions, Experience, and Culture on Military Adaptability’. Working Paper (Oxford Changing Character of Warfare Programme). 26th Jan. 2016.

of change in military organizations must be tied to actual organizational praxis.²⁸

These issues pervade a number of other mechanisms of experience-management as well. In general, the literature tends to shy away from the question of what breathes institutional life into changes, what makes them salient. Instead, it assumes that once a “lesson” has been captured by “lessons learned” or by “doctrine”, the change is locked in, for all time (or at least until the doctrine is changed). There is usually little space given to questions of how doctrine is instantiated in organizational praxis or how, why, and when “lessons learned” are recalled. Given evidence that suggests “lessons learned” are mostly ignored by organizations, the analytical weight placed on their recording does not appear to be warranted.²⁹ Jackson also provides significant evidence that previous experience in counter-insurgencies does not improve performance. As a result of confusion about experience, the mechanisms which might actually lead to change from wartime experience are left under-specified.³⁰

2.1.2 Selection Bias

In the study of any social phenomenon, it is important to separate historical contingencies from underlying mechanisms which generate patterns over time. Many of the studies of military adaptation (especially those dealing with large-scale “innovation”) involve in-depth historical case studies of particular concatenations of events, people, and resources that have resulted in major institutional changes. Recall Grissom’s definition of military innovation: “a change in operational praxis that produces a significant increase in military effectiveness” as

²⁸Grissom, borrowing from European Science and Technology Studies, makes a similar point, that doctrine’s role comes down to actual users.

²⁹Heidi Hardt. ‘Who Matters for Memory: Sources of Institutional Memory in International Organization Crisis Management’. *The Review of International Organizations* (25th May 2017), pp. 1–26.

³⁰The conceptual issues addressed here especially affect the bottom-up research agenda, for several reasons. The first is simply that the emergent, iterative, contingent, and diffuse character of bottom-up adaptations make them slipperier to study, and make the evidence about why a particular adaptation was adopted more obscure. Omni-purpose mechanisms like “culture” or firm “proofs” of change like doctrine are thus more attractive. In contrast, the top-down literature tends to deal with decisive, substantial, discrete phenomena produced by a narrow, closed set of actors. Moreover, the literature on top-down adaptation has tended to look at peace-time changes in doctrine and organization (even if in the wake of wars), whereas the bottom-up literature has looked at war-time adjustments. In the former case, data access is less variable, archival materials are better-preserved, and the organizational and institutional functions are operating ‘as normal’.

In addition, the top-down processes, with their relatively narrow and fixed sets of actors and interests, have lent themselves to organizational and institutional analysis. There are a handful of discrete mechanisms controlling major mission changes or acquisitions, including congressional budgeting, the creation of new services or organizations, substantial changes in doctrine or official assessments of threats, and procurement processes. These are, in turn, controlled by a handful of people: military chiefs of staff, the Secretary of Defense, the President, and members of relevant congressional committees. Even when one of these actors is not the originator of a change, they still have to sign off on it (Adam M. Jungdahl and Julia M. Macdonald. ‘Innovation Inhibitors in War: Overcoming Obstacles in the Pursuit of Military Effectiveness’. *Journal of Strategic Studies* 38.4 (7th June 2015), pp. 467–499). Thus, the institutional structure of top-down defense changes lends itself to relatively fixed study of appropriately narrow scope.

measured by battlefield results.” Almost all writing in the literature is concerned with military innovation and its polar opposite, spectacular failures to innovation, “a lack of change in operational praxis that produces a significant decrease in military effectiveness’ as measured by battlefield results.” But an improved conceptualization of the foundational phenomenon as change (or stasis) in military organizations reveals that this definition excludes most cases of potentially important change or stasis. These selection effects operate primarily according to evaluations of three aspects of the definition: significance, increase in effectiveness, and measurement of battlefield results. These effects remove cases that did not reach a certain threshold of significance or were temporary, that had ambiguous or negative impact on effectiveness or that went un-tested in battlefield conditions. In most cases, these are violations of the possibility principle: We should include in our universe of cases instances where a positive case was possible, even if it did not come to pass.³¹

In the first instance, studies of military adaptation adopt an arbitrary notion of “significant change”, which usually incorporates some notion of permanence and some notion of scale of change. Besides obviously excluding adaptations that occur at a local level, this approach also ignores why it may be that some changes are temporary, and others are permanent, which is itself an important and interesting theoretical question that cannot be studied under the current selection model. It also ignores changes which, while significant and permanent, are gradual and not due to any discrete strategic choice.³²

Second, the current selection model assumes the ability to routinely and reliably measure the impact of a particular change on military effectiveness. War is a complex activity, and measuring success in war is not straightforward; this is especially so for modern wars and for wars with complex political objectives.³³ This approach has also tended to give undue influence to “first draft” assessments of effectiveness, ignoring programs or factors which were either poorly assessed or secret at the time. It also has resulted in the analytical error of weighting the effectiveness of a change by the ultimate outcome of a war.³⁴

As a result, the literature tends to study failures from lost wars and successes from won wars, and correlate changes in lost wars with failure and changes in won wars with success.

³¹James Mahoney and Gary Goertz. ‘The Possibility Principle: Choosing Negative Cases in Comparative Research’. *American Political Science Review* 98.4 (Nov. 2004), pp. 653–669.

³²So, for example, Stephen Biddle’s work on the Modern System is not traditionally considered part of the military adaptation and innovation literature. See also Clark, ‘Innovation Under Fire’.

³³Jackson, ‘Defeat in Victory’.

³⁴Gregory Daddis. *Westmoreland’s War: Reassessing American Strategy in Vietnam*. Oxford, New York: Oxford University Press, 2015, p. 9.

This is all analytical nonsense. It results in overfitting to the historical contingencies and mis-categorizing cases based on only tenuous connections between changes and victory or defeat.³⁵ While detailed historical case studies are important in their own right, they don't help us think about bands of probability, the prevalence of underlying mechanisms, or the likelihood of similar events in the future. Rare things happen. Thus, some have argued that cases of British success in Malaya, the success of the American surge in Iraq, or the failure of the French Maginot Line have been unhelpfully over-interpreted by military analysts seeking "lessons" of the past. By focusing on surprising success or spectacular failure, we may overfit our models of military change to edge-cases or cases where the degree of success and failure emerged from highly contingent elements.³⁶ We will also miss cases of unspectacular adaptation that may nonetheless provide valuable theoretical insights.

Third, the selection model generally ignores organizational changes which were never tested in war. As Williamson Murray points out, "military institutions must spend long periods of time not engaged in their fundamental purpose – war".³⁷ Whether a particular innovation is tested in war is essentially random. While an increase in the expected probability of war may spur institutional innovation, major changes or investments also can act as a deterrent, preventing them from being tested. While it makes sense to study wars when we can, especially changes that would not have happened *except* for war, we must be wary of ignoring 'the dogs that didn't bark.' Because war aids in illuminating the effects of a change on military effectiveness, scholars have almost exclusively studied innovations which happen to have occurred prior to, during, or immediately after a war. The problems with this are two-fold: 1) we ignore changes that happened to never be tested, and 2) we reify and intensely study changes that just happen to have occurred prior to war, especially if victory ensued. So, for example, the organizational changes preceding US military victory during the First Gulf War have been intensely studied, but the Gulf War was an essentially random test, which easily could have not occurred.³⁸ If America had not fought the First Gulf War and had

³⁵In fact, it is not uncommon to find instances where "adapt" and "succeed" are being used as synonyms. Harkness and Hunzeker, 'Military Maladaptation'

³⁶Not to mention that factors which shape leaders' (and often historians') perceptions of failure/success often have little to do with battlefield performance. Dominic D. P. Johnson and Dominic Tierney. *Failing to Win: Perceptions of Victory and Defeat in International Politics*. Cambridge, MA: Harvard University Press, 2006.

³⁷Williamson Murray. 'Does Military Culture Matter?' *Orbis* 43.1 (1st Dec. 1999), pp. 27–42.

³⁸Daryl G. Press. 'The Myth of Air Power in the Persian Gulf War and the Future of Warfare'. *International Security* 26.2 (Aut. 2001), pp. 5–44; Stephen Biddle. 'The Gulf War Debate Redux: Why Skill and Technology Are the Right Answer'. *International Security* 22.2 (1st Oct. 1997), pp. 163–174; Thomas G. Mahnken and Barry D. Watts. 'What the Gulf War Can (and Cannot) Tell Us about the Future of Warfare'. *International*

instead fought the Bosnian wars next, assessment of American air and land prowess would have been much different, even with the same organizational structure. This is also true of “major innovations.” The adoption of the aircraft carrier is often studied as the paradigmatic “major innovation.” And yet, it played almost no role in the Atlantic in World War II. If not for the Pacific naval war, would it be considered a paradigm of innovation? In fact, by almost any method of assessment, strategic nuclear submarines required more investment, organizational restructuring, and technical perfection than either aircraft carriers or nuclear weapons. And yet, it appears in no studies of “major innovations”, at least in part because its strategic effect is ambiguous and untested. There is a cognitive element to this. The spectacular success and failure of lines of effort is only apparent in hindsight, and so studying them alone does not provide guidance for organizations in the here-and-now. If specific mechanisms are not proffered which can distinguished the “future success or failure” from the other alternatives available at the time, then no guidance is provided at all.

So, for example, the Pentomic Army was a short-lived (1957–1960) US Army reorganization designed for the nuclear battlefield. Turnover in military leadership and the election of Kennedy led to a rapid move towards “Flexible Response” and away from the Pentomic Army.³⁹ Today it is an historical curiosity. And yet, plausible counterfactuals (say, a nuclear exchange in Europe during the Cuban Missile Crisis) could have transformed this forgotten adaptation into a spectacular failure, a spectacular success, or a missed opportunity, depending on the military’s performance in such an event and whether the structure had been retained.⁴⁰

The selection effects embedded in the literature leave out a number of important or interesting cases of adaptation, not to mention instances where a failure to adapt was itself noticeable. The practical reason to incorporate a broader scope of adaptations into the military adaptation literature is that the current approach is not working. The literature is animated by a desire to emulate stunning success at innovation and avoid catastrophic failures to do so, by studying past instances of both. But we do not have any indications that militaries are, broadly, improving at their ability to learn from past failure or success, especially of the

Security 22.2 (1997), pp. 151–162.

³⁹Bacevich, *The Pentomic Era*, pp. 133–4.

⁴⁰Students of the Pentomic Army might argue why success was unlikely to be the case given some of the operational challenges it raised, but that only furthers my point. We must evaluate it in terms of other organizational mechanisms involved (in this case, how combat arms units are resourced and managed and how that process affects expected effectiveness), not “success” or “failure” in a circumstance which may never arrive.

spectacular variety. Given that military leaders cannot know in advance how a major change will be judged in light of future history, it makes more sense to study the adaptation process itself, pathologies which may develop within it, and causes of organizational acceptance or rejection over time. In this pursuit, minor adaptations, maladaptations or abortive changes may prove to be as important as “successes”. In this process, the causes of spectacular success or failure may emerge, or they may not, but a more reliable approach will surely result.

2.2 Towards a Typological Model of Military Adaptation

Largely as a result of the problems above, “the theoretical literature on military innovation has not been cumulative”.⁴¹ While the models found in the literature review identify specific phenomena, none of these theories “identif[ies] the contingent conditions under which particular lessons apply, as a typological theory would do”.⁴² To put it another way, most of the military adaptation and innovation literature is concerned with only a handful of dependent variables - whether a military innovation occurs or fails, and whether victory or defeat ensues. A typological theory allows us to turn this paradigm on its head, and begin exploring the variety of kinds of military innovations that occur or fail to occur and the multiple causal pathways that lead to them.⁴³

2.2.1 Characteristics of a New Model

Having addressed in detail the problems of the military innovation and adaptation literature as it is currently structured, what would a way forward look like? In the reverse of the criticisms above is a positive pathway. A new model approach to military innovation and adaptation would involve:

- The fundamental phenomenon of study would be degrees and varieties of change and stasis in military organizations.
- The object of study would be the organization and its structure; mechanisms allowed and levels of analysis would be diverse, but would be tied to specific evidence of causal processes in play.

⁴¹Bennett and George, ‘Case Studies and Process Tracing in History and Political Science: Similar Strokes for Different Foci’, p. 161.

⁴²Ibid., p. 161.

⁴³Ibid., pp. 164–5.

- Teleology – the assignment of positive or negative value to a change or an ascription of the “purpose” of that change (except as a characterization of the subjective notions of the agents involved) – would be avoided at all costs. While an assessment of the end result in terms of effectiveness may be offered, it must be analytically separate from the changes themselves.
- A teleology of change itself - e.g. that change or adaptation is necessarily “good” in and of itself - must be avoided.
- This approach would describe in neutral terms those changes which later are deemed by historians to be unsuccessful or “maladaptive.”
- It would describe change in terms of discrete reactions by members of the organizations to problems they confront, to rational assessment of the operational effectiveness of that reaction, and to either the repetition or cessation of this cycle of problem-reaction-evaluation.⁴⁴
- It would utilize the comparability of specific operational problems to examine how different organizations respond to the same stimulus. (Problem-directed search)
- It would describe changes in terms of effects on the operational environment, without regard to “victory” or “defeat”, unless specific causal hypotheses are explicitly proffered. It would not accept post hoc ergo propter hoc measurements of “effectiveness”.
- It would reject simplistic reduction to culture or doctrine. It would identify the ways learning lives in specific networks or organizations, and in processes and discourses.
- It would accept equifinality - that an outcome might be attained by multiple causal pathways.⁴⁵
- Any reference to organizational learning/memory would be matched to a process for both the recording and recall of that information/lesson/memory.

Some of the studies noted in the literature review already have this structure, such as Kollars on gun-trucks and on rapid procurement in Vietnam and Iraq, Jackson on strategy

⁴⁴I am using rational in the thinnest sense possible, as in discriminating. The agent undergoing learning must attempt to decide whether her problem-oriented reaction has produced a state superior to the status quo ex ante.

⁴⁵Bennett and George, ‘Case Studies and Process Tracing in History and Political Science: Similar Strokes for Different Foci’, p. 159.

search by counterinsurgents, specifically the French, and Russell on operational adjustments in the US Army in Iraq.⁴⁶ These studies share an abiding interest in the actual organizational mechanics which drive adaptation and determine its diffusion and longevity. This study expands on their work by focusing on a particular organizational mechanism - ad hoc organizations created in wartime - to explain how armies learn in the field, and why they forget when they come home.

Underlying the New Model is the desire to move away from a focus on success, which is often a slippery and highly interpretive dependent variable, to a focus on change and adaptation. While the people and organizations adapting are of course trying to improve their outcomes, the search strategies they use and the methods they attempt to 'succeed' tell us a lot about the causal forces acting on the organization. So this thesis primarily addresses solution search, adaptation, and forgetting, dealing with 'success' only as a secondary factor.

2.2.2 Evolutionary Models of Adaptation

The picture sketched above has much in common with an exciting source of recent insights in International Relations: evolutionary biology.⁴⁷ Given that the military adaptation literature needs to move from its current teleological model to one interested in change without regard to judgments of "essence", "purpose", or "success", it is helpful to look at the example of evolutionary models, which accomplished this for biology. What evolutionary methods give us is a set of mechanisms to explore with, a nomenclature with which to describe, and some intuitions to guide our cases. Moreover, not only does evolutionary biology have sophisticated models for thinking about adaptation, it also has contemplated the relationship between adaptation, localized learning in organisms, and long-term evolutionary processes.

Components of Evolutionary Analysis

Organisms in Ecosystems Evolutionary models analyze the interactions between entities and their environments (to include other entities), and how those interactions alter the entities through processes of variation, inheritance and competition leading to adaptation to the environment (Natural Selection). Evolutionary models are scalefree: the

⁴⁶Kollars, 'Military Innovation's Dialectic'; Kollars, 'War's Horizon'; Kollars, 'Organising Adaptation in War'; Jackson, 'Defeat in Victory'; Russell, *Innovation*.

⁴⁷Dominic D. P. Johnson. *Overconfidence and War: The Havoc and Glory of Positive Illusions*. Cambridge, MA: Harvard University Press, 2004.

mechanisms they identify have been studied at the molecular, cellular, organism, organizational/super-organism, and species levels.⁴⁸ This also gives them a nested structure, a naturalistic version of levels of analysis.

Variation Change only happens over time if there are differences between entities. These can emerge from any number of sources - the number of non-identical entities in an environment, number of species of entities in an environment, rates of random genetic or memetic mutation in entities, etc. These variations produce different collections of traits.

Inheritance Natural selection only affects entities for which there is a mechanism for their reproduction and continuation.⁴⁹ This is really a synonym of diffusion. For example, if someone has plastic surgery to improve their appearance, it might improve their sexual fitness, but they would not pass on their improved facial features, and so natural selection would not take place. Alternatively, if an individual has a new idea, but never gets to share it with others, it is not part of the natural selection process.

Competition Something in the environment must limit reproduction, so that not all entities which have been reproduced (inheritance) are able to themselves reproduce in the environment in question. Death is the paradigmatic source of competition, but in principle sexual competition or even simply a competition for resources (if it affects the quality or quantity of inheritance) also has the same effect. From the standpoint of natural selection, an entity which cannot reproduce itself is as good as dead.

Selection Pressure The degree and nature of competition varies by environment and over time. In environments with low competition, random variations will proliferate, and change will be random and slow. The higher the selection pressure, the faster entities in the environment will converge towards either adaptive traits or ecological niches.

Fitness This is simply the match between an entity and the selection pressures it faces, so that it is more likely to survive and multiply. Fit entities are not better - they are

⁴⁸For more on superorganisms, see Bert Hölldobler and Edward O. Wilson. *The Superorganism: The Beauty, Elegance, and Strangeness of Insect Societies*. W. W. Norton & Company, 2009; Robin Moritz and Edward E. Southwick. *Bees as Superorganisms: An Evolutionary Reality*. Springer Science & Business Media, 2012.

⁴⁹Usually we are referring to traits (genetic or memetic) or species, though it is not inconceivable for “individual organisms” to reproduce themselves (as in the case of apomictic parthenogenesis, e.g. natural cloning).

simply better suited to the environment in which they are in. While it may be the case that some adaptations improve fitness across a variety of environments, it is not the case that entities that are more fit in one environment are necessarily more likely to be fit in another particular environment.

Adaptation These are the traits we see which survive the natural selection process. They are “adaptive” only in the sense that they improve the “fitness” of the organism for its environment. The concept is somewhat tautological in this regard - adaptations are changes that produce fitness in an environment, which is to say, adaptations are traits which are better at reproducing themselves than other traits. Generally, it could be said that they are traits which prove helpful in their environment.

Maladaptation In principle, natural selection does not produce maladaptation directly (select for it). Changes that damage fitness, by definition, do not propagate as widely and are therefore selected against. Evolutionary theory suggests that seemingly “dysfunctional” or “vestigial” ideas or choices sometimes serve a surprising purpose. Repeated dysfunction, or “dysfunction” which survives multiple selection points, should be especially surprising to us. It may be the case that it is a truly maladaptive trait which cannot be selected out (mother’s curse),⁵⁰ but it will more often turn out to be the downside of a functional trade-off (octopus lifespans) or even an adaptation in its own right (genes for sickle-cell anemia in malarial climates). However, there are a number of mechanisms whereby a fitness-damaging or otherwise harmful trait can be smuggled in with *adaptations* at a genetic level. Changes in traits often have second or third-order effects, often built in to the genetic or structural sources of the adaptation. If the maladaptive trait is structurally linked to an adaptive one, and the net effect is positive for fitness, then the maladaptation will persist. We can also speak of traits which are maladaptive for the environments in which they are in: Gills are maladaptive on land, lungs in the water. If a trait persists after its function has ceased, it is a vestigial trait. If they are maladaptive, they are usually selected against over time. If there is low selection pressure, they may persist indefinitely.

⁵⁰Mother’s curses are genetic maladaptations which damage fitness for men and not for women, but which are passed down by women via mitochondrial DNA. Some of them cannot be selected against by reproduction. For example, there is some evidence to suggest that lower male life expectancies are due to an life-shortening mother’s curse in mitochondrial DNA. It is difficult to imagine what an organizational analogy would be, but the closest instance might be something within the operational code - a fundamental set of practices and identities so core to an organization that it will always reassert itself, or the institution will be destroyed.

Learning For our purposes, learning is the search and strategy selection process which individual entities use to encode information about their environment and change their behaviors without resort to natural selection of that entity. Learning is a rational process, in the thin sense that entities discriminate between better and worse outcomes according to their own assessment framework. There are fierce debates about learning and how it intersects with and affects evolution. For our purposes, I will only speak of individuals learning, and will refer to organizational adaptation, and not “organizational learning” (which is underspecified and, in IR at least, overused).

Innovation “Innovation” is not a concept in evolutionary biology. In recent discourse in English-speaking societies (including in the military innovation literature), it has a teleological connotation: innovation is good, stasis is bad. As a result, I will avoid speaking of “innovation”. This does not mean that I am speaking only of “adaptations” in the sense that the military innovation literature understands them today. Some of the changes I will analyze might be termed “innovations” within the existing conceptual framework.

Adaptation Trap Evolutionary search strategies can only ‘discover’ fitness amidst variation and selection. This often creates local maxima - adaptations which improve fitness relative to the immediate environment, but which are not necessarily the most fit adaptation in the broader environment. To put it another way, evolution is a satisficer.⁵¹

Evolutionary Insights for Studying Organizational Adaptation

Evolutionary theory has some insights and intuitions which flow from its core claims, and which can inform our investigation of adaptation in militaries at the individual, sub-organizational, and organizational level.

Actual, Persistent Maladaptation is Rare: While not impossible, actual, persistent maladaptation which reduces fitness in a species is rare. Much more often, what at first blush appear to be maladaptations actually have a functional purpose. Militaries have been criticized for recurring and deep flaws in their organizational memories; we will explore whether this criticism has been justified. Given the intense pressures militaries

⁵¹While I am providing my own definition, the broader concept of adaptation traps is introduced in Daniel A. Levinthal and James G. March. ‘The Myopia of Learning’. *Strategic Management Journal* 14 (1993), pp. 95–112.

are under to perform to their utmost, and given the geographic, cultural, and historical spread of this criticism, evolutionary theory would caution us against concluding out of the gate that organizational forgetting is purely maladaptive.⁵²

Selection Pressure Shapes Adaptation: Selection pressure varies in both degree and ‘direction’. Now, selection pressure occurs even without major competition. In settings with low environmental selection pressure (meaning the environment is not highly competitive), adaptation will be slow and random, and often by whichever forms of competition remain (e.g. sexual competition). This results in a kind of modal behavior: where resources are constrained or competed for in the environment, or when there are predators or other forms of competition, adaptation will occur quickly. The selection process will rapidly cycle through finding and diffusing adaptations to those pressures. If this environmental pressure is alleviated, selection will still occur, but selection pressures will drive fitness regarding remaining competitive pressures. Over time an ecosystem, particularly one not in equilibrium, will display multiple kinds of selection pressure, producing waves of different kinds of adaptations. We should thus be sensitive to the way that different selection pressures will generate different speeds and directions of adaptation at different times. These will all still be adaptations, even if, for example, it is an adaptation that reverses a previous adaptation, such as the famous peppered moth evolution.⁵³ Thus, the notion that militaries are adapting in wartime but not in post-war demobilization or peacetime, while containing a kernel of truth (military organizations and individuals face various strong selection pressures during war), can also mislead.

Evolutionary Pressures Operate at Multiple Levels: One of the major developments in twentieth century biology was a growing appreciation for natural selection occurring at multiple levels simultaneously. Genes compete through genetic-biological mechanisms and by influencing attributes which affect individual fitness. Individual entities compete to survive and mate, passing on some or all of their characteristics. Super-organisms and other kinds of groups cooperate internally but compete with others of

⁵²Jackson makes a persuasive case that organizational forgetting of counterinsurgency experience is a transcultural military fact (Jackson, ‘Defeat in Victory’, p. 519).

⁵³Famously, white moths evolved to turn black in industrialized city centers (white moths were easier to spot amidst the soot). After deindustrialization, black moths were selected out, pressuring the species back towards white moths (L. M. Cook et al. ‘Selective Bird Predation on the Peppered Moth: The Last Experiment of Michael Majerus’. *Biology Letters* (8th Feb. 2012)).

the same species for resources.⁵⁴ Species interact in a variety of complex ways - competition, specialization, parasitism, cooperation, symbiosis - and adapt over time to changing environments or die out. Species even work to shape their environments to suit their own needs. In all of these cases, selection will push for some combination of learning, adaptation, and competition. These levels are always interacting, but in a nested and interlinked fashion, so that the gene, for instance, cannot modify the species except through individual entities, the species is constrained by its genetic material, etc. While in principle any level can cause an effect on any other, we must always verify mechanisms through the nested levels which allow it to do so. Moreover, one can always describe evolutionary change in terms of any of the levels. This does not mean that the other levels are not at work; what appears to be exogenous or environmental factors often turn out to be the product of one of these other levels. We can usually provide multiple, true explanations of events, viewed at different levels of analysis.

Strategy and the Limits of Evolutionary Models

This evolutionary model can only be an imperfect analogy or set of mechanisms, because humans consciously manipulate each other in ways that 'violate' evolutionary mechanisms. Humans are unique in that we can take advantage of and consciously manipulate adaptation. While this kind of ecosystem manipulation is difficult, it can be a powerful strategic tool; while many animals do this, humans are the only ones known to intentionally cause evolutionary adaptations in other species or in each other (breeding). Evolutionary analysis is concerned with how interactions and competition shape adaptation. It cannot tell us whether an adaptation-forcing interaction is intentional or not: from a certain standpoint, it's not clear that it matters. But, in principle, a strategic actor can intentionally modify the environment in his favor, or force his opponent into an adaptation trap. So, for example, the Viet Cong could choose when to lay low or act quietly in a hamlet or province, so as not to elicit forcible American response. On a similar note, some have argued for American forces to be more selective in network targeting of Islamist terrorists in order to "breed" more dysfunctional organizations.⁵⁵ It's important to note that this sort of activity, while strategic, is

⁵⁴Super-organisms are collections of eu-social entities which cooperate to acquire and share resources and to reproduce as a unit. Studies have shown selection effects at the super-organism level (Moritz and Southwick, *Bees as Superorganisms*).

⁵⁵Hararo J. Ingram and Craig Whiteside. 'Don't Kill the Caliph! The Islamic State and the Pitfalls of Leadership Decapitation'. *War on the Rocks* (2nd June 2016).

also evolutionary. It relies on manipulating the enemy's learning and adaptation cycle. Most importantly, from the standpoint of the adapting organization, it's not clear that it matters; the adaptations strategic action invokes are still fitness improving. It just may be the case that, if one realizes one's enemy is manipulating selection pressures to force one in a certain direction, stratagems of one's own may be called for.

2.2.3 The Ever-Learning, Ever-Forgetting Organization

Militaries learn and maintain knowledge the same way that they forget: through processes which continuously structure and restructure the organization, shaping and being shaped by its members. Militaries do not learn or adapt principally by writing down lessons in a book or manual: they learn and adapt by encoding knowledge within organizational processes and systems. While the nuances of this encoding will be dealt with below, the overall mechanism is that individuals are the fundamental storage nodes of organizational knowledge. The organization is constantly producing and storing knowledge in individuals through training, schooling, routines, evaluations, rituals, and traditions, and simultaneously recalling that knowledge. The organization's knowledge changes over time through an evolutionary process which, while guided and cultivated, is also adaptive and automatic. In this thesis, I will provide evidence that organizational processes which remove individuals or sub-organizations (which are storing knowledge by the same mechanisms as the larger organization) are the principal sources of organizational forgetting.

Fundamental Structures of Military Organizations

Like all organizations, militaries only persist over time because they are always building and rebuilding themselves. They use a variety of structures and processes to do so. Unless otherwise specified, the following applies to land warfare organization. The heart of any military is its units. In principle, every member of a military organization falls into a unit, which itself is usually subordinate to another unit, up to, in the US military, a (forces) Command: permanent structures designed to oversee the raising and maintenance of units. Different units have different characteristics, but they are given a Table of Organization and Equipment, which dictates an organic unit structure and wartime requirements (personnel and equipment). In the US, land warfare units are structured so that every person with command (responsible for making assessments and issuing orders) commands up to four

subordinates directly, who themselves may have up to four subordinates, etc.⁵⁶ Every unit will have some capabilities, listed on the Table of Organization and Equipment (TO&E), which permanently live with that unit. However, the American military structure is highly flexible and modular. New capabilities and personnel are often attached to units for specific missions or campaigns.

It's not quite the case that different sized units are simply bigger or smaller versions of each other; certain functions or capacities only start showing up at scale. **Battalions** (of ~800 people) are generally the smallest units capable of conducting independent or sustained operations. **Regiments/Brigade/Brigade Combat Teams (BCTs)** (of ~3000 members) are the smallest truly independent units (in that they have their own supply chains), the smallest units to retain their own unit histories, and usually the minimum 'deployable' unit, but they are frequently moved between divisions, and brigades are also often deconstructed/reconstructed in wartime (in Vietnam, for example, only their headquarters staff was firmly fixed). Brigades (and, above them, divisions) have wide latitude to set and modify their TTPs and Standard Operating Procedures (SOPs).

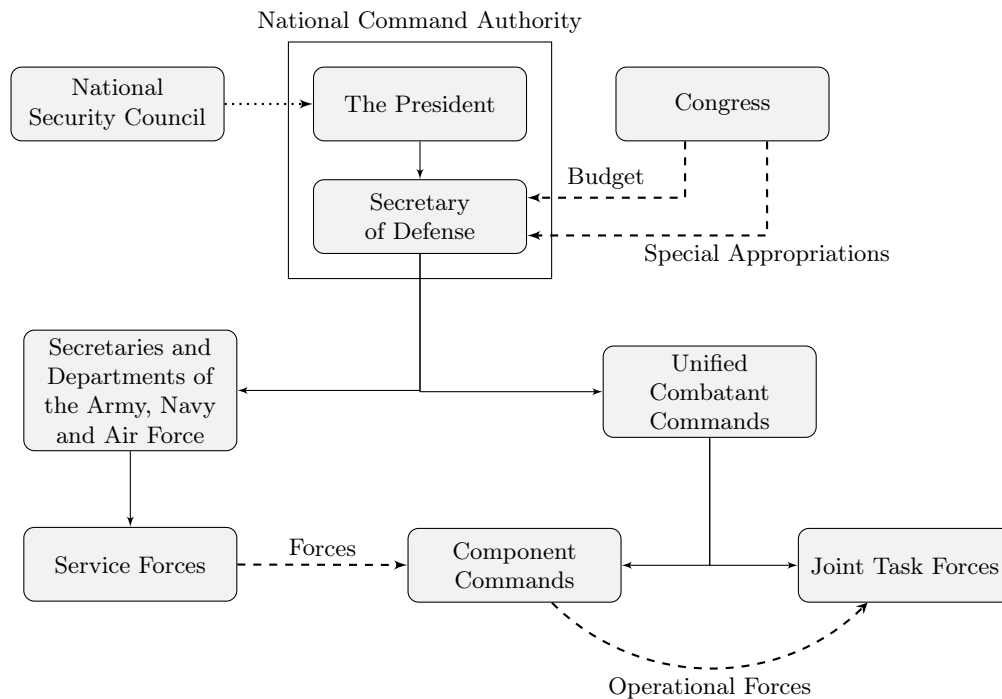
In the American military, someone is always in command. During peacetime, each branch of the military has its own permanent force command structure which trains, equips, and 'owns' forces. These are then distributed to unified combatant commands (permanent joint regional or functional commands) as needed. In war, there is a joint task force (JTF) or equivalent (set up underneath the appropriate unified combatant command) which is then staffed and resourced and becomes the command for the campaign/operation. In this regard, wartime command as we organize it is almost always ad hoc. It is in the context of this campaign command that most ad hoc adaptation occurs.

Combined Arms Even the picture painted here is grossly simplistic for one fundamental reason. Modern militaries are deeply diverse and complex organizations.⁵⁷ And so while I have given a decent overview of the view from combat arms, those units are only able to be

⁵⁶The smallest subunit, the fireteam, consists of an NCO and three junior enlisted. Several fireteams may be organized into a squad, also led by an NCO. Several squads make up a platoon, led by a lieutenant. Several platoons make up a company, led by a captain. Several companies make up a battalion, led by a major or lieutenant colonel with a staff. Several battalions make up a brigade or regiment, led by a lieutenant colonel or colonel and staff. Several battalions make up a division, led by a one or two star general with a large staff.

⁵⁷One study found, for example, that the percentage of American soldiers in the fifty corps Army combat arms Methods of Service (MOSs) declined from 25% after World War II to 14% by 1963 (Martin Van Creveld. *Command in War*. Cambridge, MA: Harvard University Press, 1985, p. 235). See also Demchak, *Military Organizations, Complex Machines*.

Figure 2.2: National Command Authority and Budgeting Structure



effective because they are enabled by diverse resources, organizations, and structures which work with or attach to typical Army units. Like the proverbial blind men surrounding an elephant, modern great power militaries are so large and complex that no one individual can fully grasp the whole.

How Militaries Are Put Together In order to produce and maintain this edifice, modern militaries employ the full variety of organizational techniques. Many if not most of these techniques have knowledge management implications. Throughout the rest of the thesis, we will examine how these organizational processes contribute to both organizational learning and organizational forgetting.

Choices about how to connect units together in chains of command create path dependencies for learning and information flow. This is not merely a problem of “red tape”: It is mathematically impossible to construct an hierarchy in an informational neutral way, which is to say, such that it will not affect the flow of information simply by connecting A to B instead of A to C⁵⁸. Especially during wartime, military chains of command (in the sense of

⁵⁸Thomas H. Hammond and Paul A. Thomas. ‘The Impossibility of a Neutral Hierarchy’. *Journal of Law, Economics, & Organization* 5.1 (1989), pp. 155–184; Jonathan Bendor and Thomas H. Hammond. ‘Choice-Theoretic Approaches to Bureaucratic Structure’. *The Oxford Handbook of American Bureaucracy*.

which subordinates report to which commanders) can be somewhat arbitrary, but they will still affect who knows what when.

Most Western militaries since the medieval period have relied on brigades or regiments as their fundamental ‘building blocks’, the kinds of units that make up the bulk of the fighting force.⁵⁹ Brigades are the fulcrum between operational and tactical concerns, they’re generally the smallest unit to incorporate most of the elements of combined arms, and they’re also the smallest unit which *generally* makes an effort to preserve its institutional and organizational history.⁶⁰ But this essential continuity masks dramatic changes in what is *inside* the brigade. As warfare gets more complex, brigades coordinate increasingly convoluted organic capabilities and maintain a variety of toolsets. Moreover, brigades, especially in the US military, are quite modular and flexible structures. In time of war, these building blocks have proved tremendously adaptive.

This is made all the more important by the fact that the US military (and the Army specifically) displays a penchant for re-organization (often under the guise of “transformation”) unique in the annals of military history. In addition to the normal cycle of mobilization and demobilization and minor tweaks, the Army engages in relatively regular updates of and paradigm shifts in its organization and manning system.⁶¹

So during peacetime, the military tinkers with the kinds of suborganizations it has, how they train, what they are equipped with, etc. (These changes are made to the TO&E). In the meanwhile, the ‘permanent’ structures of the military - large, stable formations - dominate how the smaller ones are organized. Everything changes when war starts.

How Militaries Go to War The military adaptation literature (and international relations more generally) has paid almost no attention to how combat organizations are actually structured, and has ignored the implications for our work.

Modern military organizations differ from normal organizations (and from historical militaries) in at least one critical regard. The normal organization constructs itself in such a

Ed. by Robert F. Durant. Oxford: Oxford University Press, 2012; Amy Zegart. ‘Implementing Change: Organizational Challenges’. *Intelligence Analysis: Behavioral and Social Scientific Foundations*. Ed. by Baruch Fischhoff and Cherie Chauvin. Washington, D.C.: The National Academies Press, 2011, pp. 309–330. URL: <https://www.nap.edu/read/13062/chapter/18>.

⁵⁹The United States has used a brigade system in its modern history (despite some gestures towards regiments). I will primarily refer to brigades.

⁶⁰This is actually a matter of doctrine as well as practice (US Army. *FM 6-01: Knowledge Management Operations*. 2012).

⁶¹Jensen, *Forging the Sword*, pp. 6–7.

way that its organs, components, and processes accomplish the routine peacetime mission of the organization. Any changes, reorganizations, etc. are generally intended to be permanent or at least periodic. But when modern militaries go to war, they actually generate a new, ad hoc organization to coordinate the war effort, called a Command. This Command is intended to be a temporary structure, prosecuting the war, achieving victory, and then disbanding.

The Command is resourced by components from the “regular” military, either by placing entire units temporarily under that command authority or by deconstructing existing units to provide resources to ad hoc units. During wartime, the normal military organization succeeds not when it fights but when it can produce and sustain the ad hoc organization that actually fights wars, the Command.⁶² When we think of the modern military, we make a mistake if we have in mind a neatly ordered, self-similar grouping of infantry units from the lowly platoon up to the division. Modern militaries are actually super-organizations, consisting of diverse, multiple, and often transitory sub-organizations. There are only a few other kinds of organizations with similar structures (disaster relief organizations, election campaigns). What they have in common is a bimodal character separating the organization which prepares between campaigns and the ad hoc, flexible organizations that campaign or deploy.

Wars breed ad hoc structures and processes. Ad hoc structures are organizations which temporarily coordinate either personnel directly or sub-organizations (like units) assigned to that structure. They may have their own ad hoc processes, but even if they are totally ‘orthodox,’ they are temporary concatenations of agents and resources authorized to perform some specialized task. Ad hoc processes are improvisations or modifications of existing protocols that are designed to solve a problem at hand. In wartime, even permanent structures (for example, units like the 101st Airborne) will adopt or employ ad hoc processes to improve performance in the particular wartime environment.

The implications of this structure could not be more important for military learning. Almost all of the most important, most interesting, and most adaptive organizations of any war are almost totally ad hoc. Even where all the units involved are permanent units, the combinations thereof are also, usually, ad hoc. The processes, standard operation procedures, organizational structures, and rules of the command structure, though derived from standard

⁶²This is distinct from what the US military terms “Unified Combatant Commands” or “Regional Commands”, which are permanent organizations overseeing specific regions or functional areas.

procedures, are all ad hoc and liable to change to adapt to the environment. Nearly all of the kinds of structuring processes that are crucial to organizational memory live in ad hoc, wartime organizations. Where a permanent organization has adapted to the battlefield, it has done so through ad hoc processes, which are liable to be purged in favor of ‘normal’ methods after the war.

For example, as we have seen, the military innovation literature is obsessed with doctrine. But doctrine is never simply ‘applied’ in wartime. Rather, doctrine acts as a set of “rules about how to make rules”, which the commander will use to structure his command, his units, his policies, etc., adapted for local conditions. This partially explains Posen’s observation that doctrine often goes ignored in practice; whether and how doctrine is instantiated on the battlefield depends on how these ad hoc units are put together and the operating procedures they are given.

But if all of this knowledge and adaptation becomes encoded in ad hoc organizations, what happens after the war? During demobilization, most of this knowledge is lost. These ad hoc structures are disbanded, along with all of their processes and sub-organizations. The resources and budgets appropriated for the mission dry up, and even permanent, ‘normal’ military organizations may see their budgets cut. Many of the people involved leave the military; everyone is assigned a new role. After a major war, even many notionally permanent units will be inactivated, if they are deemed no longer necessary. This phase, sometimes called drawdown, is an inevitable part of nearly any conflict of any size. Drawdown varies in scope: after Vietnam, it was extreme. After Iraq, it was relatively slight.

Mechanisms of Change in Military Organizations

The overall model is this. During wartime, ad hoc structures (Commands) are created to run the war. Commands are given resources, in the form of special appropriations, authorities, and actual units (provided by permanent service commands). In the face of unexpected challenges, these Commands reorganize units to meet battlefield conditions. Meanwhile, at every level (from the platoon all the way up to headquarters), standard procedures, TTPs, and other organizational characteristics are being modified by the relevant leaders as part of a search for solutions. In response to particularly thorny issues or in an effort to speed up diffusion of solutions, the overall Command or the military may spin up niche, ad hoc organizations like rapid procurement programs, testing and development teams, in-country

schools and specialized capabilities (such as the Vietnam-era Army/Navy Riverine task force). Over time, nearly every aspect of the Army's adaptation to the particular conflict it is fighting is reflected in these ad hoc organizations; only under exceptional circumstances will a "lesson" learned on the battlefield be straightforwardly translated into the Army's routine processes.

In their foundational article on organizational learning, Levitt and March describe the memory of what has been learned as not only modified procedures and routines but also "shared perceptions of the way things are done around here".⁶³ The problem is that, for military organizations, the "around here" disappears, as both the battlefield and the battlefield organization dissolve. As the war begins to wind down, a number of selection factors begin to act against these ad hoc structures. By default, they will be shut down. Budgeting will be cut or even eliminated, as the special appropriations dry up and as the military uses its budget to invest in resources and capabilities it had to delay because of the war. If the ad hoc organizations are not able to find a new home, they will be eliminated; their ability to do so depends in part on the perceived near-term transfer value of their mission to Army peacetime operations or to the Army's projected near term mission. As these ad hoc structures are destroyed, the lessons they encoded are lost, and their activities become obscure and are eventually forgotten. If a sub organization survives demobilization, bureaucratic politics goes to work actually maintaining, sustaining and gradually improving the core adaptation encoded in that sub organization.

Jackson sums up the most sophisticated (and organizationally focused) version of the "interwar counterinsurgency purging" theory:

The disappearance of task pressure propels bureaucratic considerations to the fore and militaries eliminate strategies that are antithetical to their parochial interests. Routines are more likely to be retained than strategies, and these routines are judged on their contributions to conventional war rather than their utility in counterinsurgency. While the interwar purge amounts to functional self-mutilation, militaries do it in order to avoid future counterinsurgency campaigns.⁶⁴

While this thesis essentially agrees with the mechanism Jackson puts forward, his theory

⁶³Barbara Levitt and James G. March. 'Organizational Learning'. *Annual Review of Sociology* 14.1 (1988), pp. 319–338.

⁶⁴Jackson, 'Defeat in Victory', p. 17.

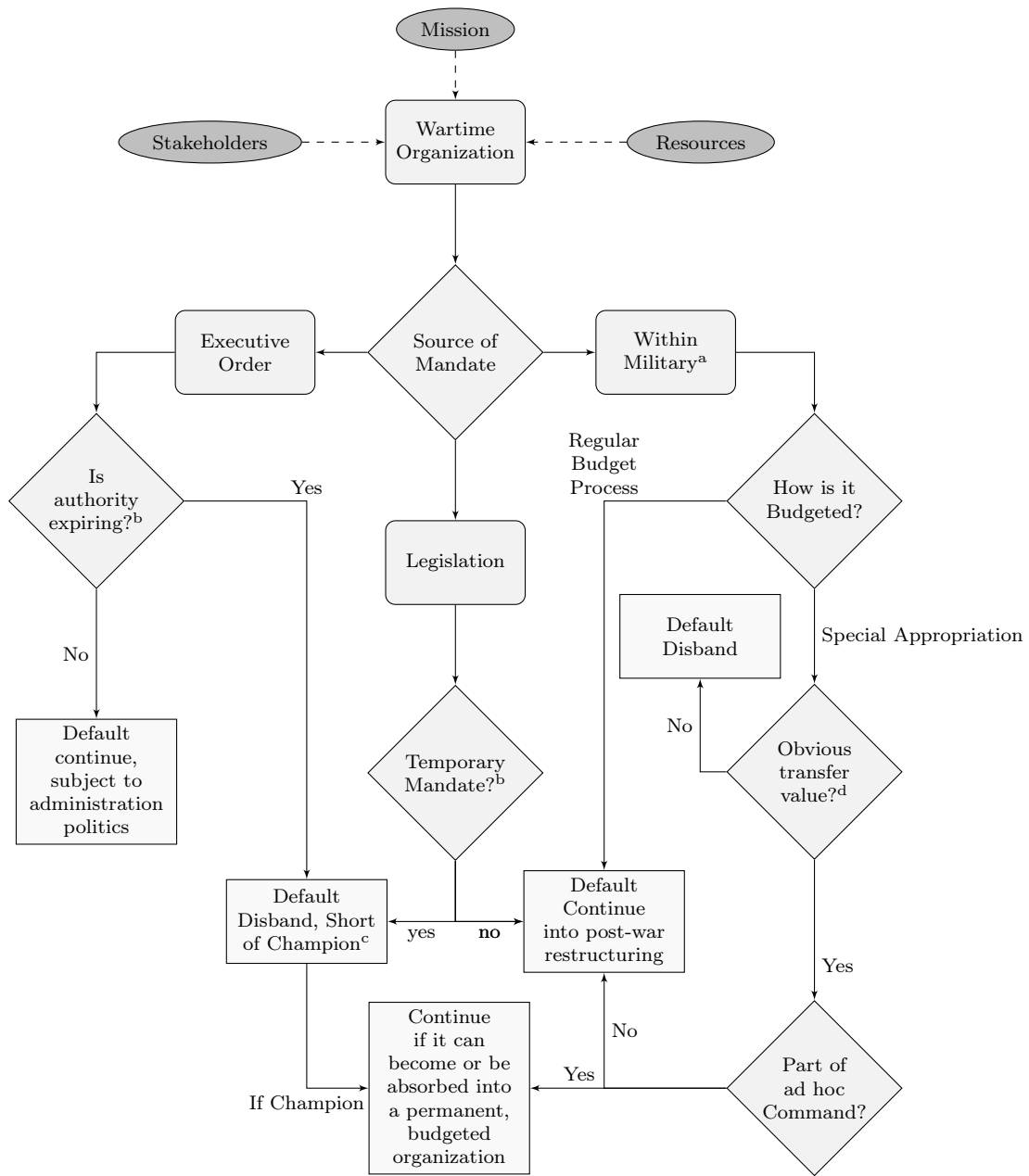
assumes that militaries do not purge routines useful in “conventional warfare”: I will provide evidence that they do. If there are selection bias or organizational-processual reasons why counterinsurgency routines are particularly likely to be dropped, it would produce the same effect as “interwar counterinsurgency purging”.

Whether a sub organization survives demobilization depends to a great extent on whether the adaptations it encodes are assessed by decision-making leaders of the larger organization to have transferable value to the organization’s larger mission or to another specific mission envisioned by that leadership. Thus, whether a sub-organization survives partially depends on its relationship to the practices of contemporary interstate warfare as envisioned by senior military and political leadership and by doctrine (ex. tank warfare in WW1), but it also depends on the particular contingent, strategic situation in which the military finds itself. Even if an adaptation is not believed to affect “the character of warfare,” if there is a particular mission that the overall organizational leadership believes is likely to occur, then the sub-organization will be preserved (strategic match). This lends a certain random character to which sub-organizations are preserved because they are likely to continue in existence past the point that that second contingent mission has ended if they are able to achieve enough organizational capital (ex. Green Berets). See Figure 2.3 for a high-level cybernetic analysis of the post-war process determining whether a wartime organization survives into peacetime.

Because organizational memory over time is bound up *in organizations themselves and what they do to sustain and continuously reproduce themselves*, organizational continuity and the factors affecting it alone explains a great deal of learning and forgetting in war.⁶⁵ Besides the match between a wartime organization and the military’s post-war tasks, organizational selection will be broadly affected by the extent to which military resources are cut after war (demobilization). Demobilization, while not always evenly distributed, tends to affect the entire military (including indirectly through resources for training, administration, weapons development, etc.) and amplify selection pressures. These two qualities (strategic match and degree of demobilization) generate a two-by-two space of outcomes (see Table 2.1). This thesis primarily explores the top right and bottom left quadrants: what happens to military

⁶⁵Perhaps for the exact reason that there is so *much* disruption in US Army units, the military’s history and heritage guardians have tended to go to great lengths to elide disruption and emphasize continuity. Disestablishments and disruptions are smoothed over to the point of parody, and newly formed units are usually given an essentially arbitrary “lineage.” While the morale and cohesion benefits may justify these practices, they have had the effect of building institutions and a military culture that romanticize unit history without ever examining the tradeoffs or institutional practices that would be required to generate organizational stability in the Army.

Figure 2.3: Wartime Organization Post-war Decision Process



a: Take care not to include congressionally mandated military organizations, which can be marginalized but not eliminated by the military alone.

b: Was the Congressional Mandate explicitly temporary and/or a part of time-delimited legislation (like a war powers act)?

c: In line with an Actor-Network Theory approach, these champions can, in principle, be anyone effective at lobbying Congress or supplying budgeting authority.

d: Does the organization contribute to a specific mission that the military's senior leadership or another organizational champion with political or bureaucratic influence believes will be on-going in the short to medium term?

organizational memory in the face of short-term strategic mismatch and strong demobilization (Vietnam) or in a situation with strong strategic match and little demobilization (Iraq).⁶⁶

Table 2.1: Factors Shaping Organizational Survival after War

	Resource Cuts	Resource Continuity
Strategic Match	Selection pressure on organizations without firm budgetary lines, attempts to preserve reduced organizations	Low selection pressure, widespread organizational continuity
Strategic Pivot	High selection pressure on all ad hoc organizations	Selection filter by strategic function, adaptability of ad hoc organizations

The Adaptation Paradox

The processes above allow us to observe the Adaptation Paradox: Organizations which permit or encourage decentralized adaptation and ad hoc structures are the most successful at learning in their environment, but ad hoc structures and informal adaptations are less likely to be preserved in organizational memory. In a scarcity-constrained environment where preserving organizational knowledge requires resources, adaptability and “forgetfulness” are two sides of the coin.

2.3 Conclusion

As I show in the coming case studies, American responses to the problems of assessment and survival in both wars were eerily similar. And yet, I could find little evidence of substantive knowledge of America’s Vietnam experience influencing adaptations in Iraq. What is remarkable is that, in each instance, the American response was ad hoc; it emerged not from a particular organizational structure, historical memory, or theory but as a response to the particularities of the threat.

⁶⁶The Iraq case will shade into strategic mismatch but little demobilization, but this is a developing case. This research design, obviously, cannot disentangle the causal role of strategic match from that of demobilization. This is a space for future research.

Chapter 3

Assessing the Battlefield

Many intelligence reports in war are contradictory; even more are false, and most are uncertain.

—Carl von Clausewitz, *On War*

This chapter examines how the US military in Vietnam and Iraq went about creating assessments and metrics processes to make sense of the wars they had embarked upon. It focuses on the military's own assessments and metrics, though it will mention civilian agency or other assessments where applicable.¹ In neither case were the elaborate and extensive assessments and metrics infrastructures that were eventually built envisioned at the start; instead, in each case, the joint command structure overseeing the war had to adapt to the conflict it found itself in. However, in doing so, the joint command (which is the focus of this case) both responded to and created conditions for the organizations it reported to (above) and who reported to it (below) that ultimately proved harmful to the overall strategic effort.

3.1 On Assessments, Indicators, and Metrics

One of the most urgent tasks military leaders face is continually assessing their own efforts. Without underestimating the difficulty of making strategic assessments in *any war*,² those directly intervening in counterinsurgencies face two additional challenging tasks. First, in conventional wars, the primary metrics of interest will generally be military in nature. While

¹Scott Sigmund Gartner. *Strategic Assessment in War*. New Haven, Conn: Yale University Press, 1997, p. 10.

²Ibid., p. 10.

decision-makers will also be interested in morale and political factors, the most important assessments will be questions of gains and losses on the battlefield (whether in territory, manpower, or matériel), the ongoing relationship between one's own forces and the enemy's, and the provision and movement of needed resources and supplies. In counterinsurgencies, assessments of military progress against insurgent forces will co-exist with assessments of civil action, development, government legitimacy, military advising, economics, and politics (at multiple levels). Moreover, the relative importance of and interaction of those factors will fluctuate over time. Second, states intervening in counterinsurgencies generally do so on behalf of a proxy (either the state or the insurgency). This generates a number of principal-agent problems, as the intervening state attempts to convince, incentivize, or coerce its proxy to do its bidding and not to free-ride – the intervening state must also, therefore, assess the proxy in addition to the enemy and the environment. Moreover, the intervening state often faces a dilemma of either relying on its proxy for information (which the proxy may manipulate) or of building an expensive independent information-gathering apparatus, often in an unfamiliar environment.

Organization theory tells us that an organization will assess progress in terms of its strategy, "the way an organization operates a class of military forces to achieve specific aims against an adversary."³ For modern, rational-bureaucratic organizations, assessments of strategic progress will have the form of indicators taken as quantitative measurements (metrics). *Metrics* are any quantitative measurements that are actively gathered in the operational environment in a systematic way. *Indicators* are data points (often metrics) that are taken (absolutely, relatively, by threshold, or by rate of change) to be direct or indirect measures for assessing success or failure.⁴

By measuring the same things (or same kinds of things) over time, the organization will seek to assess whether it is succeeding in its goals, for the purpose of adjusting its operations as necessary. Different organizations or sub-organizations will have different indicators reflecting different goals and assessments; the challenge then becomes arriving at a shared understanding of the organization's progress. Where organizations have different theories of victory or methods of assessment, organizational gridlock becomes a real possibility, as what the indicators are saying is called into question, creating a debate that is difficult to resolve

³Gartner, *Strategic Assessment in War*, p. 18.

⁴While *ibid.* is our jumping off point, the empirical validity of dominant indicator theory is by no means clear, as we shall see.

on any empirical or impartial basis. In addition, how metrics are gathered and operationalized always has the potential to affect what they say; in some cases, debates about metrics operationalization become essential and heated.

Policymakers begin with a notional end-state in mind and a theory of victory which together form a strategic narrative, a story about how the state will achieve its political goals through the various instruments of national power. This theory of victory in turn dictates to the various actors the overall goals they need to pursue and the questions they need to be asking themselves to ascertain whether they are meeting those goals, leading to an assessment. Military leaders will then seek to develop specific markers or yardsticks to routinely and systematically inform their assessments - though these can sometimes be qualitative, they are often quantitative.⁵ The concept of assessment will inform, in turn, how the indicator itself is used and understood (for instance, whether the indicator is monitored in terms of absolute value, rate of change, or a threshold). Whatever the indicator is, the organization will need to define an operational procedure for systematically measuring and collating that information, creating a metric.

3.1.1 Selection Pressure and Indicators

However, in practice, the path from strategies to metrics is rarely as simple as this, because military decision-makers are influenced by a variety of selection pressures, operating both on them as individuals and on their organizations. While a cursory analysis might emphasize battlespace task pressure (military leaders' need to win) as the primary pressure, a more detailed review reveals other pressures as well, some of which contradict each other.

Sense-making – Military leaders need to make sense of the complex environments in which they find themselves. At a certain point above field level, and when managing operations across multiple functional areas (political or economic in addition to military), military leaders no longer feel they can understand whether their organizations are succeeding or failing absent something they can track steadily over time. As long as military leaders feel they cannot make sense of their environment, they will engage in organizational search until the lack of environmental 'maps' no longer interferes with the leader's and organization's ability to operate. Of course, this is a satisficing behavior, and so can lead to path dependencies wherein military leaders are blinded by their

⁵Gartner mentions the example of arriving at a geographical objective by a certain day (ibid., p. 128).

assessment system. As we will see, it is not clear how determinative task pressure is on the shape assessments processes take. While the initial feeling of bewilderment can serve to initiate the search process (e.g. the incoming organizational assessment systems are not up to the task), there seems to be a wide, rather than narrow, variety of assessments systems which decision-makers can land on,⁶ and task pressure does not seem to be primarily responsible for the move towards sophisticated assessments systems.⁷ In principle, there is no one best qualitative or quantitative assessment or aggregation system applicable to every battlespace environment; assessment design choices are heavily influenced by other factors.

Management – While difficulty making sense of the battlefield may prove to be the initial impetus for assessments processes, organizational pressures within modern militaries account for much of their elaboration, namely, the need for military leaders to act as managers of organizations, people, and programs. While Army critics would later malign the move from martial 'gladiatorial' ethos to a 'managerial' one,⁸ senior military leaders needed to measure the performance of the efforts in which they were engaged; they did so because they were expected to follow something like 'best practices', because they themselves were held to account and 'managed', and because career promotion required the ability to lead decisively and create 'progress'. And, as Peter Drucker reportedly said, "you can't manage what you can't measure." But where concrete and definitive indications of battlefield progress (like major shifts in political sentiment or the permanent seizure of denied territory) are rare, policymakers will seek to derive alternative means of assessing progress and holding subordinates to account. The military manager will choose goals that advance his overarching objectives, and set specific indicators of those goals. Measured over time, those quantitative goals will allow him to tell whether his organization is succeeding or not. They will also allow his own managers to do the same. While in principle an organization can revisit its indicators,

⁶In population genetics, a narrow distribution of a genotype or phenotype indicates strong selection pressure; the wider the distribution, the less one genotype/phenotype is environmentally favored.

⁷This fits neatly with the genealogical research on modern organizations and societies; improved performance is rarely the source of metrification, and often *reduced performance* is the immediate result (James C Scott. *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven, CT: Yale University Press, 1998; Michael Power. 'Introduction: From the Science of Accounts to the Financial Accountability of Science'. *Accounting and Science: Natural Inquiry and Commercial Reason*. Ed. by Michael Power. Cambridge, UK: Cambridge University Press, 1996, pp. 1–35).

⁸Richard A. Gabriel and Paul L. Savage. *Crisis in Command: Mismanagement in the Army*. New York: Hill and Wang, 1978, p. 19.

goals, or metrics, at any time, in practice there is a heavy degree of path dependency, especially as an organization begins to optimize to its metrics.⁹ But because they are tied to goals, and formal organizational goals are tied to a bunch of management tools generating incentives within the organization, management needs are organizational pressures that will continue to shape organizational assessment behaviors beyond any 'real world' utility.

Messaging – One of the most powerful and immediate forces driving assessments processes is the demands made by entities with influence over the Department of Defense or the military. These typically include not only the Pentagon and White House but also Congress, the press, and public pressure groups. These groups have the power to demand, with various degrees of persuasion, that the Department of Defense or military organization in question produce reports (one-off or regular) on various subjects, to include metrics on particular areas of interest. In addition, the need to report to various strategic audiences drives military organizations to collect and shape information to fit their preferred strategic narrative. In fact, in some instances, reporting pressure may drive military organizations to create and use assessment processes that are at odds with their overall goals.

Of the forces pressuring military organizations to adapt their assessments processes, organizational pressures (management and reporting needs) predominate, because the organizational pressures are immediate and specific in selecting for processes, leaders, and organizations that fit management and reporting needs, while task pressures are usually diffuse and satisfied by a variety of potential forms of assessment. Moreover, the assessments processes organizations end up with are rarely optimized for the task pressure, because evolutionary processes do not optimize. They satisfy amongst a variety of environmental constraints, landing on local maxima. And yet, military leaders continued to use the same assessments processes (whose adaptive shape was driven by organizational pressure) for sense-making as well, even though they often acknowledge its inadequacy in the process.

In evolutionary biology, the term for an adaptation of this sort is a *spandrel*, a byproduct of another (primary) adaptation that then comes to be repurposed for another use.¹⁰ As

⁹Which is to say, the linking of concrete incentives to making the good number go up or the bad number go down leads to a reluctance to change the system once an organization or leader has gotten good at it.

¹⁰S. J. Gould and R. C. Lewontin. "The Spandrels of San Marco and the Panglossian Paradigm: A

we will see, the strongest pressures 'war managers' face in assessments processes come 'from above' - from political, managerial, or public pressures to track, manage, and report progress. But, subsequently, the mere availability of these assessments and metrics leads to their use in scenarios for which they were not designed and in which they may in fact be counterproductive in ways that are indeterminate at the time.

3.1.2 How Military Leaders Use Indicators

Military leaders are not engaged in a research project. They are not averse to revisiting their theory of victory or theory of assessment in response to changing circumstances. Sometimes this will occur at a regular interval due to a policy review; more often, it will occur as a response to changing political consensus (including change of leadership) and/or changing circumstances on the ground.¹¹ The upshot is that assessments, indicators, and metrics are often repeatedly tinkered with, even if this challenges cross-comparability or stability over time.

While Gartner is correct to push back on the notion that organizations are indifferent to assessments,¹² he dramatically underestimates what complexity, ambiguity, and information overload (not to mention changing circumstances) do to military assessments frameworks. Rather than settle on a dominant indicator used for comparison over time, American military leaders juggled multiple indicator sets whose interactions they interpreted in something of an impressionistic way,¹³ responsive to organizational and political needs as well as to circumstances on the ground. As we will see, Gartner's dominant indicator case of Vietnam doesn't really capture the organizational dynamics at play, and it is impossible to shoe-horn Iraq into the dominant indicator framework. Rather, it seems that military leaders are 'dissatisfied' with their assessments framework when they feel bewildered by the battlefield or that it is missing some critical component and 'satisfied' when they feel it helps them understand the battlefield, measure their activities, and make the case to their superiors for the strategies they wish to pursue. Mostly, this means that American military leaders constantly tinker with assessments frameworks, valuing 'accuracy' over consistency.¹⁴

Critique of the Adaptationist Programme'. *Proc. R. Soc. Lond. B* 205.1161 (21st Sept. 1979), pp. 581–598; Stephen Jay Gould. 'The Exaptive Excellence of Spandrels as a Term and Prototype'. *Proceedings of the National Academy of Sciences* 94.20 (30th Sept. 1997), pp. 10750–10755.

¹¹See the Closed Loop problem below

¹²Gartner, *Strategic Assessment in War*, p. 42.

¹³Ben Connable. *Embracing the Fog of War Assessment and Metrics in Counterinsurgency*. Santa Monica, CA: RAND, 2012, p. 19.

¹⁴Eli Berman, Jacob N. Shapiro and Joseph H. Felter. *Small Wars, Big Data: The Information Revolution*

Connable reflects the academic consensus when he assumes that the purpose of these frameworks is to provide “accurate, realistic assessment decision support to senior leadership”.¹⁵ And yet, as we will see, once one takes an evolutionary rather than purposive examination of assessments frameworks, it becomes clear that assessments frameworks serve a much more ambiguous role. Sensemaking - how senior leaders decide what is true about their environment - is a holistic and ambiguous process, and leaders are shaped by informal reports, trust, personal chemistry, the media, and any number of other factors besides the formal reports they are receiving. Their sense of the battlefield then goes on to inform how they interpret reports as managers, and how they message their activities to other parties, in part by using metrics. The deceptive “misuse” of metrics in public reporting should not normally be taken as evidence that the assessments framework is flawed or has misled senior leaders.

3.1.3 Organizing for Indicators

One of the key variables distinguishing assessments and metrics strategies is the degree of centralization employed (or imposed) across the whole organization. The more complex and varied the operational environment, the more various sub-organizations will seek to develop indicators for their own discrete operational goals. By controlling assessments of sub-organizations (and thus influencing resources and promotions), the primary organization (usually the joint command) has wide latitude to either permit decentralization or force sub-commands to focus on certain key indicators.

A variety of factors affect the degree of centralization in assessments, indicators, and metrics sought by primary organizations, which face a tension between the desire to find parsimonious tools for making sense of the entire battlespace and the variety of circumstances and missions in which different sub-organizations are engaged. The most important factor is the balance between transparency and aggregation.¹⁶ As metrics are aggregated through various levels, vital context and qualitative judgment are lost. The more centralized an assessment system, the more it will run roughshod over potentially important differences in circumstances or contexts. Other factors affecting centralization include available information

in *Modern Conflict*. Princeton, NJ: Princeton University Press, 2018, p. 324.

¹⁵Andrew P Williams et al. *Innovation in Operations Assessment: Recent Developments in Measuring Progress in Conflict Environments*. Norfolk, VA: HQ SACT, 2013, p. 25.

¹⁶Connable, *Embracing*, p. 173.

and communications technology, cost-benefit analysis (or local pushback) of the resource cost of gathering metrics, higher organizational or political demands, cross-comparability of missions/environments throughout the battlespace, relative size of joint command staff, and more.

3.1.4 The Indicator Index Problem

One difficulty decision-makers have making sense of counterinsurgency metrics is fundamentally mathematical. To succeed, counterinsurgencies need to induce changes in multiple actors (insurgents, civilian populations, client politicians, client militaries, etc.) and sectors (military, politics, economics, finance, health, etc.). And so, each of these various lines of effort will have its own distinctive indicators. But to make sense of whether the overall strategy is working, some implicit or explicit inter-relationship of these indicators must be posited, creating an *indicator index*.

Indicator indices are subject to the various vicissitudes of concept formation and measurement that Goertz, among others, identifies. An index is an artificial measurement of a set of variables, weighted or unweighted. Indices can be explicit (positing a formula for weighting the variables) or implicit (in the form of 'multiple indicator sets', where decision-makers are monitoring distinct indicators with a mental model of their interrelationship and relationship to strategy). As Goertz points out, any index posits a negative and positive pole, and some degree of continuity between them.¹⁷ Leaving aside for a minute the conceptual difficulties these poles raise, index variables often contain a "gray zone" of severe indeterminacy. For example, we might say that a counterinsurgency characterized by low population security, low client legitimacy, and high casualties was going poorly, and the inverse, going well. But what are we to make of one of high population security and high casualties, or increasing legitimacy and increasing casualties? Even if these variables produced an identical 'score', they would represent two highly distinct circumstances. Moreover, any arguments about what a 'gray zone' score means would presuppose a relationship between the variables that it may not be possible to empirically validate during the war. In addition, some of the variables within the index may in fact depend on thresholds, different rates of diminishing marginal return or a qualitative assessment, not a quantitative one.

One of the hypotheses Gartner lays out for the Dominant Indicator approach is that:

¹⁷Goertz, *Social Science Concepts*, p. 30.

If at least one indicator in a multiple indicator set suggests that a policy is performing poorly and getting worse at record rates, and another suggests that the policy is performing well and getting better at record rates, then the organization will become gridlocked.¹⁸

While indicator indices are not *necessarily* a recipe for gridlock, they do seem to routinely lead to confusion, because they make assessment indeterminable. There will rarely be an ex ante 'best practice' for weighting various index measures. Moreover, if one is debating not only what one indicator means, but what the confluence of multiple indicators means, the number of potential interpretations of the underlying data increase geometrically, not linearly. Under normal circumstances, "the results of combat can support diverse perceptions of the performance of a strategy".¹⁹ With multiple indicators, assessments can become highly subjective, but in a rather opaque way, especially if the reporting parameters or index weighting change over time.²⁰ Whether command staffs realize it or not, the indicator index problem is a key factor driving decreasing marginal benefits to aggregation and centralization.

For example, late in the Vietnam war, there was a distinct drop-off in body count, a steady increase in Hamlet Evaluation System (HES) scores, and an increase in VC assassinations of civilian leaders. This could represent a growing victory of the VC, which in its weakened state lashed out through assassinations. Alternatively, it could represent a VC strategy of 'lying low' to wait out the Americans. Moreover, these changes could just as easily be revealing changes in reporting conditions as anything 'in reality.' So, for example, the increase in HES scores could indicate increased security, or increased intimidation or loss of access due to assassinations. These questions are *fundamentally indeterminable within the indicator index*, and are subject to extreme contestation at a number of levels. Without outside, qualitative judgment, indicator indices will simply reflect the assumptions and biases that went into creating and weighting them, and not anything on the battlefield.

As we will see, in both Vietnam and Iraq, the need to interrelate multiple indicators created intractable problems for senior military and political leaders. Even as the metrics-gathering processes improved dramatically, ambiguity about how to understand and interpret the indicators persistently hampered assessment.

¹⁸Gartner, *Strategic Assessment in War*, p. 56.

¹⁹Ibid., p. 26.

²⁰Connable, *Embracing*, p. 201.

3.1.5 The Enemy and Indicators

One of the most difficult yet important tasks an assessment system must do is help decision-makers discern whether the enemy's strategy has changed, and, if so, whether their own strategy must change in turn. So, for example, US Army leaders during the Battle of the Bulge needed to decide whether the German counteroffensive was evidence of a major strategic change or a last-gasp effort. This task is doubly difficult *because the enemy can adjust its strategy to the indicators themselves*.

As discussed above, there are inevitably gaps between the systematized concepts undergirding a theory of victory, the measures employed to operationalize those concepts, and the score-keeping systems used to tabulate those measures.²¹ These gaps can create opportunities for the enemy.

Through learning or selection pressures, indicator-driven strategies may actually induce an enemy *to adapt to the indicator*. In conventional wars, there is usually (though not always) such a tight relationship between theory of victory, indicators, and metrics that indicator-driven strategies are rarely maladaptive; if what's being measured is the destruction of the enemy's industrial base, it will not induce the enemy to destroy his own base.²² But in counterinsurgencies, indicators can select for their own blindness, and the enemy can adapt either through learning (discovering and manipulating indicator sets) or through selection (parts of the organization that are easily detected are destroyed, and activities that are measured, disrupted).²³ For example, as will be established in the next chapter, American forces in Vietnam became increasingly adept at finding and killing Main Force VC. This had the effect of leaving behind conventional NVA (who were harder to kill) and part-time or hidden VC (who were harder to find and count): both trends reduced the utility of body count as an indicator. There is similar suggestive evidence from Iraq, that American success

²¹One can think of these gaps as akin to frequencies the human ear cannot hear, or light wavelengths the human eye cannot see. Evolution does not select for sensory verisimilitude, but for survival.

²²At a smaller scale, one does find indicator-driven selection pressures in conventional war. For example in World War II, British strategic bombing, driven by operations research analysis, successfully targeted German ball bearing factories. But while the destruction of the *factories* could be ascertained from the air, the destruction of the machinery and tools within them could not, and it turns out that little was damaged. These actions led to the decentralization of ball-bearing manufactures into a cottage industry, which had the side effect of being more difficult to target and assess. In the end, German ball-bearing manufacturing rapidly returned to pre-bombing levels *United States Strategic Bombing Survey - Summary Report (European War)*. Washington, DC: US Government Printing Office, 30th Sept. 1945.

²³This is in fact a specialized variant of Goodhart's Law: "Any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes" C. A. E. Goodhart. 'Problems of Monetary Management: The UK Experience'. *Monetary Theory and Practice*. London: Palgrave, 1984, pp. 91–121. URL: https://link.springer.com/chapter/10.1007/978-1-349-17295-5_4.

at attacking Al-Qaeda in Iraq (AQI) “bred” a savvier enemy through natural selection.²⁴ -

Aside from forms of enemy adaptation driven by the indicator itself, changes in the enemy’s strategy present a pernicious interpretative problem to counterinsurgents. Movement in indicators (either absolute changes or changes in the rate of change) may result from the counterinsurgent’s strategy working, or from insurgents trying new strategies. In terms of the indicator itself, these two opposite outcomes may be indistinguishable, and made more difficult when an indicator index is in play. So are declining rates of capturing weapons caches due to a reduced overall number of caches or due to the enemy getting savvier at hiding them? Do reduced infiltrations into the country represent a loss of political will or the enemy biding his time? Do increased aid dollars spent on reconstruction represent meaningful increases in security or a means for insurgents to fund themselves through protection rackets? Absent shocking failures that are visible within the indicator or in some dramatic way outside of it, neither organizational nor task pressure by themselves will induce military leaders to change their assessment processes in the face of the enemy’s change in strategy, unless that change in strategy is visible within the assessment process.

3.1.6 Summary of the Cases

In Vietnam and Iraq, assessment was an ‘unexpected problem’ in the sense that the American military did not enter the war with an understanding of the complexity of assessment in mind. Operational assessment processes are usually somewhat ad hoc, but to the extent that the US military has built-in assessments and metrics processes, they rapidly proved inadequate for these conflicts, and so circumstances forced the military to adapt.

In each case, the primary agent coordinating metrics and assessment was the overall joint command – MACV in Vietnam and MNF-I in Iraq. In each case, the joint command produced some assessments imposed on it by political leaders and some for its own operational needs. In each case, the joint command faced decisions about the appropriate degree of centralization (how many metrics requirements to impose from above on subcommands) and of formalization (how rigid or preset reports needed to be). In each case, American forces came to generate an elaborate and impressive metrics and assessment infrastructure that contributed to a clearer strategic picture or linkage of means and ends in only the vaguest ways. Even as organizational

²⁴Dominic Johnson. ‘Darwinian Selection in Asymmetric Warfare: The Natural Advantage of Insurgents and Terrorists’. *Journal of the Washington Academy of Sciences* 95.3 (2009), pp. 89–112.

pressures drove increasingly impressive reporting systems, weak task pressures operating at this level of command (and operating against organizational pressures) did not lead military leaders towards assessments processes that helped them see through the fog to the situation on the ground or that gave them strategic vision.

3.2 Vietnam

In Vietnam, American military leaders developed the most elaborate assessments, indicators, and metrics system the world had ever seen in wartime (and possibly, ever will see). Hundreds of millions of today's dollars were spent tracking dozens of indicators, reading the course of the war in the tea leaves. Indicators were combined with qualitative and quantitative assessments to attempt to make sense of what was happening on the ground, whether America was making progress, and whether America's strategy was working. This system was all the more remarkable for being one of a kind, without precedent, and built totally for the conflict at hand.

This elaborate system was perhaps necessary to match the complexity of the American effort. To achieve its aims in Vietnam, MACV needed to manage ground combat against both conventional and guerrilla forces; political warfare against a determined insurgency with a strong home field advantage; strategic bombing and other activity aimed at bringing North Vietnam to the table; and state-building of the military and governance capacity of South Vietnam, all while avoiding bringing the Soviets or Chinese further into the war. American leaders involved were clear-eyed on the strangeness and uniqueness of their task. As one of them bluntly summed up, "Vietnam was different, and we knew it."²⁵ And so, MACV and other actors in the American government gathered as much data as possible in an attempt to make sense of this 'mosaic war'. As we will see, they had some successes (especially tactical ones), even as this system never quite provided the vision and perspicacity America's leaders had hoped for.

3.2.1 American Goals in Vietnam

American involvement in Vietnam began as part of a broader anti-Communist policy aimed at preventing the entire region from falling under communist control, and especially under

²⁵Robert W. Komer. *Bureaucracy At War: U.S. Performance In The Vietnam Conflict*. Boulder, CO: Westview Press, 1986, p. 1.

a Chinese sphere of influence (the Chinese were reckoned to be an even bigger threat than the Soviets in East Asia).²⁶ This was to be accomplished through pouring American aid into domestic reform efforts, regime stabilization, and development. The Central Intelligence Agency (CIA) would work to bolster regimes and undermine insurgents; the MAAGs would build native military capacity; and a variety of organizations, including US Agency for International Development (USAID) would improve the plight of the people that was presumably driving them into communist hands. In principle, these efforts were supposed to be accompanied by legitimizing reforms (to include moving towards free and fair elections and the rule of law), but in reality clients usually resisted or shaped them to their own preferences.²⁷

Of all of the countries undergoing communist insurgencies in the 1950s, American strategists held Vietnam to be the linchpin. Vietnam had been one of the most developed European colonies in East Asia. It sat on China's Southern coastal border, the gateway to Indochina and the Pacific.²⁸

But America's interests were not merely geopolitical. American leaders sought to distinguish themselves from both Communists and colonizers, at a time when the 'new nations' of the world, emerging through decolonization, were deciding what pathways they would pursue.²⁹ In this effort, Vietnam was to be the first and most important test case, the transformation of a backwards ex-colony threatened by communism into a "bastion of the free world."³⁰ Thus American leaders set a strategy of building an anti-Communist government in South Vietnam that would contain Communist (and especially Chinese) expansionism while also providing a model for former colonies the world over.

But by the tenth anniversary of the 1954 Geneva Accords and the formal independence of South Vietnam, this mission seemed in desperate jeopardy. Political turmoil and deep social divisions in the South had damaged the legitimacy and reach of the government. The nascent South Vietnamese state was prone to corruption, incompetence, and infighting; the violent 1963 overthrow of Diem (reluctantly supported by the JFK Administration) had only made things worse. Stay-behind forces left by the Viet Minh had organized a new insurgency of increasing vitality. The South Vietnamese military forces showed little skill or will to fight,

²⁶Fredrik Logevall. *Embers of War: The Fall of an Empire and the Making of America's Vietnam*. New York, NY: Random House, 2014, pp. 458–460, 705.

²⁷Jacqueline L. Hazelton. 'The Client Gets a Vote: Counterinsurgency Warfare and the U.S. Military Advisory Mission in South Vietnam, 1954-1965'. *Journal of Strategic Studies* (20th Mar. 2018), pp. 1–28.

²⁸See John Foster Dulles comments quoted in Logevall, *Embers of War*, p. 624.

²⁹*Ibid.*, pp. 658–9.

³⁰*Ibid.*, p. 623.

and its leaders mostly seemed to occupy themselves in corruption and political intrigues. And American intelligence indicated a build-up of Communist forces throughout the country that might lead to the third stage of Maoist guerrilla warfare: open, organized combat to overthrow the regime.

In order to accomplish their goals, the US policymakers decided they needed to undertake a number of discrete tasks. They needed to destroy the VC's capacity to act as a governance, legitimacy, and capacity spoiler. They needed to stem the tide of NVA infiltration at various points through the Central Highlands, the Ho Chi Minh trail running along the border and various waterways in the Mekong Delta. They needed to encourage the development of the Republic of Vietnam Armed Forces (RVNAF) and the South Vietnamese government.

And so Westmoreland developed a three-stage plan. The first and most urgent trend was to halt and reverse the growing conventional warfare parity between the VC/NVA and South Vietnamese forces by 1965. To do so required direct American intervention, investment in logistical infrastructure, and preserving and strengthening RVNAF. In Phase II, American and South Vietnamese forces would resume the offensive, rooting out VC/NVA in their hideouts and base areas and denying them return while rebuilding the South through development programs and aid to rural areas, as Army of the Republic of Vietnam (ARVN) units continued to improve under American guidance. In Phase III, remaining enemy forces and base areas would be destroyed and primary security responsibilities would be transferred back to RVNAF; American efforts would return to being primarily aimed at advisory support for the Regional Forces (RF) and Popular Forces (PF)) and development aid.³¹

To understand the trade-offs MACV faced in assessing its goals and building an assessment process, you first have to understand the geography and political economy of Vietnam, as well as the nature of the threat the South Vietnamese government faced, which the American government decided to address (see Figure 3.1). Faced with multiple different 'fronts' and varied geographies, there was no single tactical or operational framework that would work across the whole country. As a result, MACV undertook a complex patchwork of efforts, synchronized from the top.

South Vietnam's army was organized into four Corps Tactical Zones (CTZs), which the US also adopted as an organizational principle.³²

³¹'Open-Ended Strategy'. *The New York Times. Archives* (2nd July 1971).

³²Later calling them Military Regions (MRs).

I Corps encompassed the northernmost quarter of Vietnam, consisting of a relatively narrow strip between the South China Sea (called the East Sea by the Vietnamese) and Laos. A slim coastal plain was populated and farmed (including ancient imperial capital of Hue), as were a handful of river valleys coming out of the highlands. The rest of the terrain consists of forests, jungles, hills and mountains, stretching north to the border with North Vietnam and west to Laos. In I Corps, the primary American missions were border interdiction and interrupting North Vietnamese supply lines, along with counter-insurgency along the coast. Since ARVN forces would be facing off against fresh and well-supplied Main Force VC and NVA units, American troops also needed to aid with population security on the coast. The American overall commands in I CTZ were the 3rd Marine Expeditionary Force (MEF) and the Army's XXIV Corps.

II Corps encompassed the territorial strip between Laos/Cambodia and the sea north of Saigon, consisting of the Central Highlands (forests interspersed with uncultivated grasslands) and a narrow cultivated coastal plain. While more populated than the interior of I Corps, the interior of II Corps was still vast and mostly inaccessible. Moreover, there were expansive base areas of VC/NVA bolstered by heavy foot traffic southward on the Ho Chi Minh trail, and communist forces were repeatedly successful at harassing and interdicting ARVN and US units.³³ In II Corps, the primary initial American efforts were aimed at rooting out these interior base areas and destroying freedom of action for NVA units in particular - it was in the inaccessible highlands that airmobile tactics would come into their own. These kinds of non-linear pursuit operations were not intended to permanently conquer territory (base areas had to be routinely swept) but to make possible any kind of sustained counter-insurgency effort amongst the populace.³⁴ As the enemy reeled from this harassment, American and South Vietnamese troops would also work to clear and hold pacified areas. Some of the fiercest 'big unit' warfare of the entire war occurred in this cat-and-mouse game in II Corps. II Corps was overseen by the Army's I Field Force Vietnam (FFV).

III Corps encompassed Saigon, the capital of the Republic of South Vietnam and South Vietnam's most important urban center, along with the surrounding territories - sub-

³³Military Assistance Command Vietnam. *Command History [1965]*. 1966.

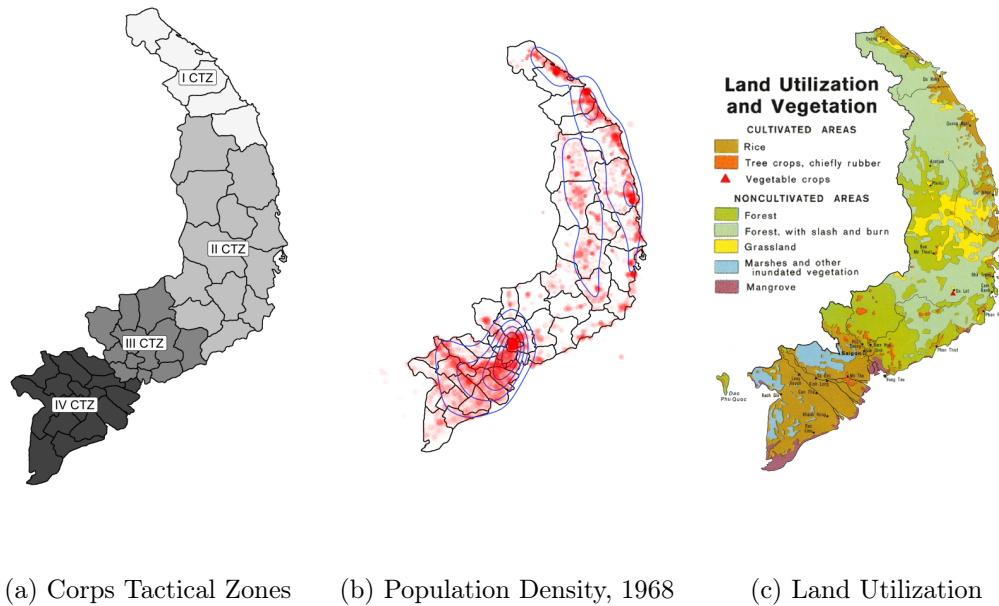
³⁴Shelby L. Stanton. *Anatomy of a Division: The 1st Cav in Vietnam*. Novato, CA: Presidio Pr, 1987, p. 69.

urbs, villages, and much of South Vietnam's most productive agricultural land (for rice but also a variety of other goods). North and west of Saigon, in forests and difficult terrain, were expansive VC base and logistics areas, designated War Zone C, War Zone D, and the Iron Triangle, which included the Central Office for South Vietnam (COSVN). Heavily populated, III Corps included numerous hamlets and villages which supported the VC to varying degrees, ranging from begrudging taxation to enthusiastic aid. Given the organic VC support amongst a large population, pacification and counter-insurgency were intense tasks for the American military in the region. While most tactical encounters were small-scale and occurred against VC rather than NVA, there were a number of major, large-scale military operations in III Corps to root out major logistical elements; these were usually impermanent solutions. Moreover, the ARVN units in and around the capital, were involved in various political intrigues from 1954 all the way through the end of the regime. Given the sheer density of enemy and friendly units, missions, and command structures, III Corps was a bewilderingly complex mosaic even by the standards of a complex war. III Corps was overseen by the Army's II FFV, along with the Capital Military Assistance Command (originally spun off from IIFV during the Tet Offensive) and various American agencies and military component headquarters, including MACV's.

IV Corps encompassed the southernmost part of Vietnam, dominated by the expansive Mekong River Delta, along with marshlands, swamps, and some forests in the north. IV Corps was the primary rice-producing region of Vietnam, and was heavily populated in villages and hamlets. As IV Corps was the only CTZ with no substantial connection to the Ho Chi Minh Trail, enemy units operating in the region were almost exclusively VC, supported by a rural population, severe land reform grievances and decades of Viet Minh influence.³⁵ American military efforts in IV Corps were nearly entirely counter-insurgency and pacification, though there was some additional focus on denying base areas near Saigon and interdiction of seaborne smuggling routes through Cambodia. IV Corps lacked its own major American military command, though it did host the ad hoc Riverine Task Force. While most combat was very small scale, there were a handful of major operations aimed at rooting out the VC, most notably Operation Speedy Express. Due substantially to the relative lack of NVA units, ARVN took more

³⁵William A. Nighswonger. *Rural Pacification in Vietnam*. New York: Praeger, 1966, p. 38.

Figure 3.1: Maps of South Vietnam



of the lead in IVCTZ.

The combination of multiple kinds of war in multiple geographies produced what Westmoreland's former intelligence chief later called a "mosaic war".³⁶ In an attempt to make sense of this bewildering complexity, Westmoreland and MACV came to rely on a bevy of metrics derived from an increasingly sophisticated reporting and analytics operation, detailed in the rest of the case. These metrics were used to track progress in the various lines of effort that American policy-makers believed were essential to success.

Counterinsurgency – To the extent that there existed a 'Dominant Indicator' in Gartner's sense, it was not the body count but rather measures of population security - how many South Vietnamese lived under the threat of VC violence or under VC control?³⁷ MACV pursued increasingly sophisticated ways of answering these questions throughout the war through a few indicator systems, most notably the Hamlet Evaluation System (HES). Important metrics were whether a population was being taxed by the VC, the number of violent or terrorist incidents, and other various development indicators.

³⁶Phillip B. Davidson. *Secrets of the Vietnam War*. Novato, CA: Presidio, 1990, p. 20.

³⁷Lyndon Baines Johnson. 'Press Conference, 17 November 1967'. *Department of State Bulletin*. Vol. 57. 1485. Washington, D.C, 11th Dec. 1967. URL: <http://www.presidency.ucsb.edu/ws/index.php?pid=28555>; Robert S. McNamara. 'Memorandum From McNamara to President Johnson'. *Foreign Relations of the United States, 1964-1968, Volume IV, Vietnam, 1966*. 14th Oct. 1966. URL: <https://history.state.gov/historicaldocuments/frus1964-68v04/d262>.

RVNAF Capability – From the start, American military and civilian leaders agreed that American success was wholly contingent on standing up the Republic of Vietnam Armed Forces. American forces could be used as stopgaps where and when the VC/NVA threatened to overwhelm the South Vietnamese, but long-term engagement beyond an advisory and air support capacity was seen as unsustainable (not to mention undesired). Given the costs of the war, American leaders were concerned about whether the South Vietnamese were shouldering their fair share of the burden and whether they would be able to stand up to the North Vietnamese. They tracked a variety of metrics related to these questions - number of units and personnel available, ratings of combat effectiveness given by American advisors, loss-exchange ratios with the North Vietnamese, rates of desertion and recruitment, and more.

Military Objectives – In keeping with the ‘conventional’ aspect of the war, MACV assessed American and VC/NVA performance, both absolutely and relative to each other. Some of this was in keeping with standard intelligence practices - logistics flows were estimated and tracked, and assessments of order of battle and movements (particularly infiltrations) were monitored. But as detailed below, some were military assessments aimed at making sense of a ‘war without fronts’ - body counts, kill ratios, measures of initiative, battalion days in the field, and any number of other countable inputs and outputs of military activity.

Overall South Vietnam ‘Health’ – In keeping with the notion that development was crucial to counterinsurgency and the desire to turn South Vietnam into an attractive example of the American model, military and civilian leaders tracked a wide variety of societal indicators, including public health measures, macroeconomic indicators, economic sector data, political participation in elections, etc.

Signalling – Even before the escalation of ground troops, America’s senior civilian leaders sought to use a strategy of exerting violence as a signal of American resolve to attempt to force the North Vietnamese to the negotiating table, and these policy-makers tracked indicators of bombing sorties conducted, bombs dropped, and damage assessments. This effort was generally managed from the Pentagon and White House, and will not be dealt with here.

While the weightings of different metrics varied over time as the war and American goals

there evolved, the overall theory of victory was more or less continuous throughout the entire American engagement: build up and ensure the ability of South Vietnam to militarily resist both conventional and unconventional forces allied with North Vietnam, while developing South Vietnamese society and the South Vietnamese state to the point where the Vietnamese people could resist the ideological appeals of Communism (as it was assumed they inevitably would). It was against this end state that the picture of present reality provided by metrics would be compared. The history below is limited in scope and discusses the assessments and metrics process in essentially one organization: MACV (along with sub-organizations within MACV), and is followed by a discussion section that helps make sense of MACV adaptations within a broader institutional context.

3.2.2 Metrics and Assessments at the Start

Statistics and indicators were a vital part of the policy-making process from the start. Days before the Diem coup, using data from Defense Intelligence Agency (DIA) and MACV, one State Department intelligence analyst sent a memo to Secretary of State Rusk entitled "Statistics on the War Effort in South Vietnam Show Unfavorable Trends." While raising some of the usual problems with indicators (the partial picture they present, their reliance on South Vietnamese reporting, and the incompleteness of the data - he did note their steady improvement under MACV influence), he nonetheless showed that VC incidents had been increasing in frequency and scale since mid-1963; that the loss-exchange ratio between VC and RVNAF was steadily shifting in the VC's favor; and that the level of VC deserters had marginally declined. He concluded that "virtually all of the indicators" suggested that any progress the Diem government had made against the VC had evaporated, and was already doing so even before the latest political crisis.³⁸ But the statistical controls used here were primarily ad hoc, relatively disorganized, and heavily dependent on the South Vietnamese.³⁹ It would take the establishment of MACV for the assessments process to take off.

Prior to the formal establishment of MACV, American forces in Vietnam existed as distinct elements and task forces, including an Air Force counterinsurgency tactical air unit, Navy minesweepers, and a variety of Army counterinsurgency elements, including two heli-

³⁸Thomas L. Hughes. 'Statistics on the War Effort in South Vietnam Show Unfavorable Trends [October 22 1963]'. *Report of the Office of the Secretary of Defense Vietnam Task Force [The Pentagon Papers]*. Washington, DC: US National Archives, 1966, Vol. V.

³⁹They were, as a result, seen as less trustworthy and subject to manipulation.

copter companies and Special Forces (SF) advisory efforts. While these elements were technically organized under MAAG, the arrival of new units (and especially aviation) pushed the MAAG's bandwidth to the limit.⁴⁰ The lack of a robust centralized command structure and poor civil-military relations hampered policy coordination, much less shared assessment. In November 1961, McNamara ordered the Joint Chiefs of Staff (JCS) to prepare a proposal for a new command in Vietnam, both as a costly signal to friends and enemies (in-country and around the world) of American commitment to South Vietnam and to prepare for broader investment of resources and the possible introduction of major ground combat units.⁴¹ The swiftly-approved proposal had the new Headquarters (HQ), dubbed Military Assistance Command, Vietnam, reporting directly to Pacific Command (PACOM), and from there to the Secretary of Defense and the President, an arrangement befitting the importance which the Kennedy administration placed on the effort to stem communism in Southeast Asia.⁴²

With relatively low levels of staffing, a poorly integrated and inexperienced intelligence arm, and the need to start from scratch, MACV's assessments and metrics system did not begin to operate in a substantial fashion until early 1964. The advent of a metrics system was catalyzed by a few developments made in light of the recognition that American forces would be working in Vietnam until (it was believed at the time) the late 1960s. The first development was the up-tick in resources and personnel that, among other things, demanded the reorganization of MACV. As part of this, the J2 was reorganized, and senior billets given to Marines instead of Air Force officers;⁴³ the Marines had more experience gathering battle-field intelligence (including through indicators) than their predecessors, who had previously been in nuclear strategy.⁴⁴ Moreover, though the Mission Council convened under the Ambassador maintained its prerogatives overseeing the overall U.S. Mission in Vietnam, MACV, as the agent of much of both pacification and security (two of the biggest budget items in the overall Mission) increasingly became the primary forum managing assessments and metrics processes that informed the entire Mission's work.⁴⁵

⁴⁰Graham A. Cosmas. *MACV: The Joint Command in the Years of Escalation 1962-1967*. Washington, D.C.: Center for Military History, 2006, pp. 18-20.

⁴¹*Ibid.*, p. 22.

⁴²From the start, MACV's mission was understood to encompass the broader fight against communism in Indochina (George S. Eckhardt. *Command and Control, 1950-1969*. Washington, D.C: Department of the Army, 1974, p. 30).

⁴³Winterbottom, the Air Force J2, had quickly gained a reputation for optimism, contradicted by independent reporting from sources like the DIA (Michael B. Peterson. *The Vietnam Cauldron: Defense Intelligence in the War for Southeast Asia*. Defense Intelligence Historical Perspectives Number 2. Defense Intelligence Agency, 2012).

⁴⁴Cosmas, *Years of Escalation*, p. 127.

⁴⁵While MACV played a dominant role in the formal and repetitive reporting process, other organizations,

The second development was MACV's own recognition that the complexity of the war demanded a more rigorous approach to assessment. Since its establishment in 1962, MACV had generated village-level estimates of government and VC control of the countryside, based on interviews with province chiefs by American intelligence advisors, who checked the validity of reports where they could.⁴⁶ As the war effort grew more complex, MACV bore a greater and greater burden for reporting both military and pacification progress. And so in October 1963, MACV established the Information and Reports Working Group under the Operations Directorate, to recommend improvements to MACV's reporting systems.

The third development was increasing pressure from MACV's overseers and partners to produce consistent metrics to be used for evaluation, assessment, and coordination. A panel of policymakers at Defense, State, and CIA concurred with the findings of the Information and Reports Working Group (IRWG) and recommended MACV institute weekly and monthly mission reports incorporating operational data alongside reporting from other agencies, as well as creating a separate Provincial Reports Office separate from the J-2 and J-3.⁴⁷ Demands from Washington led to a variety of other regular reporting and metrics. The Defense Department asked for a "Senior Adviser's Monthly Evaluation Report" on ARVN readiness down to the battalion level.⁴⁸ The result was a demand (from task and organizational pressure) for a more robust, structured, and sophisticated reporting system.

The Early Metrics and Assessment System (1964-1967)

These developments coalesced in early 1964, resulting in MACV creating a two-stream reporting system. The first stream was a pacification reporting system (gathering information via American advisors and their Vietnamese counterparts). The IRWG had recommended a system including over 100 metrics: while aspects of this survived, the overall system proved too impractical, not least because some of the data needed were practically impossible to collect.⁴⁹ MACV merged the IRWG's findings with that of the survey team and a White House group led by Chester Cooper to derive a new field reporting system (MACV was not the only

namely the State Department and the CIA jealously guarded their own reporting streams, which were influential sources of dissenting opinion. Paradoxically, there is an argument to be made that MACV's handling of regular reporting made it logistically easier for the other organizations to have the impact that they did.

⁴⁶Cosmas, *Years of Escalation*, p. 130.

⁴⁷Cosmas, *Years of Escalation*, p. 130; Chester Cooper et al. *The American Experience with Pacification in Vietnam. Volume II: Elements of Pacification*. R-185A. Institute for Defense Analysis, Mar. 1972, p. 209.

⁴⁸Cosmas, *Years of Escalation*, p. 131.

⁴⁹Cooper et al., *American Experience*, p. 209.

group reinforcing its reporting at this time - the interagency group had also recommended that the Embassy intensify its nascent ‘provincial reporters’.⁵⁰

The pacification reporting system that came emerged in May 1964 followed on pre-existing classifications indicating degrees of control over hamlets, areas and populations that MACV appears to have inherited from the MAAG’s Province Rehabilitation (PROVHAB) Status Reports.⁵¹ The classifications broke down degree of control into five categories: secured, undergoing securing, undergoing clearing, uncontested (i.e. controlled by neither side, of negligible importance), and VC-controlled. The criteria for classification were based on subjective assessments, made more-so by the fact that evaluators relied on Vietnamese sources like district and provincial chiefs; the Vietnamese, in turn, resisted American involvement in district-level pacification. Moreover, Vietnamese provincial authorities felt their own strong organizational pressure to report positive results to meet their government’s ambitious goals.⁵² However, by mid-1964, there were American advisers present in every province, and as American presence grew, so did the relative contact between Americans on sub-sector/district advisory teams, ground reality, and the assessments process.⁵³ The coup and the alleviation of the need to prop up Diem, along with increasing American presence at every level and changes to the reporting system, seems to have substantially relieved early pressures to report pacification progress ‘imaginatively’, at least for a time.⁵⁴ These advisors’ reports fed into MACV’s Province Reports Center, which generated pacification reports mixing quantitative and qualitative assessments that broadly informed the U.S. Mission’s assessments, including a monthly “MACV Monthly Report of Revolutionary Development, Progress, Population, and

⁵⁰This group of diplomats has had remarkably little written about them, given the seriousness with which their assessments were treated by senior policymakers, to include Kissinger, who credited them with a crucial role in making up his mind about the future of the war (Henry Kissinger. *Diplomacy*. Simon and Schuster, 2011, p. 663). Ellsworth Bunker also quoted provincial reporters in his reports to the president (Ellsworth Bunker. *The Bunker Papers: Reports to the President from Vietnam, 1967-1973*. Ed. by Douglas Pike. Vol. 2. Berkeley, CA: Institute of East Asian Studies, University of California at Berkeley, 1990, pp. 422, 480, 540, 565). Future American Ambassador to Iraq (2004-5) John Negroponte was also a Vietnam provincial reporting officer. See also James Rosenthal. ‘Provincial Reporters’. *The Foreign Service Journal* (Online Supplement Apr. 2015).

⁵¹It appears the two major pre-existing sources of pacification were these Province Rehabilitation (PROVHAB) reports and the MACV-J2’s Daily Intelligence Summaries derived from the Daily Journal (A command element’s record of the reports and events of a day); the Daily Intelligence Summaries were replaced by the MACV Daily Situation Report (SitRep) in March 1964 as part of the overall restructuring of reporting. It also appears that a The RAND Corporation (RAND) study crunching these early statistics on CINCPAC’s IBM-704 computer may have been one of the earliest uses of a computer for analyzing pacification data, or any of the war’s data. See C.V. Sturdevant, J.M. Carrier and J.L. Edelman. *An Examination of The Viet Cong Reaction to the Vietnamese Strategic Hamlet Program*. RM-4028-ARPA. RAND, 1964.

⁵²Nighswonger, *Rural Pacification*, p. 214.

⁵³Cooper et al., *American Experience*, pp. 207–214; Nighswonger, *Rural Pacification*, p. 81.

⁵⁴Nighswonger, *Rural Pacification*, p. 215.

Area Control.”⁵⁵ The reporting system would remain more or less the same for the next two and a half years, even as participants and policy-makers moved towards a more sophisticated (and less Vietnamese-dependent) approach.

The second major reporting stream was MACV’s military reporting system, run out of the MACV-J2 and MACV-J3, while also collating material from ARVN advisors, civil affairs officers working with the military, and Liaison Officers (LNOs) (as distinct from the provincial advisors running pacification programs). Famed battlefield chronicler S.L.A. Marshall visited the war zone in three extended visits 1966-1968, recalling that “Our army in Vietnam at that time had no system for recording what happened during battle.” He noted especially the lack of systematic tools “for collecting and collating combat data other than the raw statistics on body and weapons counts.” SLAM, as he was known, was “more early than correct. In fact, a system for collecting, evaluating, and applying combat data had been implemented, but its impact had not yet become apparent.”⁵⁶ In response to the IRWG’s efforts and pressure from above, a number of regular reports were instituted, ranging from daily reports to quarterly reviews; from and for these reports, assessments and metrics were generated.

While the Army of the “Flexible Response” era was focused on counterinsurgency, little organized thought had been given towards assessing and measuring progress in counterinsurgency.⁵⁷ There were certainly no standardized procedures or training in place, and it was absent in doctrine and field manuals.⁵⁸ As a result, MACV’s early leaders did not come in with any strong notions of how they *should* assess and develop metrics for measuring effectiveness; certainly little about their experiences in World War II and Korea had prepared them for what they found in Vietnam.⁵⁹ And so MACV collected whatever information it could, on the assumption that analysts either in Vietnam or in Washington would be able to spin gold from straw. By the time General Harkins left MACV in 1964, his organization was collecting over 100 metrics.⁶⁰ These reports were passed on to CINCPAC (where they were incorporated into the Republic of Vietnam Statistical Data Base, the first piece of an increasingly

⁵⁵Cosmas, *Years of Escalation*, p. 130; MACV. *Command History 1964*. 15th Oct. 1965; Cooper et al., *American Experience*, p. 210.

⁵⁶Dennis J. Vetock. *Lessons Learned: A History of US Army Lesson Learning*. Carlisle Barracks, PA: US Army Military History Institute, 1988, p. 101.

⁵⁷Gregory A. Daddis. *No Sure Victory: Measuring U.S. Army Effectiveness and Progress in the Vietnam War*. Oxford, New York: Oxford University Press, 2011, pp. 12–13.

⁵⁸Gregory A. Daddis. ‘The Problem of Metrics: Assessing Progress and Effectiveness in the Vietnam War’. *War in History* 19.1 (1st Jan. 2012), pp. 73–98.

⁵⁹Gartner argues that the US military first used body counts in Korea, but see the section on the body count on pg.116 refuting this claim.

⁶⁰Daddis, ‘The Problem of Metrics’.

elaborate computational infrastructure) and on to Washington.⁶¹ By the end of 1964, MACV had a formal, cumulative reporting system, including daily Situation Reports (SITREPs), weekly Military Reports (MILREPs), Monthly Evaluation Reports (MEPs), and a Quarterly Review and Evaluation, alongside a Senior Advisor's Monthly Evaluation (SAME) submitted by the COMUSMACV to CINCPAC and the Joint Chiefs of Staff.⁶²

While the Monthly Evaluation Report and Senior Advisor's Monthly Evaluation were technically products designed to assess the entire campaign strategy (to include pacification), they tended to give pride of place to military assessments in the early years, of both ongoing operations and the effort to train the ARVN.⁶³ In the early stages of escalation, this should be neither surprising nor necessarily alarming; Westmoreland's strategy for Phase 1 and Phase 2 was built upon the premise that South Vietnam faced an immediate, severe *military* threat, and that pacification was ultimately dependent on population security, which required both the destruction of the conventional military threat and the build up on RVNAF.⁶⁴ As one 1972 pacification retrospective later put it:

The years 1964 and 1965 were by far the worst ever for the Government of Vietnam and its supporting American ally....Under these circumstances, the task of pacification...had to yield to the manifestly higher priority demands of the "big war." With pacification itself in limbo, there was not overly much high-level concern with pacification reporting; as for evaluation of progress, this was a black period during which everyone knew that almost all indicators of almost everything were pointing sharply downward.⁶⁵

And yet, even though MACV's emphasis on military reporting was intentional and strategic in 1965 (responding to the agreed-upon military strategy), by 1966 there was increasing dissatisfaction, primarily in both Washington and in Saigon, with the lack of reporting on pacification and with the need to make sense of a bewildering war. Westmoreland and his staff had grown increasingly dissatisfied with the accuracy of pacification reporting (which consisted primarily of population security), unable to even satisfactorily derive South Vietnam's population.⁶⁶ The intensity and scale of American efforts by 1966 created a growing

⁶¹Cosmas, *Years of Escalation*, p. 130.

⁶²MACV, *Command History 1964*.

⁶³For example, see MACV. 'Senior Advisor's Monthly Evaluation Reports'. RG 472, A1 124. NARA II, College Park, MD, July 1965 (Box 2).

⁶⁴Daddis, *No Sure Victory*, p. 107.

⁶⁵Cooper et al., *American Experience*.

⁶⁶Daddis, *No Sure Victory*, p. 104.

mismatch between what MACV staff and their superiors needed and what the metrics and reported system then provided, triggering another wave of adaptation.

This felt need for improved assessments processes was fueled by the intense analytical resources being invested in Vietnam. Besides the diplomats, military staff officers, and other American civilian operatives working in Vietnam, scores of individuals in the United States labored to make sense of, integrate, and analyze vast quantities of information being sent back to Washington about America's many-valanced efforts. In the Pentagon, the OSD - Systems Analysis produced widely-read analytical reports independently assessing (and often criticizing) MACV's metrics. The DIA, CIA, and State Department's Bureau of Intelligence and Research (INR) generated reports and assessments focused on the aspects of the war relevant to their agencies. Through both the more permanent budgeting lines (including Advanced Research Projects Agency (ARPA)) and Vietnam-specific funding allocations, numerous independent research organizations were contracted, studying issues including RAND, BDM Corporation (BDM), Research Analysis Corporation (RAC), and many more now-defunct and obscure firms.

While many of these organizations were based in the United States, there was a high degree of contact with Saigon, with analysts either traveling frequently to Vietnam or, as in the case of RAND opening up a Saigon office.⁶⁷ These reports provided important color and detail to senior policymakers assessments, and dealt with any number of the vital analytical issues senior decision-makers faced. These independent assessments contributed to the overall flood of information, and sometimes to confirmation bias. In one early but troubling incident, Leon Gouré, a senior RAND scientist provided optimistic 'preliminary' results from the Viet Cong Morale Study that confirmed the psychological efficacy of bombing on both the VC and the population (who supposedly blamed the insurgents for the violence); the study (tellingly done for the Air Force) ultimately found the opposite, and RAND leadership had to rein Gouré in.⁶⁸ Ironically, it was dissatisfaction with these various *qualitative* assessments that partially drove the desire to quantify pacification assessment; as with the Viet Cong Morale Study case, it was hard to say how extensible qualitative findings really were to broader trends, or how biased they might be.⁶⁹

⁶⁷Duong Van Mai Elliott. *RAND in Southeast Asia: A History of the Vietnam War Era*. Santa Monica, CA: RAND, 2010, p. 56.

⁶⁸Ibid., pp. 165–7.

⁶⁹Indeed in this case, the existing metrics, such as they were, pointed in the other direction, away from Gouré's optimistic findings (ibid., p. 165).

Coming to Terms with Problems

Between 1962 and 1966, MACV had developed a relatively sophisticated and formalized metrics and assessments process which produced regular, high-quality reports for senior leaders in Saigon and Washington, mixing qualitative and quantitative evaluations (even as the quantitative assessments received pride of place), using practices primarily developed in and for Vietnam. And yet even as MACV had somewhat succeeded in keeping the enemy off-balance on the battlefield, a number of disturbing trends had emerged. In 1965-6, when military indicators (including the infamous 'Body Count') predominated in MACV decision-making, MACV leaders and senior analysts in OSD - Systems Analysis (OSD-SA) noticed that there were some critical factors making it highly unlikely that the 'Crossover Point' would be reached anytime soon.⁷⁰ While the VC/NVA were facing heavy casualties, they had a strong ability to control their losses; Thayer from OSD-SA concluded that 88% of enemy Killed in Actions (KIAs) occurred in contacts that the enemy had chosen. Moreover, over the course of 1966, the VC (chastened by dramatic early defeats) switched to smaller and smaller unit combat, generally avoiding a battalion or larger-sized confrontation with overwhelming American firepower unless they felt the situation favored it. Moreover, intelligence reports suggested that estimates of successful infiltration were far too low.⁷¹ The American indicators were clear; Westmoreland was able to make little progress on his goal of killing enemy soldiers as fast as they could be replenished in 1966. While military force was vital to prevent the 'bully boys' of main force VC and NVA units from destroying population security or preventing the rudiments of pacification, the slowness of military progress and an overall sense of an improved military situation since the dark days of 1964-5 led to an increased emphasis on population security and pacification, accompanied by a desire for metrics and reports to measure progress in these areas. While in the desperate 'Phase 1' in 'the Year of Decision', pacification had been of low concern, in 'Phase 2', in a slight modification of Westmoreland's original approach, the Free World Forces would attempt to both militarily confront conventional enemy military units and to accelerate the hard work of securing the population and winning them to the government's side.⁷²

These goals were formally laid out in the February 1966 Honolulu Conference, where all

⁷⁰The Crossover Point was not, it must be emphasized, Westmoreland's theory of victory, but an important benchmark (Daddis, *No Sure Victory*, p. 91).

⁷¹*Ibid.*, p. 105.

⁷²Richard A. Hunt. *Pacification: The American Struggle for Vietnam's Hearts and Minds*. Boulder, CO: Westview Press, 1995, p. 32.

of the senior American and South Vietnamese decision-makers met, and where LBJ himself calling for a renewed focus on pacification.⁷³ Both sides agreed to set formal, measurable benchmark goals for the year as part of a larger overall strategy: only one dealt with attriting VC/NVA forces.⁷⁴

From an organizational adaptation standpoint, it is easy to see why pacification had hitherto been left behind. Prior to escalation, the military pacification effort under MAAG had only been one of a number of programs aimed at the broader categories of pacification: security, Revolutionary Development, rural construction, refugee resettlement, medical care, education, civic action, etc. Standard American operating procedure called for the Embassy (and the Ambassador in particular, as head of US Mission) to organize inter-agency cooperation.⁷⁵ And so it attempted, organizing the Committee on Province Rehabilitation (COPROR) in 1962.⁷⁶ At the province level, in 1963 the I Corps Senior Advisor advised that this structure be replicated across all four regions. But the COPROR had no permanent staff, and so coordination between agencies tended to be ad hoc and based on direct connections. In 1965, Ambassador Lodge invited counterinsurgency guru General Ed Lansdale to “take over pacification” (according to Lansdale’s later recollection).⁷⁷ Lansdale arrived in September 1965 to spin up a Senior Liaison Office for coordinating American pacification efforts and to take over the Mission Liaison Group, which coordinated with the South Vietnamese.⁷⁸ But by the time Lansdale’s work begins, he was leading only one of dozens of formal and informal offices, committees, and task forces with some small piece or another of coordinating pacification efforts between all of the various agencies and governments, including not only the Americans and South Vietnamese but also smaller efforts from allied Free World Forces. Moreover, the ‘balance of power’ between the Embassy and MACV (which had swallowed up the MAAG) had shifted dramatically. Though the American Embassy in Saigon at this time was the largest in the world, with 782 personnel, MACV HQ had over 1100 officers and

⁷³Elizabeth N. Saunders. *Leaders at War: How Presidents Shape Military Interventions*. Ithaca, NY: Cornell University Press, 2011, p. 180.

⁷⁴Robert S. McNamara and John McNaughton. ‘Paper Prepared by Secretary of Defense McNamara and the Assistant Secretary of Defense for International Security Affairs (McNaughton)’. *Foreign Relations of the United States, 1964–1968, Volume IV, Vietnam, 1966*. 10th Feb. 1966. URL: <https://history.state.gov/historicaldocuments/frus1964-68v04/d70>.

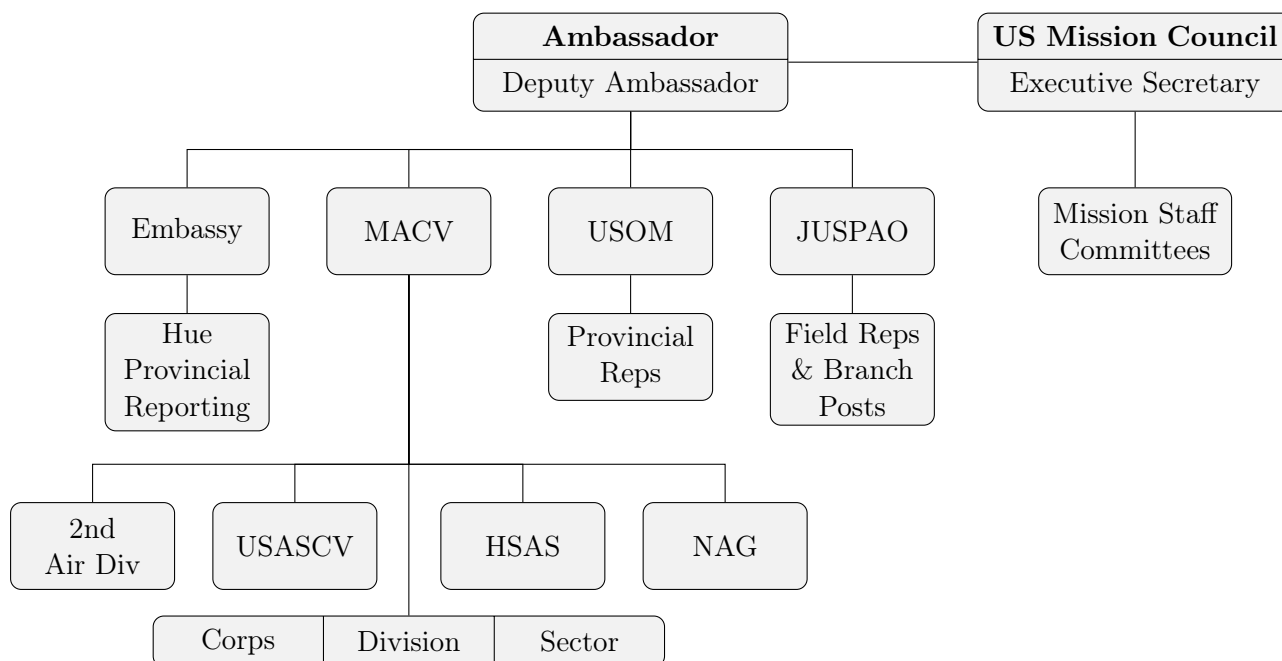
⁷⁵Nighswonger, *Rural Pacification*, p. 194.

⁷⁶Nighswonger, *Rural Pacification*, p. 193; Cooper et al., *American Experience*.

⁷⁷Max Boot. *The Road Not Taken: Edward Lansdale and the American Tragedy in Vietnam*. New York: Liveright, 2018, p. 455.

⁷⁸Boot, *Road*, p. 466; Nighswonger, *Rural Pacification*, p. 193.

Figure 3.2: United States Mission Vietnam – Organizational Chart 1964



men, on its way to over 3300 by the end of 1967.⁷⁹ This shift was not merely about staff capacity and budget; some substantial minority of the tens (later hundreds) of thousands of GIs flowing into the country would spend significant time working with and among the South Vietnamese population (including in advisory capacities with RVNAF), instantly dwarfing efforts by the Embassy, USAID, and the CIA. Moreover, what coordinating the extensive and variegated effort took was above all supreme management skills, which Lansdale lacked (something which a visiting Professor Kissinger pointed out to Ambassador Lodge).⁸⁰ At the 1966 Honolulu Conference, one quiet, immediate outcome was Lansdale's replacement as head of pacification by Deputy Ambassador Porter, a temporary solution at best to the structural problems plaguing American efforts (see Figure 3.2).⁸¹

In late 1966, as the White House finally settled on a coordinated, unity-of-effort pacification organization (something Westmoreland had originally pushed for in 1964, albeit not forcefully), MACV needed to spin up a reporting system to match, in order to report on pacification activities and progress.⁸² Prior to this, various lines of communications and one-off reports were integrated through the Provincial Reports Center, but there was nothing like a

⁷⁹Boot, *Road*, p. 474.

⁸⁰Ibid., p. 485.

⁸¹Nighswonger, *Rural Pacification*, p. 194; Hunt, *Pacification*, p. 75.

⁸²On Westmoreland's early understanding of and push for unity-of-effort on pacification, which likely was delayed by his focus on the 1965 military escalation, see William C. Westmoreland. *A Soldier Reports*. Garden City, N.Y: Doubleday, 1976, p. 69.

systematic pacification reporting system, and most pacification reporting was either ad hoc or heavily reliant on the South Vietnamese.⁸³)

The existing Vietnamese hamlet rating system dating to at least the the Strategic Hamlet Program and the Marines' I Corps practices of scoring hamlets (rooted in the Combined Action Program (CAP)) provided an inspiration as MACV and McNamara set about formalizing pacification assessments, the design and implementation of which McNamara asked the new CIA director Richard Helms to aid in.⁸⁴ Helms in turn recommended that the effort involve all the relevant parties, and an interagency mission was sent to Saigon to work out the implementation of concepts that had been hashed out in Washington.⁸⁵ Given the shambolic state of pacification reporting heretofore, all of the major parties (military and civilian) understood the need for the new system and were generally cooperative and enthusiastic, as the team from Washington (consisting of civilian researchers alongside the interagency working group) tested the concepts and validity of various possible indicators. Initial results were validated through a pilot study beginning in September 1966 conducted through an ARPA contract under the auspices of MACV's Revolutionary Development Support Division (RDSD) by Clark and Wyman of the Research Analysis Corporation, supported by the Army Concept Team in Vietnam (ACTIV).⁸⁶ Nationwide rollout began in January 1967 (under the auspices of the Office of Civil Operations (OCO) prior to the creation of Civil Operations and Revolutionary Development Support (CORDS)). Reporting was at first conducted by military civil affairs and revolutionary development advisors – at the time the only American officials that could be found in every district – and later by CORDS District Senior Advisors.⁸⁷

While the HES was the most important new assessment tool responding to American senior leaders' needs going into 1967, it was not the only revision. MACV leaders faced their own changing needs, continuing pressure from policymakers, and new organizational pressures within their own organization, some reflexive responses from earlier decisions. By around 1967, these organizational pressures were coming to a head. With MACV having operated substantial ground forces for over a year and the overall tempo of activity steadily

⁸³Robert Shapley. 'Letter from South Vietnam'. *The New Yorker* (12th Mar. 1966), p. 58.

⁸⁴Cooper et al., *American Experience*, pp. 217–8.

⁸⁵George W. Allen. 'Report on Pacification Measurement Project in Vietnam [Memo from George Allen to CIA Director Helms]'. CIA Reading Room. Washington, D.C., 28th Dec. 1966. URL: https://www.cia.gov/library/readingroom/docs/D0C_0000196423.pdf.

⁸⁶Dorothy K. Clark and Charles R. Wyman. *The Hamlet System in the Republic of Vietnam*. Research Analysis Corporation, 1968.

⁸⁷For details, see pg. 89.

increasing, both the resources available (especially at MACV HQ) and the challenges of operating at scale were increasing, catalyzing efforts to transform or revisit organizational processes that had been slowly evolving from MACV's beginning; the surge in resources, demands, and the mission catalyzed reaching a new equilibrium in the assessments process.

One of the strongest forces driving MACV's assessment processes adaptations circa 1967 was the operational and organizational environment created by the assessment process itself.⁸⁸ When MACV leaders or, better yet, Department of Defense (DoD) or Congressional overseers imposed new reports or changed reporting structures, they did so with an eye towards their own needs, and not those of the junior and mid-level personnel that would carry out reporting. Moreover, new organizational or bureaucratic structures and capacities created new opportunities for other actors in the ecosystem, for their own purposes, to get information; thus, for example, improving the efficiency and operations of MACV's J2 created incentives for other actors to *increase* their demand for MACV reports. Moreover, the rise in personnel, resources and sub-organizations had resulted in a proliferation of assessments, for sense-making but especially for management and reporting/messaging: 100s of metrics (ranging from 'body counts' and sorties conducted to tonnes of rice provided and PSYOPS pamphlets handed out) were generated monthly. The result for MACV's senior leadership in Washington and DC was a cacophony of assessments.

The centralization of assessments and metrics was a key driver in the underlying dysfunctions to which MACV leaders were responding. Centralization was itself initially a response to the ramshackle, subjective, optimistic and haphazard early reporting in Vietnam. Centralization generated cross-comparability both across regions and over time, and it held both US and Government of [South] Vietnam (GVN) officials to account. Moreover, under the management technology of the day, centralization was a necessary evil in order to produce reports (routine and otherwise) that got where they were supposed to go. Centralization of assessments and metrics was itself only a subset of a relatively centralized communications network. Secretaries, aides-de-camp, deputy chiefs of staff, and full-time file clerks operated a complex bureaucracy that churned reports from one level to the next and ensured proper distribution and filing, not to mention follow-through on action items; imagine a modern-day email system operated entirely by hand. The complexity of this system was a direct function of the complexity of the war effort, and the large number of actors and diversity of organiza-

⁸⁸In nature, this kind of recursive adaptation is characteristic of essentially any ecosystem.

tions (including within the military) necessitated a high degree of inter-agency coordination, with multiple hierarchies and networks in play and relying on each other in a paradigmatic example of the notion that the complexity of environment is reproduced in the complexity of the organization.⁸⁹ This centralized, high-touch organizational network both produced and was reproduced by the physical communications infrastructure in play.

Centralization did not by itself mean rationalization, per se, and did not necessarily reduce the complexity of the process by which assessments and metrics were generated. As information wound through various organizational channels into MACV reports and databases, differing standards, lags in reporting, and estimates would work their way in, generating opacity and inconsistency and making it difficult to say exactly why a number was what it was. Journalists highlighted these inconsistencies (especially around the number of enemy killed) as evidence of inaccuracy, malfeasance, or inflation.⁹⁰

In reality, all evidence suggests that diverging reporting standards and subjective judgments were primarily at play. Examples included discrepancies between MACV and Embassy's RD number,⁹¹ between the body counts reported by CORDS and the MACV J2, and of course between summaries of individual body counts based on reports in the field and the final numbers given by JUSPAO in its daily press briefings (nicknamed the five-o'clock follies).⁹² These discrepancies, even as they pointed towards deeper underlying fuzziness and cost MACV some credibility with some journalists, were never disruptive enough to the basic tasks of sense-making, management, and messaging to force MACV to do the difficult job of rooting out the sources of internal disagreement between the metrics, though there were occasional confabs and committees put together to adjudicate particular disagreements, which were nearly always *between* bureaucratic units, and thus subject to standard bureaucratic politics.

The tendency of journalists to distrust inconsistent figures (together with the general scrutiny the released metrics were under) drove further centralization. One proposed 1967

⁸⁹See Demchak, *Military Organizations, Complex Machines*, p. 45 for more on organizational complexity reproducing environmental complexity. For evidence concerning the organizational complexity of the American mission in Vietnam, with a special regard to the explosion of specialization in MACV and the US Army, see Van Creveld, *Command in War*, p. 235.

⁹⁰This did not always play out the way one might expect. Joseph Alsop, a widely syndicated columnist, argued that MACV statistics which showed *higher* infiltration numbers than the intelligence agencies in Washington was being fabricated out of a desire to avoid any move to "bring the boys home" (William M. Hammond. *Public Affairs: The Military and the Media, 1962-1968*. Government Printing Office, 1988, p. 280).

⁹¹Cooper et al., *American Experience*, pp. 213-4.

⁹²MACV J3. 'Reporting Enemy KIA'. A1 130 Box 2. NARA II, College Park, MD, 1st May 1970.

change in reporting friendly wounded categories involved the Vice President and Secretary of Defense.⁹³ Changes on reporting enemy KIAs (as part of de-emphasizing the body count) would have required 'at least' JCS approval.⁹⁴ In analyzing adaptation and problem solving, it is critical to ask *for whom* is this an adaptive solution; centralizing the definitions behind various reporting metrics helped senior policy-makers manage their messaging, even as it made the system less flexible than it might have been; such restrictions generally only applied to the most politically-sensitive metrics.

The impressive infrastructure generated to impose rigor and stability on the ad hocery of early American efforts created problems, constraints, and adaptive behaviors of its own. One impetus for centralizing some computer generated reports in a Saigon datacenter and upgrading the systems was that some of the existing MACV computers (still very physical devices) were literally breaking down under the volume of report traffic,⁹⁵ while the older punch card systems had trouble keeping up with the volume of reports.⁹⁶ At one point before 1968, for example, the sheer volume of traffic between Saigon and Washington overwhelmed the communications infrastructure, creating significant messaging delays. As a result, an inflation of message priority set in, resulting in a great percentage of traffic being sent with the highest-priority 'flash' rating as various parties attempted to get their messages through. Frustrated at its messages being delayed, the Joint Staff granted itself an exclusive new '*super-flash*' rating.⁹⁷ At the height of the war, 10-15% of military personnel in country were devoted full-time to communications; the 1st Signals Brigade alone (responsible for the first-of-its-kind telecommunications and radio nets) constituted 5% of total personnel.⁹⁸ A high degree of centralization, substantial demand for intelligence and assessments products, and a relatively low through-capacity or degree of automation contributed to blockages and bottlenecks. Intelligence reports arrived in the field after they had ceased to be useful (Figure 3.3).⁹⁹

⁹³It should be noted that this was a classic case of a reporting/messaging selection pressure at work; because friendly casualties were not further categorized, the mounting numbers seemed worse than they actually were - MACV adjusted by breaking them down into those requiring a hospitalization and those that did not (MACV J3, 'Reporting Enemy KIA').

⁹⁴Ibid.

⁹⁵Dan E Feltham. *When Big Blue Went to War: A History of the IBM Corporation's Mission in Southeast Asia during the Vietnam War (1965-1975)*. 2012, Location 164.

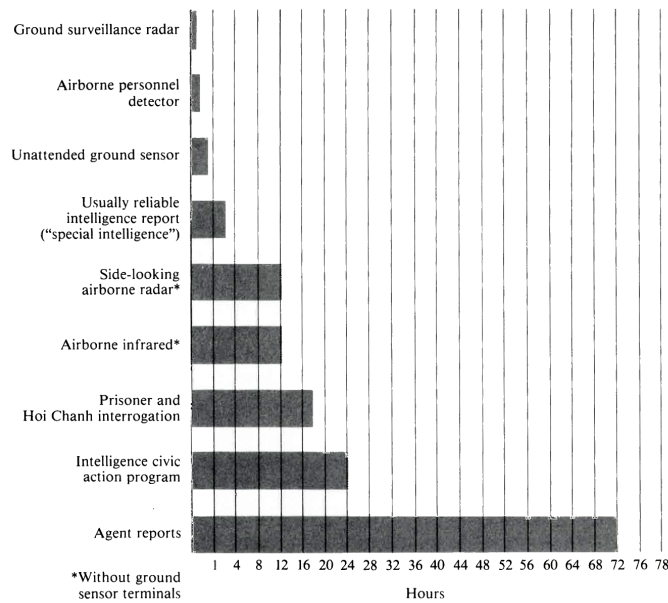
⁹⁶Ibid., Location 3790.

⁹⁷Thomas Matthew Rienzi. *Communications-Electronics 1962-1970*. Washington, DC: Department of the Army, 1972, p. 91.

⁹⁸Van Creveld, *Command in War*, p. 239.

⁹⁹It must be said that: A) It is not clear that these numbers represent a substantial deterioration in the intelligence picture of the battlefield. Even the most complex products (from interrogations) generally arrived within a few days. While this may be too late for maneuver, it should usually be enough time for intelligence uses. B) It is not clear what Van Creveld's sources are here. C) Van Creveld does not tell the reader that

Figure 3.3: The Timeliness of Intelligence Reports, c. 1967



"Average hours elapsed from event to receipt of report." From Martin Van Creveld. Command in War. Cambridge, MA: Harvard University Press, 1985, p. 248.

Soldiers and civilians throughout the bureaucracy spent inordinate amounts of time writing reports. With American military efforts and numbers increasing in Vietnam, something had to give.¹⁰⁰

As more and more information streamed into and through MACV, the systems that had formed order out of the initial chaos of the early American mission were no longer fit for purpose. The dysfunction they caused, along with the changing needs of MACV and Washington as the war changed and escalated, led to another wave of adaptations that created another level of communications, assessment, and analytical capacity, possibly the largest in the history of warfare.¹⁰¹

3.2.3 Adapting the Metrics and Assessment System to the Changing Conflict (1967-1972)

Between roughly 1967 and 1972, MACV adapted to the organizational pressures above while also continuing to adapt to environmental pressures from the war (and changes within the

this picture begins changing dramatically in 1967.

¹⁰⁰In general, not only does an increase in scale increase overall needed carrying capacity in the normal linear fashion, but in complex systems can generate an exponential increase in need due to interaction. Such as the case with Vietnam communications.

¹⁰¹See Connable, *Embracing*, p. 148.

prosecution of the war), with these pressures shaping the development of MACV's assessments process. The overall trend was away from subjective, qualitative progress reporting (especially by South Vietnamese sources) in favor of quantitative or at least structured reporting, ideally by independent American raters. Moreover, ad hoc reporting that had suited the early MACV years through the escalation crisis of 1965-6 (and simultaneous "big unit war") gave way to structured, regularized reports and a formal operations and campaign-planning process – these changes also helped senior MACV leaders make sense of increasingly complex, intense, and geographically dispersed American efforts. At the same time, as a diverse array of military and civilian agencies ramped up their efforts (not to mention the GVN), reports and reporting systems proliferated, producing a mosaic metric system with varied and often-overlapping subjects and usually supporting the institutional priorities, if not the chosen narratives, of those agencies. This ecosystem was supported by a range of civilian and military analysts and technicians, and reached into the heart of how American policy was made in both Saigon and Washington.

Communications Infrastructure

Pre-figuring the Information Revolution that would soon sweep across the developed world, one way MACV dealt with report volume without having to compromise its own needs or those of Executive or Congressional overseers was by building a first-of-its-kind battlefield information network. Where they could be, mandated reports were streamlined and automated, driving down delay times and producing 'hotter' reports with more timely intelligence.¹⁰² The 1st Signal Brigade, organized by the Army's Strategic Communications Command (USAS-TRATCOM) in and for Vietnam in 1966, led the way.¹⁰³ Vietnam's variable geography presented tremendous challenges for reliable radio communications at the same time that dispersed combat units (which often encountered numerically larger VC/NVA forces, in both "conventional" and counterinsurgency missions) required instantaneous and reliable connections to higher headquarters and combat support and that field commanders needed to range further and faster to exercise command over those dispersed units. Triple canopy jungle, mountain highlands, the vast Mekong delta, and everything in between each presented differ-

¹⁰²Joseph A. McChristian. *The Role of Military Intelligence, 1965-1967*. Washington, DC: Department of the Army, 1974, p. 149.

¹⁰³"Brigade" is something of a misnomer for a unit that reached Division size –over 25,000 troops– in the course of the war (Charles R. Myer. *Division-Level Communications, 1962-1973*. Washington, D.C: Department of the Army, 1982, p. 63).

ent technical challenges. Moreover, the centralization of personnel in-processing and logistics (not to mention of some intelligence and reporting) in Saigon required a never-before-seen intensity of communications between units in the field and MACV HQ; because logistics and personnel systems were automated, field unit staffs needed to be able to connect into the nascent “network.” What the 1st Signal Brigade built in response to these environmental pressures set a number of precedents in the history of warfare: the first battlefield computer network; first satellite uplink (between MACV, PACOM and the Pentagon); the first persistent radio system (in principle, an American infantryman could communicate from anywhere in South Vietnam); and the first automated teletype system (a precursor to email) - not for nothing was the new unit’s motto “First to Communicate.” With the installation of new International Business Machines (IBM) 360 mainframes and a state of the art switching system, alongside built-for-purpose undersea cables and satellite uplink, MACV’s information flow troubles (including the inflation of message ratings) had been solved by mid-1968.¹⁰⁴

Alongside the work of the 1st Signal Brigade, various other military organizations worked to develop the communications infrastructure needed to accommodate growing staffs, missions, and reporting processes. In order to coordinate logistics and track operations, the Army and Marines installed computer systems ranging from state-of-the-art IBM360 mainframes in air-conditioned datacenters at important hubs like Long Binh and Danang to slightly more rugged punchcard file processing systems in remote firebases that could communicate with the main data centers using the IBM AutoDIN system connected to a microwave transmitter.¹⁰⁵ The MACV J2 built a multi-million dollar Combined Intelligence Center (CIC) at HQ, the Combined Military Interrogation Center (CMIC) and another further eighteen CICs at the corps and division levels all over the country to improve intelligence processing. At the tactical level, radiotelegraph operators worked to balance between their ability to communicate and operational necessities, generating new tools and antennae in order to maintain the lifeline of fire support while minimizing the chance of getting shot at by the savvy NVA.¹⁰⁶ This communications infrastructure was not necessarily perfect, of course, nor in a certain sense was it efficient - it was costly and manpower intensive.

¹⁰⁴Rienzi, *Communications-Electronics 1962-1970*, p. 92.

¹⁰⁵Thanks in part to the work of intrepid IBM systems engineers embedded with military units, these systems were maintained despite the forbidding environment; one computer processing building was destroyed by rocket fire, but the dataframe salvaged. Others were shot at or had their inner-workings clogged with sand. See Feltham, *When Big Blue Went to War*, Location 1180.

¹⁰⁶Rebecca Robbins Raines. *Getting the Message Through: A Branch History of the U.S. Army Signal Corps*. Washington, D.C.: Center for Military History, 1996, Ch. 10.

But actors throughout the chain of command pushed for more communications infrastructure until they were satisfied in terms of *their* organizational and environmental pressures, where the main issues were persistent telecommunications links, reduced time spent writing and processing reports, and improved process automation.¹⁰⁷ The result of this early Information Revolution was that front-line units were able to maintain the same or greater volume of reporting with reduced effort, an adaptation minimizing negative impacts both for them and for MACV's leaders.¹⁰⁸

Pacification Reporting

Prior to the “Americanization” of the war, pacification had been primarily the responsibility of the GVN, albeit with American aid and support, on the theory that the South Vietnamese government had to be seen to be the ones providing security and development to their country. But by 1966, it had become clear that American efforts were necessary to jumpstart and accelerate pacification, if not to run it completely, with pressure coming directly from the White House and with strong support from Westmoreland.¹⁰⁹ Sense-making was an early (if not *the* early) function of pacification reporting; in a dispersed, variable environment, it was hard to make heads or tails of what was actually going on in the countryside, especially when reporting from South Vietnamese sources was notorious for its optimistic tinge – both in Saigon and in Washington, American senior leaders recognized and disclaimed poor and optimistic pacification reporting, and began the search for something better.¹¹⁰ As pacification assessment matured, these metrics (as we will see) more than many others played a

¹⁰⁷Where organizational and environmental pressures pushed against ‘optimal’ behavior, the pressures usually won. For instance, throughout the conflict MACV had tremendous difficulty enforcing proper security protocols over the radio; despite there being some risk of the VC/NVA capturing communications, security protocols imposed significant effort without any obvious immediate payoff for the end-user. Without further enforcement or punishment, substantial cooperation was unlikely (Myer, *Division-Level Communications, 1962-1973*, pp. 65–66).

¹⁰⁸It is remarkable how many of the technologies and techniques later associated with the Revolution in Military Affairs (RMA) first show up on the battlefield in Vietnam. In addition, while one cannot say that the Vietnam experience was the definitive source of decentralized, networked approaches to warfare and communications, it remains the case that Vietnam furthered and reinforced a mission command, decentralized, process-based (as opposed to hierarchical) approach to network communications, which shaped both the military's future practice and ARPA's thinking about networks, contributing indirectly to the development of ARPANET, and therefore to the Internet (Annie Jacobsen. *The Pentagon's Brain: An Uncensored History of DARPA, America's Top-Secret Military Research Agency*. New York, NY: Little, Brown and Company, 2015, p. 211). For a study in contrasts on an attempt at hierarchical networking, see Benjamin Peters. *How Not to Network a Nation: The Uneasy History of the Soviet Internet*. Cambridge, MA: The MIT Press, 2016.

¹⁰⁹Westmoreland understood that, even if North Vietnam's ability to support the southern insurgency was damaged or deterred through military force, the South would still collapse unless the GVN could win the support of the population and develop its institutions. See Daddis, *Westmoreland's War*, p. 127.

¹¹⁰Cooper et al., *American Experience*, p. 198.

critical role in how senior leaders actually made sense of the war. But as American forces prepared for a completely unique assignment, management and messaging needs also came to the fore. American standard procedures necessitated some kind of reporting structure allowing subordinates to report their work and senior managers to assess progress and direct resources. But these management needs extended beyond the American pacification organizations (OCO and its successor CORDS): improved pacification reporting allowed actors primarily focused on pacification and counterinsurgency to gauge and moderate the activities of more security or military-focused American and Vietnamese forces and even to manage and hold accountable local GVN officials. Even as the middle and senior managers running pacification programs made use of assessments in their daily work, senior program leaders and Washington policymakers came to rely on pacification reporting systems to show progress to the American public and to the media; metrics in particular were vital, because journalists had grown skeptical of earlier reports of “progress” from the same early sources that American leaders had found unreliable. In response, MACV developed a pacification reporting system described by many later scholars as “arguably the de facto gold standard for assessment” , one unrivaled in military history for its depth and intensity.¹¹¹

The Hamlet Evaluation System (HES) The cornerstone of the MACV pacification reporting system was the Hamlet Evaluation System, run by CORDS. In a sense, the HES and CORDS were co-constitutive: CORDS advisors filled out the questionnaires and gathered the data for the HES, while the HES served as a kind of spinal cord for pacification reporting, channeling information to CORDS, MACV, and Washington-based senior leadership while also serving as a jumping-off point for independent auditing and analysis by organizations like the OSD-SA and the CORDS Pacification Studies Group (PSG).¹¹² Designed in 1966 following the Honolulu Conference, the HES came online in early 1967 under the aegis of the OCO and eventually CORDS. Designed by social scientists consulting with MACV under an ARPA contract and monitored by ACTIV, the HES was designed around a questionnaire which District Senior Advisors (DSAs) would fill out on a monthly basis regarding each of

¹¹¹Connable, *Embracing*, p. 113; Stathis N. Kalyvas and Matthew Adam Kocher. ‘The Dynamics of Violence in Vietnam: An Analysis of the Hamlet Evaluation System (HES)’. *Journal of Peace Research* 46.3 (1st May 2009), pp. 335–355; Rex Douglass. ‘Why Not Divide and Conquer? Targeted Bargaining and Violence in Civil War’. Ph.D.. Princeton, NJ: Princeton University, 2012.

¹¹²As one later analysis said, “if there had not been HES when [Komer] arrived, he would have had it invented” (Albert C. Bole and K. Kobata. *An Evaluation of the Measurements of the Hamlet Evaluation System*. Research Project No. 118. Newport, RI: Naval War College Center for Advanced Research, 1975, p. 31).

the hamlets in their district (while this may have been cumbersome, it was an improvement over the previous, manual system).¹¹³ The centerpiece of the survey was the hamlet security rating.¹¹⁴

- A No incidents, including harassments, in, near, or en route to the hamlet or outlying villages during the month
- B No incidents in the hamlet during the month; infrequent harassments within a village or nearby
- C Long-range fire at night; VC activity in adjacent hamlets; or occasional sniping on routes to the hamlet
- D GVN activity under harassment; frequent sniping on routes to the hamlet; or VC night activity in the hamlet
- E Armed VC units in the hamlet at night and sometimes during the day. Little GVN activity at night. Routes to the hamlet may be interdicted or ambushed by day.
- V The hamlet is controlled by the VC and inaccessible by day to GVN pacification activities (except by force)

Except for V-rated hamlets (which could not be measured), raters filling out the Hamlet Evaluation Worksheet rated villages along three metrics across six factors (for a total of 18 indicators, half being security-focused and half development), also by an A-E score using a formal rubric.¹¹⁵ In addition, evaluators assessed fourteen multiple-choice questions on various potential hamlet problems during the month, such as how actions by US military units were affecting the hamlet. From the start, the HES combined objective metrics; standardized qualitative assessments; and the advisors' own judgments. While some tweaks were made in May 1967, they were relatively minor; the system had been well-conceived to meet US managerial and measurement needs, and there was the sense that any more fundamental changes should be based on data, which the system needed time to collect.¹¹⁶ But from the

¹¹³Cooper et al., *American Experience*, p. 220; Robert W. Komer. *Impact of Pacification on Insurgency in South Vietnam*. RAND Paper P-4443. Santa Monica, CA: RAND, Aug. 1970. URL: <https://www.rand.org/pubs/papers/P4443.html>. For more on ACTIV and their unique role in Vietnam, see pg. 210.

¹¹⁴Cooper et al., *American Experience*, p. 220.

¹¹⁵The six factors were VC military activities; VC political and subversive activities; security (friendly capabilities); administrative and political activities; health, education, and welfare; and economic development.

¹¹⁶Bole and Kobata, *An Evaluation of the Measurements of the Hamlet Evaluation System*; Army Concept Team in Vietnam. 'Hamlet Evaluation System Study (HES) ACG 60F'. RG 472, P 1626, Box 9. NARA II, College Park, MD, 1st May 1968.

beginning, the HES was viewed as a part of an iteratively improving system, and systems were in place not only to measure pacification, but to measure the quality of measurement.¹¹⁷

After several years of operation and following several independent assessments (including one from ACTIV), the HES underwent a revision in 1970 and a smaller revision in 1971, producing the HES70 and HES71 systems, respectively.¹¹⁸ These revisions were aimed at further removing subjective factors from the evaluation - assessment would be based on objective indicators (like whether GVN officials could spend a night in a village) rather than interpretive judgment and to further emphasize development and political factors; most importantly, the A-E hamlet security rating would be derived from these indicators, rather than be given by the DSA. These changes were not driven by concerns about bias or inflation (no evidence to that effect was found), but to control for differences in DSA opinion and access to information.¹¹⁹ As a control, the HES and HES70 were run simultaneously for six months in 1969, in order to validate the new system, before the new system was used exclusively beginning in February 1970.¹²⁰ In order to derive the A-E rating, a sophisticated Bayesian algorithm was used, which essentially calculated how ‘unexpected’ (based on prior probabilities generated by CORDS experts) information in the indicators would be for the various types of hamlets, and assigned a rating inductively.¹²¹ Because the derivation of the ratings was entirely transparent, it was possible for interested analysts to build and deploy their own ratings systems, providing another ‘robustness check’ to the HES.¹²²

While nearly all of the analytical focus (both at the time and in retrospect) has centered on the pros and cons of the HES as a quantitative measurement system, it also bolstered and supported qualitative, narrative reporting and sense-making throughout CORDS. The HES forced DSAs to interact routinely with all of the hamlets in their district and provided a regular outlet for qualitative reporting through the free-form sections of the questionnaire, forming a parallel “gut HES”.¹²³ Quantitative indicators, qualitative assessments, and prac-

¹¹⁷Bole and Kobata, *An Evaluation of the Measurements of the Hamlet Evaluation System*.

¹¹⁸Cooper et al., *American Experience*; Army Concept Team in Vietnam, ‘Hamlet Evaluation System Study (HES) ACG 60F’.

¹¹⁹Army Concept Team in Vietnam, ‘Hamlet Evaluation System Study (HES) ACG 60F’.

¹²⁰MACCORDS- Pacification Study Group. ‘Validation of the Hamlet Evaluation System/70’. RG 472, A1 462, Box 15. NARA II, College Park, MD, 11th Mar. 1970.

¹²¹For technical details, see the Appendix to Kalyvas and Kocher, ‘The Dynamics of Violence in Vietnam’, available at <http://file.prio.no/Journals/JPR/2009/46/3/Replication%20data%20Kalyvas%20Kocher.zip>.

¹²²As we see below, at least two parties did this - OSD-SA and the Vietnam Special Studies Group (VSSG).

¹²³Bole and Kobata, *An Evaluation of the Measurements of the Hamlet Evaluation System*.

tices of routine interfaces with DSAs and Province Senior Advisors (PSAs) (through field visits and meetings in Saigon) shaped impressionistic decision-making by CORDS senior leaders and aided PSG analysts in determining what to study in depth.¹²⁴ The American leadership in Saigon (civilian and military) interacted frequently with those “on the ground” and read highly detailed narrative reporting and specialized reports that interrelated HES statistics, performance measures from various pacification programs, public opinion, and results on the ground.¹²⁵

The HES came to serve as a common parlance for both management within MACV and for messaging to the broader public. Senior officials like CORDS chiefs Robert Komer and William Colby (former CIA Saigon station chief, Komer’s deputy, and later the head of CORDS) briefed journalists and senior politicians in terms of “government controlled population” and “ABC hamlets”.¹²⁶ Generally, hamlets in the A and B categories were considered, for all intents and purposes, under government control, while C hamlets were considered under government control but not consolidated. While “government control” was understood by pacification officials as the *first* step towards broader pacification (ensuring the security necessary for all of the other programs to work - it was, in other words, population-centric counterinsurgency), the specific, technical meaning of the term was often lost in public reporting, especially that aimed at assuring the public of “progress”. So, Johnson could report that “the fact that the population under free control has constantly risen, and that under Communist control has constantly gone down, is a very encouraging sign”, and days later be a fully engaged participant in a meeting touching on the problems and limitations that American pacification efforts had encountered.¹²⁷

But to many American journalists, politicians, and citizens, only the broad claims of “government control” were visible, without the nuance which pacification officials understood - many believed the measures referred to popular support or “hearts and minds” and rightly

¹²⁴Komer, *Impact of Pacification on Insurgency in South Vietnam*.

¹²⁵Thomas W. Scoville. *Reorganizing for Pacification Support*. Washington, D.C.: Center for Military History, 1982. See, for example, MACCORDS- Pacification Study Group. ‘Evaluation of Long Tri Village’. RG 472, A1 462, Box 15. NARA II, College Park, MD, 30th Mar. 1970 (which includes a handwritten note from Colby in the archival folder) or the extensive narrative comments in MACCORDS- Pacification Study Group. ‘Opening Statement by Ambassador W. E. Colby for the Hearings before the Senate Foreign Relations Committee’. RG 472, A1 462, Box 15. NARA II, College Park, MD, 16th Feb. 1970.

¹²⁶For example, see MACVCORDS. ‘Briefing for General Wheeler by Ambassador Colby’. RG 472, A1 491. NARA II, College Park, MD, 5th Oct. 1969; MACCORDS- Pacification Study Group, ‘Opening Statement by Ambassador W. E. Colby for the Hearings before the Senate Foreign Relations Committee’.

¹²⁷Johnson, ‘Press Conference, 17 November 1967’. For more on the sources and problems of this kind of messaging, see 3.2.5 on pg. 112. Even before the HES was fully operational, public relations staffers were using it to bolster claims of progress, to the chagrin of HES overseers (Hammond, *Public Affairs*, p. 329).

disclaimed its effectiveness in that regard.¹²⁸ Part of this is a misunderstanding or misconstrual of what the HES measured, which was baseline security of the hamlet.¹²⁹ A 'C' hamlet was not a nice place to live, but simply one which was in 'control' of the GVN in the sense that the VC could not or did not operate freely or in the open most of the time, though the hamlet was still contested. A perfect 'A' hamlet was not an idyllic patriotic village devoid of any pro-Communist sentiment,¹³⁰ but one thoroughly controlled and securitized by the GVN, such that any overt VC activity was dangerous to those cadres, from which the VC could not collect taxes, press-gang locals, etc. Even that is overstating it - HES scores were essentially dynamic measurements collected at discrete points in time. That a hamlet might drop from 'A' to 'C' as a result of enemy activity can hardly be a criticism, if that reflects the ground reality!¹³¹ So while HES metrics served the purposes of messaging confidence in the war effort and reassuring the American people, it also hid the fragility of progress and the need for follow-through of which American leaders (informed through other statistics and narrative reports) were painfully aware, and legitimate criticism was directed at the simplistic use of pacification scores as a shorthand for "progress".¹³²

But while the HES served as a valuable system (among others) for making sense of the complex battlefield and for fighting "the war at home" through messaging, it was invaluable as a management tool. It served as a conduit for DSA concerns, helped channel resources and senior leadership attention where it was needed, and monitor the numerous pacification programs that were underway, especially as American and RVNAF forces moved to take advantage of VC/NVA weakness in the wake of the Tet Offensive. The HES acted as an independent reality check - though imperfect, it could (and did) indicate when a program was not working, or was working surprisingly well. Under MACV directive, CORDS officials had the authority to evaluate *all* civil-military pacification activities, including "provision of security," and Westmoreland repeatedly sided with CORDS against military complaints about assessments.¹³³ As a management tool, though, HES was in some ways more important

¹²⁸See, for example, Congressman Tunney and Ambassador Komer's back and forth in Bole and Kobata, *An Evaluation of the Measurements of the Hamlet Evaluation System*.

¹²⁹Misconstrued at some times by hawks trying to shore up support for the war and at other times by critics of CORDS or the war attempting to score a point regarding the hubris, technophilia, or misguided nature of American leadership.

¹³⁰Though of course, such a hamlet would be graded 'A', but as a subset of all 'A' hamlets, not the whole set.

¹³¹Of all criticisms of the HES, this is the one that most befuddles the modern social scientist; that a change in measurement in response to a change in the environment denotes the inaccuracy of the initial measure.

¹³²Komer, *Impact of Pacification on Insurgency in South Vietnam*.

¹³³Hunt, *Pacification*, p. 179. This protection slightly weakens under Abrams, though CORDS maintains

for CORDS interfaces with other parties; PSAs and other middle management in CORDS reported relying on DSA narrative reporting and their own experiences (the “gut HES”) more than the quantitative metrics.¹³⁴

More importantly, the HES provided some much-needed leverage over the South Vietnamese. Recall that, from the beginning, pacification had been viewed as something it was imperative for the South Vietnamese to do for themselves – while the Americans could help fend off the conventional military threat, they could not convince the people of South Vietnam, especially in the countryside, to support the GVN. And so, American involvement in pacification following the escalation of the military conflict was itself a kind of admission of failure, a failure predicated in no small part on the weakness of the South Vietnamese state and the internal politics of reform. As American investment in pacification accelerated, MACV looked for leverage over programs ranging from development and agricultural improvement to targeting operations like Phung Hoang. American officials could sometimes cajole them, but any changes Vietnamese officials might promise would be slow to materialize.¹³⁵ From the start, it appears that Komer understood the management potential of HES. From the beginning, CORDS had worked to keep President Thieu “in the loop”, and these efforts finally paid off when, during the Accelerated Pacification Campaign (APC), President Thieu agreed to use the HES to grade pacification progress, *including for GVN officials*. For the first time ever, American officials had a say in how GVN efforts and official were assessed.¹³⁶ Perhaps the strongest proof that the HES worked in this regard was the determination of South Vietnamese officials to get out from under it. Gen. Hoang Van Lac, deputy minister of RD, in mid-Nov 1968 attempted to create a new system whereby GVN provincial authorities, not American advisors, would establish “the true situation of each hamlet”.¹³⁷ Around the same time, President Thieu himself tried to force the Americans to change the system to only report two categories: VC-controlled hamlets and everything else, in advance of the election.¹³⁸ In each case, Komer and Colby worked to keep the HES ratings fully independent.

Because nothing like the HES had been built before or used as a battlefield tool, Amer-

an important say.

¹³⁴Bole and Kobata, *An Evaluation of the Measurements of the Hamlet Evaluation System*.

¹³⁵Walter C. Ladwig III. *The Forgotten Front: Patron-Client Relationships in Counterinsurgency*. Cambridge New York Port Melbourne Delhi Singapore: Cambridge University Press, 2017, p. 212.

¹³⁶Hunt, *Pacification*, p. 159.

¹³⁷Ibid., p. 194.

¹³⁸Ibid., p. 195.

ican pacification leaders were eager to validate and cross-check HES results. On over half a dozen occasions, independent assessments of pacification reporting were made, which included statistical assessment and separately interviewing villagers and local officials.¹³⁹ Each found that the HES was highly reliable when compared to GVN and villager self-reporting, especially regarding security factors (development factors, slightly less so).¹⁴⁰ Compared to previous streams, DSAs security reporting was actually somewhat “pessimistic”. The HES was cross-checked against public opinion data, assessments by local chiefs, independent American pacification raters, VSSG teams that included old Vietnam hands, and alternative ratings algorithms using the underlying HES data.¹⁴¹ In the ultimate test (in the field), HES data was highly correlated with observed changes after the Tet offensive, during the APC, and following the Easter Offensive, and after Tet even served to highlight areas where wiped-out VC liberation committees were re-forming.¹⁴²

This is not to suggest that the system was perfect. The HES was ultimately designed for CORDS senior leaders, and some DSAs felt that it failed to capture nuances and issues on the ground. In many cases, advisors still relied on Vietnamese sources for information, and later studies showed that DSAs who did so were more likely to believe HES data to be inflated.¹⁴³ Advisors going through CORDS orientation provided feedback on the HES that ranged from positive to decidedly less so.¹⁴⁴ Others expressed frustration that the

¹³⁹See Army Concept Team in Vietnam, ‘Hamlet Evaluation System Study (HES) ACG 60F’; Vietnam Special Studies Group. ‘The Situation in the Countryside’. RG472, A1 462, Box 17. NARA II, College Park, MD, Jan. 1970; MACCORDS- Pacification Study Group. ‘PAAS Briefing’. RG 472, A1 462, Box 15. NARA II, College Park, MD, Dec. 1970; MACCORDS- Pacification Study Group, ‘Validation of the Hamlet Evaluation System/70’. Bole and Kobata also cite Clark and Wyman’s 1967 report for RAC, Pool et al.’s 1968 Simulmatics Corporation assessment, and Pacific Technical Analysis in 1968 (Bole and Kobata, *An Evaluation of the Measurements of the Hamlet Evaluation System*, p. 55).

¹⁴⁰The only possible exception was Pacification Attitude Analysis System (PAAS) reporting, where villagers tended to rate security as slightly worse than the HES indicated (MACCORDS- Pacification Study Group, ‘Validation of the Hamlet Evaluation System/70’). However, some in Pacification Studies Group believed the difference to reflect a gap between what the villagers were being asked and how raters were trained to (and did, correctly) rate - a ‘B’ hamlet, for example, might not feel safe to a peasant, even if it met the criteria for that level of government control. Thayer later said that according to statistics he had access to, peasants were 5% more conservative than the HES (*Analyzing Guerrilla Warfare [Proceedings of an SAIC Conference]*. McLean, Virginia, 24th Sept. 1985. URL: <https://www.vietnam.ttu.edu/reports/images.php?img=/images/217/2171614007a.pdf>, Thayer Comments).

¹⁴¹See the sources noted above and JR Bullington. ‘Assessing Pacification in Vietnam: We Won the Counterinsurgency War!’ *Small Wars Journal* (Mar. 2012).

¹⁴²Hunt, *Pacification*, p. 204.

¹⁴³Bole and Kobata, *An Evaluation of the Measurements of the Hamlet Evaluation System*; Daddis, *Westmoreland’s War*, p. 137.

¹⁴⁴Two examples ranking a presentation on the HES: 1) “Good, Col Thomure’s presentation was knowledgeable with significant emphasis on the factors which affect the reliability and validity [of] the hamlet evaluation system (HES). The speaker adequately communicated the danger present in the improper interpretation of the data.” 2) “Adequate - His presentation reflects he has read HES, reports and statistics, but that he lacks a ‘feel’ for the situation.” (Byron Botts. ‘MACV CORDS Adviser Orientation Course Presentation’. RG 472, A1 491. NARA II, College Park, MD, Apr. 1969, Critique sheets from previous orientation).

HES focused on “inputs” and on security or event capture, and felt it should have further emphasized political reporting. Some DSAs resented the diminished role for the “gut HES” and their subjective judgments in HES70, and expressed concern that VC who were not conducting attacks would not be ‘picked up’ by the system. Some advisors were frustrated at attempts by GVN or officials in the military or other agencies to influence their ratings (these rarely came from their supervising PSAs, who sometimes preferred *worse* ratings as a tool to gain resources and leverage over District Chiefs).¹⁴⁵ But, ultimately, many of these complaints are representative of the usual feelings of those “on the front lines”, that the reporting metrics they are forced to use are crude and do not capture the complexity of the situation. While this criticism is not incorrect, it does not reflect the concerns and usages of senior managers.

But for senior policymakers who were “dissatisfied” before they built HES, the system was fit for purpose. In contrast to their feelings about the Body Count, senior policymakers displayed a high degree of confidence in the HES. Of the former Vietnam generals who responded to Kinnard’s survey (a group highly divided amongst itself and generally skeptical about professionalism and metrics in general) 75% believed the HES to be “about as good as could have been devised”.¹⁴⁶ Thayer, the overseer of the independent and highly acclaimed Southeast Asia Analysis Reports in OSD-SA, in a post-war meta-analysis of the HES compared with other reporting streams found it to be valid and reliable, calling it “the most complete and systematic record that exists anywhere of rural security and development in a less-developed country”.¹⁴⁷ Over time, the HES has emerged as the (forgotten) gold-standard of counterinsurgency reporting.

The Vietnam Special Studies Group Control Indicator As the war wound on under the Nixon administration, Nixon and Kissinger grew concerned that they might not be getting the full picture from MACV. And so Kissinger convened a task force associated with the National Security Council, the Vietnam Special Studies Group (VSSG). The group brought together Vietnam-experienced officials from the foreign policy, military, and intelligence communities, serving directly under Kissinger, to conduct entirely independent analyses of the situation in Vietnam, outside of the MACV and other Saigon-based assessments structures. Their biggest and most important project was a bottom-up evaluation of pacification, con-

¹⁴⁵Bole and Kobata, *An Evaluation of the Measurements of the Hamlet Evaluation System*.

¹⁴⁶Douglas Kinnard. *The War Managers*. Hanover, N.H: University Press of New England, 1977, p. 173.

¹⁴⁷Thomas C. Thayer. *War without Fronts: The American Experience in Vietnam*. Boulder, CO: Westview Press, 1985, pp. 141, 152.

tained in a lengthy report, “The Situation in the Countryside”, consisting of a thorough analysis of every facet of pacification, alongside detailed reporting on every province contained in an appendix. As part of this project, they developed the “VSSG Control Indicator,” a re-scoring of the HES that focused on control of the population and the ability of each side’s security infrastructure to prevent the other side from pursuing pacification or governance-building (contested areas were listed as controlled by neither side); magnetic tapes with raw HES data were flown directly to Washington for VSSG analysts to pour over.¹⁴⁸ The report found that pacification progress had been slow in 1967 (VC rural population control declining from 52% to 49%); had reached a nadir during Tet (55% controlled by VC vs. 14% by GVN); had rapidly accelerating during the APC after Tet, such that by the end of 1969, the VC controlled 8% of rural population (5% total) and the GVN, 62% (76% total); and had once again slowed in 1970 as the enemy adopted a protracted war strategy.¹⁴⁹ As cease-fire negotiations picked up, the VSSG conducted a re-assessment of “the Control War” in the key provinces in light of a possible upcoming treaty and American withdrawal.

Old Vietnam hands (most of whom had cut their teeth in the worst years of the war), the VSSG staff actually came away from their study *more optimistic* from than they had been before. Ironically, officials in Saigon were concerned that VSSG reports and the VSSG Control Indicator were *too optimistic*. In internal MACV correspondence regarding a response to the VSSG report, CORDS senior managers (such as the Associate Chief of Staff for CORDS and PSAs) expressed concern that the HES indicators the VSSG was based off of entailed assumptions that made them susceptible to inflation, and suggested alternative indicators. The CORDS senior advisor to the commanding general of 1FFV was also concerned that the VSSG had paid insufficient attention to political (as opposed to military) control factors. John Paul Vann, then IVCTZ CORDS Deputy, expressed frustration that the effort had been Washington-led, believing it would have been more effective if it had been led from Saigon, while not believing its findings to be anything surprising. Robert Weeks, CORDS director for Research and Development, summed up the pervasive and detailed concerns about how the VSSG Control Indicator used the HES to suggest that it was rendered susceptible to “the same weaknesses [as the pre-1970 HES]...subjectivity and possible resultant inflation and misleading

¹⁴⁸Lynn Goodsell. ‘Reference Copy of Technical Documentation for Accessioned Electronic Records’. RG-330 (Electronic Records). NARA II, College Park, MD, 24th Apr. 2009.

¹⁴⁹Charles Stuart Kennedy. *Interview with James R. Bullington*. In collab. with James R. Bullington. 31st July 2001; Bullington, ‘Assessing Pacification in Vietnam: We Won the Counterinsurgency War!’

data at the hamlet/village level,” while nonetheless applauding the undertaking of such an extensive focus on pacification by those with access to senior White House policymakers.¹⁵⁰

PAAS At the same time that CORDS assessments officials moved the HES in the direction of more “objective” indicators, they sought to, for the first time, directly survey the population of South Vietnam on their political sentiments, beliefs about the GVN, and awareness of various programs aimed at improving their lives and destroying the insurgency. After several months of design, study, and testing, the PAAS came online in mid-1969. On a monthly basis, specially trained PAAS personnel asked a representative sample of urban and rural South Vietnamese civilians a fixed set of questions related to security, political sentiments, and GVN performance, along with one-off questions related to specific information requirements, regarding matters such as awareness of the Phung Hoang (anti-VC) program, or the kind of man voters were looking for in the upcoming elections (41% were primarily looking for someone who would “restore peace”).¹⁵¹ In order to run the PAAS, CORDS had to deploy a number of trained South Vietnamese personnel through the Pacification Research Program (PRP), had to work with consulting social scientists to develop a semi-structured interview process that would work in the context of South Vietnamese society, and had to design a valid sampling strategy for a diverse and dispersed population.¹⁵² But the growing resources being invested in pacification after the Tet offensive (and the decline in VC/NVA activities that had militarily threatened pacification) enabled CORDS to make this investment, and the continual search for ways of triangulating the true state of pacification demanded it.

Why did it take until 1969 for MACV to generate something like the PAAS, designed to evaluate “hearts and minds”? Four factors seem to have predominated: 1) prior to 1967, the GVN and other US agencies had been organizationally tasked with pacification. 2) public opinion surveys of foreign nationals were, at the time, seen as part of the Psychological Operations (PSYOPS) mission set, which was “owned” by United States Information Agency (USIA) as part of JUSPAO, until MACV (and CORDS specifically) wrestled control of the portfolio in 1968.¹⁵³ Prior to PAAS, JUSPAO actually frequently ran public surveys, but did

¹⁵⁰Vietnam Special Studies Group, ‘The Situation in the Countryside’.

¹⁵¹MACCORDS- Pacification Study Group. ‘PAAS Briefing Slides’. RG 472, A1 462, Box 15. NARA II, College Park, MD, Dec. 1971.

¹⁵²MACCORDS- Pacification Study Group. ‘Random Cluster Sample Design’. RG 472, A1 462, Box 15. NARA II, College Park, MD, 1970; Jose Armilla. ‘Surveying Vietnamese Peasant Attitudes in Wartime: The Pacification Attitude Analysis System’. RG 472, A1 462, Box 15. NARA II, College Park, MD, Sept. 1970.

¹⁵³Robert J. Kodosky. *Psychological Operations American Style: The Joint United States Public Affairs Office, Vietnam and Beyond*. Lanham, MD: Lexington Books, 2007, p. 199.

not incorporate them into a longitudinal system, 3) public opinion reporting took a back-seat to getting the HES online, on the theory that pacification was unsustainable without security. The infrastructure which the PAAS eventually used (especially the PRP) emerged from CORDS's other efforts.¹⁵⁴ 4) even after CORDS decided to systematically collect public opinion data, it had to actually figure out how to conduct surveys in rural and war-torn South Vietnam in statistically valid ways.¹⁵⁵ In a certain sense, it is not clear if PAAS came "too late" in the war - its findings tended to confirm information already available to MACV about public sentiments, and to confirm security ratings derived from the HES and other sources.

Pacification Reporting by the End So what picture of pacification did these systems report in 1972, when American leaders were negotiating a cease-fire and preparing for a future South Vietnam without American troop presence? USAID reports showed a 10-15% increase in swine, poultry, and fish production. Rice yields and acreage-under-cultivation continued to increase substantially year over year. PAAS and other public opinion surveys showed that 3/4 of the rural populations had no difficulty getting products to market, and 80% of essential roads and 75% of essential waterways were deemed safe. Increased security led to political changes, including the long-delayed implementation of land reform. At the same time, both the HES and the PAAS reported that only 23-29% of the population lived in areas totally free from VC activity.¹⁵⁶ The point is not that these measures should have been interpreted to mean victory was around the corner, as a few at the time did (and many did after).¹⁵⁷ But *as assessments and indicators*, the variety of systems (run independently by a variety of organizations) reinforced each other, improved the reliability of the overall process, and provided ample granular material for "impressionistic decision-making".¹⁵⁸

Pacification reporting in Vietnam was not perfect, but it was the most intense and wide-ranging purpose-built assessment system in the history of warfare, generating completely unique data. From the earliest days of American involvement in Vietnam, policymakers tasked with working on assessment continued to search for better sources of information and expressed dissatisfaction with their systems; when policymaker priorities, resource allocation,

¹⁵⁴See for example Armilla, 'Surveying Vietnamese Peasant Attitudes in Wartime: The Pacification Attitude Analysis System'.

¹⁵⁵MACCORDS- Pacification Study Group, 'Random Cluster Sample Design'.

¹⁵⁶Hunt, *Pacification*, p. 249.

¹⁵⁷Though not, it must be said, most American leaders or decision-makers.

¹⁵⁸Martin G. Clemis. *The Control War: The Struggle for South Vietnam, 1968-1975*. Norman, OK: University of Oklahoma Press, 2018, p. 235; Thayer, *War without Fronts*, p. 151.

and mission-importance combined, MACV was able to build a system that met its needs in ways which finally satisfied senior policymakers.

Analysis and Evaluation

Ambassador Ellsworth Bunker described information in Vietnam as “pour[ing] forth in such abundance that it is frequently conflicting and seldom digested into an integrated assessment of the whole range of problems we face”.¹⁵⁹ From the earliest days of MACV, the great challenge (clear both at the time and in retrospect) and the one that proved most difficult to adapt to was analysis. After the war, Thayer said, “The problem was that quantification became a huge effort but analysis remained a trivial one”.¹⁶⁰ This may have been *relatively* true, given the vast sums spent gathering and processing data and the relative unimportance of operations research specifically compared to its World War II heyday. But it was false on an *absolute* basis, or on a basis relative to *other wars or counterinsurgency campaigns*. In order to make sense of the bewildering complexity of the war, MACV generated an unprecedented variety of internal analysis organizations and supporting reachback organizations in the United States, alongside additional American analysis efforts conducted under the auspices of OSD-SA, ARPA, and the various intelligence agencies that conduct analysis as a matter of course. These agencies brought to bear a bewildering array of methodological approaches, ranging from cultural history to theoretical physics, but above all, social science.

Before MACV developed its own internal analysis organs, there was DoD and ARPA. In the early post-war years, social science had come to the fore as an invaluable tool for Washington to make sense of and deal with the “wreckage of European empires” and to prevent the broader spread of Communism, believed to be linked fundamentally to underdevelopment.¹⁶¹ As early as 1962, RAND had experimented with predictive modeling of programs focused on the war in Vietnam under ARPA contract, and increasing American interest in and investment in the war unleashed a veritable flood-gate of funding and analysis.¹⁶² Nobel-prize

¹⁵⁹Ellsworth Bunker. ‘Address before the Overseas Press Club, 17 November 1967’. *Department of State Bulletin*. Vol. 57. 1485. Washington, D.C, 11th Dec. 1967.

¹⁶⁰Vetock, *Lessons Learned*, p. 96.

¹⁶¹Joy Rohde. ‘Gray Matters: Social Scientists, Military Patronage, and Democracy in the Cold War’. *Journal of American History* 96.1 (1st June 2009), pp. 99–122.

¹⁶²Jacobsen, *The Pentagon’s Brain*, p. 96. Intellectual historians credit the Vietnam War as a pivotal event in the broader establishment of social science research in American higher education (see Paul N. Edwards. *The Closed World: Computers and the Politics of Discourse in Cold War America*. Ed. by Wiebe E. Bijker, W. Bernard Carlson and Trevor Pinch. Cambridge, Mass. London: The MIT Press, 1997; Jacobsen, *The Pentagon’s Brain*).

winning mathematicians and Ivy League physicists affiliated with the “Jasons” (a secretive group of scientists employed as DoD problem-solvers) dissected problems of counterinsurgency, VC infiltration, and border security along one of the world’s longest land borders per area.¹⁶³ Within Vietnam, many of its activities were managed by ACTIV; while many of ACTIV’s own efforts focused on technical or tactical problem-solving, a fair number were analytical efforts focused on thorny and comprehensive problems (a major counter-IED project and an early, independent analysis of the HES chief among them).¹⁶⁴ ACTIV acted as manager or in-country liaison for a wide-variety of ARPA projects, which numbered in the hundreds and ranged from analyses of traffic patterns on the Ho Chi Minh trail to numerous assessments and reassessments of counterinsurgency and pacification strategy. RAND, alongside the Army’s other major research contractors RAC maintained a Saigon field office throughout the war.

Partly, the problem of analysis was a function of technology. Computer programming was at the time still an intensely physical activity, done in person by IBM contractors living and working in Saigon on punchcard systems. These programmers’ primary tasks were to simply keep the system functioning and to generate reports as requested by various MACV customers.¹⁶⁵ This imbalance between collection and analysis was driven by the difficulty of knowing how exactly to make sense of the war – collecting more information was easier than figuring out what it all meant. Due in part to the technological conditions, the vast majority of analysis occurred in relatively simple intelligence reports and collections of indicators.

DoD under McNamara also developed its own specialized assessments apparatus. These efforts were centered on OSD - Systems Analysis (OSD-SA), which McNamara established in 1961 and staffed with experienced operations researchers, many from RAND.¹⁶⁶ After years of effort (beginning in 1961), by late 1966, the Army had also, finally, approved a distinctive operations research career track for Army officers (as well as formal categories for trained civilians), producing the Operations Research/Systems Analysis (ORSA) Officer Specialist program (these officers came to be called simply ORSAs).¹⁶⁷ By 1974, the Army contained

¹⁶³Jacobsen, *The Pentagon’s Brain*, p. 182.

¹⁶⁴For more on ACTIV, see 4.1.2 on pg. 210).

¹⁶⁵Feltham, *When Big Blue Went to War*.

¹⁶⁶Edwards, *The Closed World*, p. 113.

¹⁶⁷Charles R. Shrader. *History of Operations Research in the United States Army: Volume II: 1961-1973*. CMH Pub 70-105-1. Washington, D.C.: Office of the Deputy Under Secretary of the Army for Operations Research, 2008, p. 142.

almost 600 of them.¹⁶⁸ While neither the ORSA program nor the OSD-SA was set up for Vietnam (and each was a permanent, budgeted organization), both cut their teeth, in many ways, on the problems the war generated.

McNamara's office in January 1967 also instituted the *Southeast Asia Analysis Reports*, a series of statistical surveys and reports compiled by Thomas Thayer in the OSD - Systems Analysis (OSD-SA) covering a wide variety of topics. As Thayer pointed out, there were "44 provinces, 260 districts, 11,000 hamlets, and 3500 VC/NA actions and 35,000 tactical air sorties per month," making it difficult for anyone to wrap their heads around the war without *some* kind of quantitative approach.¹⁶⁹ The Southeast Asia Analysis Reports were circulated across the government and enjoyed a wide and active audience (something most routine reports might not); subjects including measuring the percentage of actions initiated by the enemy (as well as the percentage of casualties by contact-initiator) and analyzing critical bottlenecks in the enemy's supply needs.¹⁷⁰ The reports were lively, well-written, explored issues of interest to a variety of military and civilian actors (but about which they might know little), and also provided summary statistics that were useful for quoting in reports and requests for information (in part solving McNamara and Laird's issues with receiving divergent information from multiple sources).¹⁷¹

From 1961 through roughly 1966, these capabilities (alongside routine intelligence analysis conducted by MAAG and MACV staff, Embassy diplomats, and the CIA) made up most of the American analytical apparatus oriented at Vietnam, and they produced reports that were read by senior managers and policymakers back in Washington. This reporting was integrated through the usual National Security Council (NSC) process, as well as through a number of Special National Intelligence Estimates (SNIEs) that represented consensus findings for senior policymakers. But as both the complexity and size of the war effort grew, MACV began to demand its own analytical staff to investigate issues at the operational and tactical level, and to generate data and analysis that could support strategic decision-making.¹⁷² As MACV HQ gradually took on all of the tasks of a theater command, with the staff to match, and as more data became available than the standard J2 could deal with, Westmoreland established

¹⁶⁸Shrader, *Operations Research*, Vol. II, p. 148.

¹⁶⁹Donald Fisher Harrison. 'Computers, Electronic Data, and the Vietnam War'. *Archivaria* 26.0 (26th Jan. 1988), pp. 18–32 quoting Thayer in Donaldson D. Frizzell and W. Scott Thompson. *The Lessons of Vietnam*. New York: Crane, Russak, 1977, p. 196.

¹⁷⁰Kinnard, *The War Managers*, p. 72.

¹⁷¹*Analyzing Guerrilla Warfare [Proceedings of an SAIC Conference]*, Thayer Comments.

¹⁷²Shrader, *Operations Research*, Vol. II, p. 296.

an organic analysis component within the J2, MACV Operations Research/Systems Analysis Office (MACEVAL), and filled it with officers, civilian consultants, and ORSAs.¹⁷³ Before MACEVAL, MACV had overseen a diversity of analytical efforts (to include not only the usual intelligence parties, but also a variety of research units sent over to aid the war effort and to generate counterinsurgency “lessons learned” for the rest of the Army).¹⁷⁴ But MACEVAL gave MACV the tools and manpower to integrate new information and data sources into its decision-making and to apply systems analysis to solve operational problems within Vietnam. ORSAs deployed not only to HQ in Saigon but also into the field, conducting analyses at the field corps and division level. In the field, work included a study of “paddy foot” (a debilitating foot fungus) in the Mekong delta (the results of which improved soldier quality of life and unit effectiveness), the pros and cons of different small unit tactics, and a variety of analytical war games, all conducted with data and systematic approaches (ORSA trademarks).¹⁷⁵ At the MACV level, ORSAs with MACEVAL worked on one-off reports on a wide variety of subjects, ranging from examining the effectiveness of jungle-clearing herbicides to analyzing early pacification data, from issues plaguing ARVN effectiveness to the over-use of artillery.¹⁷⁶ From the MACV to the division level, ORSAs provided analysis and directly shaped policy, with outcomes ranging from minor optimizations (such as optimal base defense set ups) to major operational changes (the decision to abandon the McNamara Line), and even where ORSAs themselves were not present, the notion of using systematic and often quantifiable study to analyze and solve problems pervaded the Army in Vietnam.¹⁷⁷

CORDS also developed its own ‘in-house’ analysis shops to specifically study pacification data and to integrate narrative and quantitative reports with independent assessments. The Research and Development Division (RAD) oversaw all quantitative and qualitative research (both in-house and contracted) and oversaw the running of systems like the HES, including analysis and revisions to the system. Underneath RAD, Komer established the Pacification Studies Group (PSG) in 1967 and tasked it with conducting reports and providing studies directly to him.¹⁷⁸ The PSG frequently conducted in-depth district and province studies that also served as validation tools for the HES. PSG researchers would swoop into an area and

¹⁷³Cosmas, *Years of Escalation*, p. 292.

¹⁷⁴*Ibid.*, pp. 292–3.

¹⁷⁵Shrader, *Operations Research, Vol. II*, pp. 312–313.

¹⁷⁶*Ibid.*, p. 311.

¹⁷⁷*Ibid.*, p. 314.

¹⁷⁸Bole and Kobata, *An Evaluation of the Measurements of the Hamlet Evaluation System*.

carry out a completely independent HES rating, interview American and South Vietnamese officials operating in the area, as well as South Vietnamese nationals, and otherwise try to make sense of the dynamics of counterinsurgency in that particular place. The reports that followed served as both a prime source of high-quality contextual content for CORDS senior leadership and a management tool for overseeing and improving pacification reporting.¹⁷⁹ One-off reports included yet another validation study of the HES; an examination of the state of Viet Cong Infrastructure (VCI) leadership in 1970; a status report on the Village Self Development program in Kien Phong province; and the effects of the withdrawal of US forces on pacification progress in Dien Tong and Kien Hoa provinces; and a comparison of HES and PAAS indicators.¹⁸⁰ Besides written reports, PSG also produced summary briefings for senior leaders and oversaw the Pacification Research Program (PRP), which had a Vietnamese director and focused on research programs that interfaced with South Vietnamese officials or the population, later to principally include the PAAS. By 1970, the PRP alone had grown to over 200 staff members, including 46 teams working on survey research all over South Vietnam.¹⁸¹

Assessment and Metrics at the End

Even as other aspects of the war began to wind down, the broader assessments and metrics infrastructure kept functioning until the bitter end. The Paris negotiations revolved, in part, around who, exactly, controlled what where; HES data proved a vital part of American thinking about the mechanics of the ceasefire.¹⁸² Throughout 1972, work was done to Vietnamize and transfer over all of the various intelligence and reporting systems (including the HES), and MACV and the civilian agencies transferred much state of the art equipment over to the GVN. Withdrawal under fire, and its impacts, created a raft of new problems and questions which MACEVAL personnel poured over: what was the effect of withdrawal on pacification progress? On ARVN and RF/PF performance? What were the “lessons learned” for future rearguard actions? And then, one by one, the assessments and metrics activities were shut

¹⁷⁹For a characteristic study, see MACCORDS- Pacification Study Group, ‘Evaluation of Long Tri Village’.

¹⁸⁰MACCORDS- Pacification Study Group. ‘Village Self Development in Kien Phong Province’. RG 472, A1 462, Box 16. NARA II, College Park, MD, 28th Jan. 1970; Armilla, ‘Surveying Vietnamese Peasant Attitudes in Wartime: The Pacification Attitude Analysis System’; MACCORDS- Pacification Study Group. ‘Redeployment Effects of the 9th US Division from Dinh Tuong and Kien Hoa Provinces’. RG 472, A1 462, Box 16. NARA II, College Park, MD, 15th Mar. 1970.

¹⁸¹‘A Brief Summary of the Organization and Activities of the Pacification Research Program, Period May 1969 through November 1970’. RG 472, A1 462. NARA II, College Park, MD, Nov. 1970.

¹⁸²Clemis, *Control War*, pp. 234–235.

down, inactivated, and rolled up. The civilian contracts were terminated, and the military personnel reassigned. Files and records were (in principle) disposed of in accordance with the law; no successor organizations were identified. Former members of the 1st Signal Brigade (temporarily task organized as the catchall US Army Strategic Communications Command (USASTRATCOM)-Southeast Asia (SEA) after 1st Signal was inactivated) were some of the last to leave, and the messages relaying the shut-down of MACV would be sent for the final time over the remains of the extensive communications network that had once parsed hundreds of thousands of messages a month.¹⁸³

3.2.4 Drawdown

The assessments operation effectively ground to a halt in 1973 as MACV demobilized. The HES was turned over to the Vietnamese and kept operating in some form.¹⁸⁴ There was an exceptionally thorough attempt to save data from the assessments operation and generate “lessons learned” – besides the military’s own various internal studies, there were several contract reports created, and The National Archives (NARA) diligently reformatted and saved much of the original data, creating a record of the war “as it happened” that is totally unique in military history.¹⁸⁵ These “lessons learned” may have had some practical effects: The 1981 version of the Army’s counterinsurgency manual, FM 100-20 included an annex listing over 200 “Insurgent Activity Indicators” and a chapter on how to run a CORDS-like organization. These disappeared from the 1990 edition.¹⁸⁶ But the overall factor driving forgetting in the post-war period is intuitive: not only was there no peacetime use for assessments, but even if there was a war, it would take a very specific kind of war to need an assessments system akin to MACV’s. The assessments system in Vietnam was both the product of and necessary for deep, sustained engagement over a long period of time in a complex counterinsurgency, conditions that were not met again until the war in Iraq.

While the transfer of knowledge about complex assessments from Vietnam to other organizations was minimal, almost all organizations that had actually performed those assessments

¹⁸³ John D. Bergen. *Military Communications: A Test for Technology*. Washington, D.C.: Center for Military History, 1986, p. 356.

¹⁸⁴ G.D. Jacobson. ‘CORDS Termination and Transmission Schedules’. RG 472, A1 462, Box 18. NARA II, College Park, MD, 30th Jan. 1973.

¹⁸⁵ Curt Campbell. ‘Essay on the Potential Research Value of the Operations Analysis (OPSANAL) System Files’. NARA II, College Park, MD, 5th July 1996. URL: <https://www.archives.gov/files/research/military/vietnam-war/opsanal-essay.pdf>; Harrison, ‘Computers, Electronic Data, and the Vietnam War’.

¹⁸⁶ Gregory A. Daddis. ‘No Sure Victory: Measuring U.S. Army Effectiveness and Progress in the Vietnam War’. Chapel Hill, NC: University of North Carolina, 2009, 375fn32.

were victims of the demobilization process.

The 1st Signal Brigade Even though USASTRATCOM intended to retain the 1st Signal Brigade to reflect the command's operational needs in the Asian theater (including the impending modernization of Korean communications incorporating materiel from Vietnam) and the unit's unique capabilities, bureaucratic and organizational imperatives *still* required the unit to be formally disestablished, because it was a unit of USASTRATCOM-SEA, under the operational control of United States Army Vietnam (USARV)/MACV. The unit was inactivated and its colors shipped to Korea on 6 November 1972, and the 1st Signal Brigade in Korea was stood up as part of the broader reorganization of USASTRATCOM forces in the Pacific in early 1973.¹⁸⁷ Members of Vietnam signals units had, throughout the broader American withdrawal from Vietnam, been dispersing to units around the world. Nonetheless, USASTRATCOM (including 1st Signal) maintained uninterrupted the experiences and skills gained in Vietnam, including through the modernization of Korean and European communications in the decade to come. Specialized skills, schools, equipment, and personnel maintained an unbroken connecting thread, and (more importantly) the operational lessons learned of Vietnam were directly applicable to the everyday tasks and broader TTPs development of modern military communications, while the travails were illustrative of the challenges of operating a complex network in an opposed environment. Today, the "First to Communicate" still maintain a significantly above-average memory of the challenges their forebears had faced in Vietnam, and their unit patch still pays tribute to MACV.¹⁸⁸

Reporting Systems The inactivation of MACV and CORDS within it destroyed the organization with immediate experience in reporting systems in Vietnam. During and after the war, the HES was recognized as a unique and valuable experiment which in some ways presaged the future of warfare, and therefore ought to be studied and understood. One Army study shortly after the war argued that the HES was a unique capability whose lessons should not be lost and recommended establishing a "DoD proponent agency" to continue studying and developing future systems similar to the HES.¹⁸⁹ Needless to say, such an agency was

¹⁸⁷USARV/MACV SUPCOM. *Annex F (USASTRATCOM-SEA) to USARV/MACV SUPCOM After Action Report*. 4th June 1973. URL: <https://www.vietnam.ttu.edu/star/images/107/1070814001a.pdf>, F-39; Wilburn Weaver. *USASTRATCOM Southeast Asia Meritorious Unit Commendation*. 25th Apr. 1973. URL: <https://www.fold3.com/image/1/269630841>; Howard Bartholf. *1st Signal Brigade*. 21st Feb. 2017. URL: <https://armyhistory.org/1st-signal-brigade-2/>.

¹⁸⁸Rebecca Robbins Raines. *Signal Corps*. Washington, D.C.: Center for Military History, 2005.

¹⁸⁹Bole and Kobata, *An Evaluation of the Measurements of the Hamlet Evaluation System*.

never created, and the HES became doomed to obscurity, a subject of interest primarily to academics and the odd military graduate school student looking for unmined subjects for his or her masters thesis. The PAAS was left out of most accounts of Vietnam metrics in general histories (which focused instead on the HES and body count), and the unique challenges of and lessons learned regarding conducting public opinion surveys in wartorn countries were completely forgotten by the time the American military again attempts the practice in Iraq.¹⁹⁰

The US combat data from Vietnam that still exists does so partially due to pure contingency. In 1969, several competitors filed an anti-trust lawsuit against the IBM corporation. In the proceedings, the presiding judge ordered the preservation of all IBM master tapes by both IBM and all federal agencies, on the premise of preserving evidence. When MACV HQ learned about the lawsuit, they decided to take the opportunity to return over one hundred data files to the Combat Data Information Center in Ohio, partly in the recognition that the data might be lost when the U.S. military withdrew.¹⁹¹ While the lawsuit provided a motive force, the desire to preserve records was also driven by the analysts who had used them and believed them an invaluable record of the war, at a time when even the National Archives viewed electronic data not as records but as tools to facilitate printouts of actual records.¹⁹² And yet, despite this unique record of the US military at war, the data has remained essentially untouched by military researchers, government analysts, and academics alike, playing essentially no part in the Army's lessons learned process.¹⁹³

Analysis Within the broader analysis community, the dramatic cut-off of funding led analysis organizations to scale back and eliminate operational systems analysis, counterinsurgency, and social science work and focus on the military's current needs, even though many of the organizations themselves continued to exist due to their status as independent, budgeted

¹⁹⁰James William Gibson. *The Perfect War: The War We Couldn't Lose and How We Did*. New York: Vintage Books, 1988; Nagl, *Learning to Eat Soup with a Knife*; Lewis Sorley. *A Better War: The Unexamined Victories and Final Tragedy of America's Last Years in Vietnam*. New York: Mariner Books, 2007; Guenter Lewy. *America in Vietnam*. Oxford: Oxford University Press, 1980.

¹⁹¹Harrison, 'Computers, Electronic Data, and the Vietnam War'.

¹⁹²Ibid.

¹⁹³This state of affairs has been noted and lamented by almost everyone familiar with the archived Vietnam War electronic records, including Harrison, 'Computers, Electronic Data, and the Vietnam War'; Kalyvas and Kocher, 'The Dynamics of Violence in Vietnam'; Oliver Belcher. 'Data Anxieties: Objectivity and Difference in Early Vietnam War Computing'. *Algorithmic Life: Calculative Devices in the Age of Big Data*. Ed. by Volha Piotukh and Louise Amoore. London New York: Routledge, Taylor & Francis Group, 2016, pp. 132–147; Campbell, 'Essay on the Potential Research Value of the Operations Analysis (OPSANAL) System Files'; *Analyzing Guerrilla Warfare [Proceedings of an SAIC Conference]*.

organizations.

Without high-level cover from the Secretary and facing a hostile and cost-conscious department leadership, OSD-SA was reduced from an Assistant Secretary-level position in April 1973 and turned into a director-level office to focus exclusively on program management, where it survives today as the Cost Assessment and Program Evaluation (CAPE) staff, with zero trace remaining of its ambitious war efforts.¹⁹⁴ Even though there remained no vestige of DoD's Vietnam-era *analysis* system in place, it is worth noting that the Planning, Programming, and Budgeting System (PPBS) efforts not tied to the war effort (and those dependent on temporary or ad hoc sources of authority and funding) have broadly survived throughout the years, and at DoD more than at other agencies. The sheer inertia of instituting a new budgeting system (which McNamara only managed to overcome through intense focus and presidential support) has effectively cemented PPBS into place; to institute a new set of organizational routines would take an unbelievably powerful organizational or task pressure.¹⁹⁵

While operations research remained active in the Defense Department after Vietnam, the community completely refocused on its current tasks, namely budgetary and strategic considerations viz a viz the Soviets. ORSA training, which had not been modified for the war (most adaptation to Vietnam work had been on-the-job), remained focused on these tasks.¹⁹⁶ Unique among the services, the Army shut down its independent federally-funded research center, the RAC, as part of its overall concerns about funding in the immediate post-Vietnam environment.¹⁹⁷ The Army's main ORSA staff focused on operations research in Vietnam, the US Army Strategy and Tactics Analysis Group (STAG), was disbanded. However, a number of staffers from various Army analysis activities joined an omnibus successor organization set up as part of broader structural reforms: Center for Army Analysis (CAA).¹⁹⁸ The organization focused substantially on short-term wargaming and budgetary concerns. The overall

¹⁹⁴William F. West. *Program Budgeting and the Performance Movement: The Elusive Quest for Efficiency in Government*. Georgetown University Press, 2011, pp. 102–103; Office of the Secretary of Defense Historical Office. *Department of Defense Key Officials (1947–2004)*. 2004.

¹⁹⁵For an in-depth organizational analysis of why the PPBS survived at DoD, see West, *Program Budgeting and the Performance Movement*, Ch. 3. It is worth noting that the one element of PPBS truly objectionable to the services - the lack of fixed shares of the defense budget- was quietly done away with shortly after Vietnam, and continues to this day (ibid., p. 100).

¹⁹⁶Charles R. Shrader. *History of Operations Research in the United States Army: Volume III: 1973–1995*. CMH Pub 70–110-1. Washington, D.C.: Office of the Deputy Under Secretary of the Army for Operations Research, 2009, Chapter 1.

¹⁹⁷Michael W. Garrambone and Robert S. Sheldon. 'Military Operations Research Society (MORS) Oral History Project: A Follow-On Interview of E.B. Vandiver III, FS'. *Military Operations Research* 23.1 (2018), pp. 57–93.

¹⁹⁸*Center for Army Analysis (CAA)*. URL: <http://www.caa.army.mil/history.html>; Shrader, *Operations Research*, Vol. III, p. 26.

result of these changes was that there remained a repository of analytical ability, but not of specific knowledge about counterinsurgency assessments. However, while the vast majority of analysts were untrained in, and had no experience of, expeditionary analytics for counterinsurgency, there remained a cadre of senior civilian staffers (in Center for Army Analysis (CAA) and in places like RAND) who had had direct experience in earlier organizations. The CAA's director (Vandiver) for nearly thirty years (including throughout the Iraq War) was a veteran of the Vietnam-era STAG and expeditionary operations research.¹⁹⁹

3.2.5 Discussion: Adaptation and Analysis in Vietnam

In 1962, a RAND conference spent a morning session debating a question essential to American efforts in Vietnam: “how do you know that you are winning a counterinsurgency war”.²⁰⁰ This case has examined how MACV elaborated on that question: with a variety of ad hoc, campaign-specific measurement and assessment systems designed to support sense-making, management, and messaging in a complex war. *Pace* Gartner, American decision-makers throughout the Vietnam conflict did not rely on any particular “Dominant Indicator” to drive decision-making, but rather integrated a wide variety of data in an impressionistic fashion. Even as statistics proved essential for messaging and management at the highest levels, it would also be a mistake to blindly identify this kind of “public reason” with the deeper forces actually driving evaluation, which were usually in-person meetings, narrative reports, and the policy-maker's own experience and intuition. In this section, I address the effect of Vietnam-era analysis in context and defend the ‘adaptiveness’ of the system against its critics.

Paradoxically, one of the most important elements of the assessments ecosystem (elements which have been mostly ignored in histories focused on assessment at the level of senior leadership) does not appear in the history above: that of routine reporting. Organizational adaptation is a response to the inadequacy or ill-fitness of existing routines, processes or structures. But to a great extent, standard reporting procedures were flexible enough to meet the needs of the various organizations involved in Vietnam: the military and MACV,

¹⁹⁹Michael W. Garramone and Robert S. Sheldon. ‘Military Operations Research Society (MORS) Oral History Project: Interview of E.B. Vandiver III, FS’. *Military Operations Research* 10.3 (2005), pp. 57–87. Vandiver in this interview actually notes his ongoing interest in Vietnam and counterinsurgency throughout this period, before noting that no one could get funding or permission to work on it, with the exception of one RAND analyst.

²⁰⁰Daddis, *Westmoreland's War*, p. 136.

but also State, CIA, USAID and others. Indeed, narrative reports (which could take the form of after-action reports, briefings, cables, special memos, and more) were, along with face-to-face communications, the *primary* sources of sense-making for senior MACV decision-makers, and that the special assessments systems MACV built, while used for sense-making, were even more valuable for managing and messaging.²⁰¹ The sheer normalcy of narrative reporting has tended to mask its importance.²⁰²

One trope in the historiography on Vietnam assessment is that reports (usually referencing Body Count, HES, or narrative reporting) were substantially inflated. These claims, while seemingly coherent on an individual basis, should be looked at skeptically within the context of the entire Vietnam ecosystem. To be sure, as with any endeavor, rosy reports were common, and people liked to put their best foot forward. But, in general, informal feedback mechanisms, a sense of the importance of the mission, and professional norms provided powerful accuracy-improving countervailing forces to yes-manship. Reporting streams (and individuals responsible for them) could quickly gain a reputation for optimism or pessimism, putting a shiny gloss on reporting or 'telling-it-like-it-is'. Moreover, since a multitude of independent reporting streams reached back to Washington (including those of civilians and reporters), a kind of wisdom-of-crowds took hold which allowed senior leaders to benchmark or discount assessments. So, for example, even as RAND's Gouré is persuading Rostow back in Washington that VC morale is weak and growing weaker, Westmoreland discounts his findings as over-optimistic as early as late 1965, because they "seem to be generally contradicted by the increase in incidents and will to fight that has been evident during recent months."²⁰³

If Vietnam assessments were fundamentally credible, why did they accrue such a poor reputation? A number of factors militated together:

Information Flows A very small group of people sat in a place in the information network where they could see more or less everything - operational reporting, statistics, intelligence (including highly secretive signals intelligence), secret negotiations with the North Vietnamese, the political situation at home, etc. Throughout most of the war, that group was

²⁰¹This confusion is, I believe, one of the single biggest problems in the Vietnam historiography, especially amongst scholars primarily interested in senior-level decision-making. Read in context, archival material from senior leaders reveals a tremendous amount of detailed knowledge generated from narrative reports and personal conversations; these, mixed with intuition and judgment, shaped how decision-makers interpreted statistics, which were always in-and-of-themselves ambiguous.

²⁰²Connable, *Embracing*, p. 100.

²⁰³Westmoreland Diary, quoted in Elliott, *RAND in Southeast Asia*, p. 172.

limited to the President, the Secretaries of State and Defense, COMUSMACV, the chairman of the JCS, the National Security Advisor, and a handful of their immediate deputies. The further you moved outside of this network locus, the more likely your information sources are to have a partial and skewed view, even if they were otherwise entirely creditable: where you sit is what you see. Not until very recently, with the declassification of large groups of records, has it become possible to more or less reconstruct this ‘view from the middle.’

For example, after the war, Thayer (who had been a senior official in OSD-SA) in a conference Q&A expressed skepticism about Westmoreland’s claim that a massive spike in infiltrations in late 1967 had clued MACV on to the coming Tet Offensive, saying that “if we had known before the Tet Offensive, just in the Office of the Secretary of Defense, that Westmoreland thought there were 25,000 infiltrators a month coming down, we would have flipped”.²⁰⁴ And yet, we now know that Thayer was wrong and that Westmoreland was telling the truth and that, moreover, the Secretary of Defense was fully briefed on the situation. Thayer’s numbers came from monthly reports compiled by the MACV J2.²⁰⁵ However, those monthly estimates of infiltrators were updated after the fact as a matter of course, as new documents came in, in order to keep the order of battle estimate up to date. Moreover, the J2’s monthly estimate was always a few months behind the number of actual infiltrators, as NVA soldiers and supplies made their way south. In late 1967, MACV intelligence began to update their earlier estimates of infiltrators, and those updates were larger than normal.²⁰⁶

While this was an extreme case, many of the complaints or skeptical concerns raised by junior officers, enlisted personnel, and field officials in Vietnam regarding “incomplete” or “unnuanced” metrics and reporting and superiors who were, as a result, “out of touch” reflect a real lack of apprehension of how those systems and metrics were actually used in decision support, and of the diverse sources of information available to decision-makers. This situation was worsened by the difference between what MACV Public Affairs Officers (PAOs)’s might report to the media and what those in charge knew and believed - the former being far more visible than the latter. For instance, Bill Lenderking was a civilian CORDS advisor in Pleiku from January 1968 to the end of 1969. One day, he happened to attend a daily press briefing held by JUSPAO (commonly called the “Five O’Clock Follies”), in which the

²⁰⁴ *Analyzing Guerrilla Warfare [Proceedings of an SAIC Conference]*, Thayer Comments.

²⁰⁵ T. L. Cabbage. ‘Westmoreland vs. CBS: Was Intelligence Corrupted by Policy Demands?’ *Intelligence and National Security* 3.3 (July 1988), pp. 118–180.

²⁰⁶ *Ibid.*

PAO giving the briefing extolled the recent defection of an entire company of Viet Cong through the Chieu Hoi program. But Lenderking had actually been on the scene, and knew that this supposed company of hardened fighters was actually 'haggard Montagnard refugees' who were claiming to be VC in order to benefit from the program (possibly with the tacit acceptance of the Americans working with them).²⁰⁷ And yet, even as the PAO seized upon the "good news", CORDS senior leadership was well aware of the problems with the Chieu Hoi program, and the refugee issue in particular.²⁰⁸ But to "the man on the spot," it was difficult to parse the public, authoritative statements of official MACV representatives from the private beliefs of those actually overseeing various programs; this state of affairs was no doubt worsened by the information silos which inevitably arise in complex organizations - while senior pacification managers would be well aware of the problems of the Chieu Hoi program, as might be field-grade commanders of the particular issues in their district, the odd J2 staffer or USAID official might take JUSPAO's word for it. This gap - between what public affairs personnel and senior leaders messaged to the public and what decision-makers actually believed - became an endemic problem in Vietnam.

Over-Optimism, the Credibility Gap, and the Problem of Messaging Perhaps *the* principal reason why the American assessment effort is held in such so low esteem is the so-called "credibility gap" - the conviction that grew in intensity over time that American leaders were not being truthful about the course of the war. This conviction exploded after the Tet Offensive, an event which supposedly gave the lie to American claims of "progress" in 1966 and 1967. Whether senior leaders like Johnson or Westmoreland were lying or deluding themselves, they were not credible.

From American escalation on, American senior leaders expressed severe frustration at the gap between what they saw and believed and what was reported in the media. Prior to 1966, LBJ had had good relations with the press by presidential standards, in part due to a high touch approach - transparency, openness, fairness, and access were the watchwords, in both Saigon and Washington.²⁰⁹ Between the inevitable wearing out of the presidential welcome and the grind of war to which any enterprising journalist could easily expose him or herself

²⁰⁷Bill Lenderking. 'The Five O'Clock Follies'. *The Foreign Service Journal* (Online Supplement Apr. 2015).

²⁰⁸MACCORDS- Pacification Study Group. 'Survey of the Attitudes of Refugees in Twelve Selected Camps in I Corps'. RG 472, A1 462, Box 16. NARA II, College Park, MD, 27th Apr. 1970.

²⁰⁹William C. Spragens. 'The Myth of the Johnson "Credibility Gap"'. *Presidential Studies Quarterly* 10.4 (1980), pp. 629-635; George C. Herring. *LBJ and Vietnam: A Different Kind of War*. Austin: University of Texas Press, 1994, Ch. 5.

(taking a complimentary ride to the front on a MACV helicopter), this approach was bound to have a limited halflife.²¹⁰

One factor in the “credibility gap” was the frequent divergence between different organizational units statistics for the same item (enemy order of battle, body count, number of infiltrators, etc.). MACV J2 numbers often diverged from those generated by Washington intelligence agencies (though MACV’s were often on more *conservative*).²¹¹ This issue caused repeated heartburn for the Johnson and Nixon administrations, and various remedies were attempted, including conferences and meetings to resolve the sources of dispute, and even a discussion of withholding some statistics altogether (a possibility which was rejected because it would cause a media uproar).²¹² But because the statistical differences emerged from deeper differences in operational and analytical processes, they refused to go away, and (to their credit) MACV and the intelligence agencies strongly resisted attempts to force agreement for the purposes of public relations.

One possible way to mitigate accusations of inflated or dishonest statistics would have been to prevent or limit their release: and yet, this alternative failed for a number of reasons, despite a number of attempts by senior MACV and Washington leadership to do just that. For a while (1965-early 1967), the press officers at JUSPAO experimented with characterizing American and enemy casualties as “light”, “medium”, or “heavy”, using formal criteria based on percentages of casualties. And yet, in instances where small units (platoons) were mauled by the VC/NVA, the media would breathlessly report “that US forces were taking heavy casualties”, even if the actual number wounded was in the single digits.²¹³ The other alternatives were not much better: MACV believed it would increase media skepticism if it were to release the absolute number of friendly casualties but only the light/medium/heavy casualties of the enemy, and so Body Count statistics were again reverted to as the least worst option. At one point, Johnson wanted to stop releasing casualty statistics altogether, but Westmoreland argued “we would catch hell from the press if we were to change the system”,

²¹⁰Numerous books have been written which focus in-depth on LBJ’s public relations and domestic politics. See especially Herring, *LBJ and Vietnam*; Kathleen J. Turner. *Lyndon Johnson’s Dual War: Vietnam and the Press*. Chicago: University of Chicago Press, 1985.

²¹¹Hammond, *Public Affairs*, p. 280; W. W. Rostow. ‘Memo To President Lyndon B. Johnson From W. W. Rostow: Body Count Verification’. Folder 18, Box 08, Larry Berman Collection (Presidential Archives Research). The Vietnam Center and Archive, Texas Tech University, 29th Nov. 1967; Peterson, *The Vietnam Cauldron: Defense Intelligence in the War for Southeast Asia*; MACV J3, ‘Reporting Enemy KIA’.

²¹²Hammond, *Public Affairs*, p. 280; ‘Notes of Meeting (409)’. *Foreign Relations of the United States, 1964–1968, Volume V, Vietnam, 1967*. FRUS. 21st Nov. 1967. URL: <https://history.state.gov/historicaldocuments/frus1964-68v05/d409>.

²¹³Hammond, *Public Affairs*, p. 283.

a judgment with which McNamara concurred.²¹⁴

The credibility gap at the MACV level was intensified by the organizational structure of public relations. Those responsible for generating metrics and assessments worked in the various operations or intelligence staffs at the battalion and higher levels, or in one of the specialized units like MACEVAL or in an intelligence agency. But those responsible with liaising with the press tended to work for public relations organizations, specifically for (), which was effectively an independent organization in Vietnam. JUSPAO, in which Cold War propaganda agency USIA took the lead, was led from 1964-68 by the “silver-tongued” former journalist and State Department PAO Barry Zorthian, who initiated the Five O’Clock Follies and was an essential advisor to Johnson and Rostow as they sought to control the narrative.²¹⁵ The same firewall that made it extremely difficult to pressure analysts to change their assessments or metrics also gave those analysts no control over how their reports were used. And so, amongst the other organizations conducting their affairs in MACV, JUSPAO would roam over reports and stories looking for progress to report. One can spot this structural issue at play in a careful review of how specific documents or pieces of information were used. For example, in May 1970 CORDS PSG wrote a report on pacification progress in Long Tri, which highlighted through metrics and detailed narrative reporting both GVN strengths (especially militarily against the VC) and substantial weaknesses (including GVN local leadership) and program flaws. In response, Ambassador Colby directed that copies be sent to COMUSMACV, Ambassador Bunker, the Embassy Political section, USAID, and JUSPAO, with additional copies to be distributed internally within CORDS, along with cover letters suggesting what CORDS was doing about the recommendations. It elicited substantive responses from several actors, including from a NSC staffer. What was JUSPAO asked to do about it? Report on the success of the land reform program in various media.²¹⁶ This is, of course, exactly what messaging organizations are supposed to do. JUSPAO as an organization did not share personnel, beliefs, or organizational goals with the MACV sub-organizations tasked with generating assessments and metrics.

With characteristic bluntness, Robert Komer best describes the relationship between sense-making, management, and messaging in the Vietnam war:

²¹⁴‘Notes of Meeting (409)’.

²¹⁵Emma Brown. ‘Barry Zorthian, U.S. Spokesman in Saigon during 1960s, Dies at 90’. *Washington Post* (2nd Jan. 2011); Neil Sheehan. *A Bright Shining Lie: John Paul Vann and America in Vietnam*. New York: Vintage, 1989, p. 698.

²¹⁶MACCORDS- Pacification Study Group, ‘Evaluation of Long Tri Village’.

Listen, the president didn't ask for a "situation" report, he asked for a "progress" report. And that's what I've given him – not a report on the situation, but a report on the progress we've made.²¹⁷

Reports of "progress" were generated by an essentially separate system (sometimes with separate actors) from assessments, and were constructed for explicitly political purposes. Both within MACV and in the White House, this intentional optimism (masking private pessimism) was not an accident but a strategy, and a common one in the annals of military history. Connor Huff and Robert Schub argue that military leaders often make "intertemporal tradeoffs" during conflict initiation, underselling the potential length and costliness of the conflict. As the conflict goes on, the public receives more information about the accuracy of those initial assessments and the credibility of leaders (depending on how they continue to message the course of the war).²¹⁸ This creates a trade-off: leaders can predict a short conflict, but run the risk of destroying public support later in the war. Throughout the war, American leaders attempted, unsuccessfully, to produce a feeling of speed and progress, even as they caveated this with explicit statements about long-term nature of the American commitment in Vietnam. Thus, the pattern was not optimism leading to intervention, but an analytical belief that greater intervention was necessary, generating public optimism (as an operational necessity). "Optimism is psychologically necessary for dedicated and energetic performance; analytical defeatism becomes operationally counterproductive".²¹⁹

Were Vietnam assessments maladaptive to the extent that they enabled overselling? Central to most criticisms of Vietnam assessments is that they were over-optimistic. And yet, as we have seen, the assessments consistently provided negative as well as positive feedback, and at no point indicated victory at hand. Gelb and Betts put it bluntly: "The presidents and most of their advisers saw the Vietnam quagmire for what it was. Optimism was by and large put in perspective and was under control".²²⁰ There are two faulty notions entailed in the claim that assessments systems enabling over-selling are maladaptive. First, the claim assumes the possibility of another assessments system that does not enable over-selling. In reality, the possibility of using assessments to over-sell comes, paradoxically, from their rich-

²¹⁷Stanley Karnow. *Vietnam: A History*. New York, N.Y: Penguin Books, 1997, p. 515.

²¹⁸Connor Huff and Robert Schub. 'The Intertemporal Tradeoff in Mobilizing Support for War'. *International Studies Quarterly* (Forthcoming).

²¹⁹Leslie H. Gelb and Richard K. Betts. *The Irony of Vietnam: The System Worked*. Washington: Brookings Institution Press, 1979, p. 321. Appropriately, Gelb and Betts conclude by quoting Kafka: "It is not necessary to accept everything as true, one must only accept it as necessary" (*ibid.*, p. 322).

²²⁰*Ibid.*, p. 324.

ness and complexity: The plethora of data points and their ambiguity allows policy-makers to interpret them optimistically for the public. An assessment system that gave an unambiguous, un-interpretable signal would be useless for sensemaking, management, or the military's other legitimate needs.²²¹ Indeed, the assessment system that emerges in Vietnam strikes an equilibrium point between unformed, narrative assessments (subject to manipulation from below and impossible to aggregate) and over-precise quantitative assessments which fail to capture underlying complexity. Second, the central criticism of Vietnam assessments *assumes that over-selling is itself an irrational or maladaptive behavior*. In reality, the prevalence of over-selling, together with recent political science and evolutionary biology work, suggests the opposite; over-selling and even over-optimism is a rational strategy. Projecting optimism (in terms of war length and cost) increases domestic support; bolsters morale to overcome obstacles; improves one's ability to project resolve and bluff one's enemies; and assuages allies that they won't be abandoned.²²² In fact, this research suggests that the situation in Vietnam – projected optimism and private realism – is something like the optimal strategy.²²³

The Body Count and the Crossover Point

One of the most misunderstood metrics processes in Vietnam regards the Body Count. The Body Count was, from the start, not simply an estimate of enemy KIA; it was a *practice*, of literally counting dead bodies; it was designed to be precise and conservative, even as the practice changed in the course of war. While Gartner and Myers point out that enemy KIA statistics were also used in Korea, they mistakenly conclude that practices in Vietnam were a continuation of or inspired by Korea-era decisions.²²⁴ In Korea, as in most other wars, enemy casualties figures were primarily estimates, or a somewhat unstructured mixture of estimates and battlefield counts where it was feasible.²²⁵ Rather than showing continuity

²²¹Indeed, the quest for unambiguous signals not subject to interpretation by agents, especially in social interventions or human activities, leads straightforwardly to disaster (Scott, *Seeing like a State*; Jerry Z. Muller. *The Tyranny of Metrics*. Princeton: Princeton University Press, 2018).

²²²Gelb and Betts, *The Irony of Vietnam*, pp. 321–22.

²²³Dominic D. P. Johnson, Richard W. Wrangham and Stephen Peter Rosen. 'Is Military Incompetence Adaptive?: An Empirical Test with Risk-Taking Behaviour in Modern Warfare'. *Evolution and Human Behavior* 23.4 (1st July 2002), pp. 245–264.

²²⁴Scott Sigmund Gartner and Marissa Edson Myers. 'Body Counts and "Success" in the Vietnam and Korean Wars'. *The Journal of Interdisciplinary History* 25.3 (1995), pp. 377–395. The only source they quote on continuity between Korea and Vietnam is Korea-era commander and early right-wing Vietnam War critic Gen. Matthew Ridgway, who sees in Saigon (from afar) what he had done in Korea. While it is doubtful that militaries always fight the last war, retired generals surely do.

²²⁵See, for example, Billy C. Mossman. *Ebb and Flow: November 1950–July 1951*. St. John's Press, 2016, pp. 67, 334.

with the Korean War (where assessments were organized using the same ad hoc methods we are studying here), the archival evidence instead points to MACV more or less independently arriving at the use of the body count based on similar organizational pressures to report process, mixed with McNamara-era notions of input-control and precision. Certainly, no American effort prior to Vietnam had made use of anything like the organizational practice of the body count. MACV senior leaders early on opted for a measurement which they *knew* would undercount actual KIAs, in favor of precision; according to a later formalization of MACV's reporting processes, "The only KIA reported will be those determined from actual body count of males of fighting age and others, male or female, known to have carried arms."²²⁶ It was, in fact, this unique emphasis on precision that drove no small degree of resentment amongst the men in the field, who were forced to count them "with all of the gore and odors present" (sometimes endangering themselves to do so).²²⁷

The empirical evidence for systematic distortion of the body count as a metric is much thinner than its ubiquity would suggest. Two inflating mechanisms are usually suggested for the body count: 1) that estimates were sometimes substituted which tended to be guesses, sometimes generous and 2) that mid-ranking or high-ranking officers falsified body count reports in their reports up the chain of command for the sake of their careers. And yet, while these explanations sound eminently plausible, they break down under empirical investigation and evolutionary analysis.²²⁸ There is *some* empirical basis to the first claim, in that there are reliable reports of what were in fact estimates being radioed in as body counts, sometimes in lieu of body counts (though units could and frequently did submit estimates of kills in addition to the Body Count) and sometimes because what counted as a "body" was unclear. In the former instance, the desire to not actually count the bodies (especially in a dangerous situation) might drive the illicit use of an estimate, or at least a not terribly careful count: "The basic problem with the body count was that soldiers under combat conditions had neither the time nor the inclination to make minute tallies of enemy dead".²²⁹ In the

²²⁶MACV. 'Directive 381-21'. 26th Dec. 1967.

²²⁷Ron Milam. *Not a Gentleman's War: An inside View of Junior Officers in the Vietnam War*. Chapel Hill: University of North Carolina Press, 2009, p. 103.

²²⁸For one example of high casualty counts being called into question by peers or superiors, see Erik Villard. *Combat Operations: Staying the Course, October 1967 to September 1968*. Washington, D.C: U.S. Army Center of Military History, 2017, p. 492.

²²⁹George L. MacGarigle. *Combat Operations: Taking the Offensive, October 1966 to October 1967*. Washington, D.C: U.S. Army Center of Military History, 1998, p. 57. Sometimes when body counts increased over time, it was not evidence of malfeasance, but of additional bodies turning up elsewhere or in daylight. In one instance, a hasty body count produced 72 bodies; the next morning, a broader search of the area revealed a total of more than 250, including at a camp nearby that had been hit by artillery (ibid., p. 343).

latter case, different units had different standards for how much of a “body” was needed to count. “[I]f we came across four different body parts we called in four kills. But even with inflated numbers we killed a lot of people”.²³⁰ Neither practice primarily aimed at inflation, and both were usually still bound by some sense of realism. The drudgery and macabre nature of the Body Count was both belayed by and contributed to a kind of pride: “We were MACV officers, and our body counts were never estimates.”²³¹

There is little empirical evidence to support the second claim, that mid-ranking or high-ranking officers falsified body count reports. The claim rests on the assumption that the risks of being caught inflating reports would be outweighed by some hoped-for career benefit (or threatened punishment for lack of performance). Not only is this claim dubious on the face of it, but it ignores both how the body count was actually collected and the extensive paper trail it left. The Body Count was recorded piece by piece in the battalion Daily Journal as it came in from the field, and these reports were filed directly to higher headquarters, from which reports were issued on a weekly, monthly, and quarterly basis to HQ MACV (see Figure 3.4). An attempt to falsify body count would require either a number of co-conspirators or leave a wide and obvious paper trail, as it would require fraudulently altering or conspicuously veering from information held by both lower and higher headquarters. On at least a few occasions, the MACV J2 conducted spot checks of the Body Count process, and found nothing; nor have I been able to find any instance in any document or oral history speaking to direct knowledge of an officer falsifying body count reports after the fact. This, of course, does not prove that it never happened, but it is doubtful it was as widespread as it was believed.

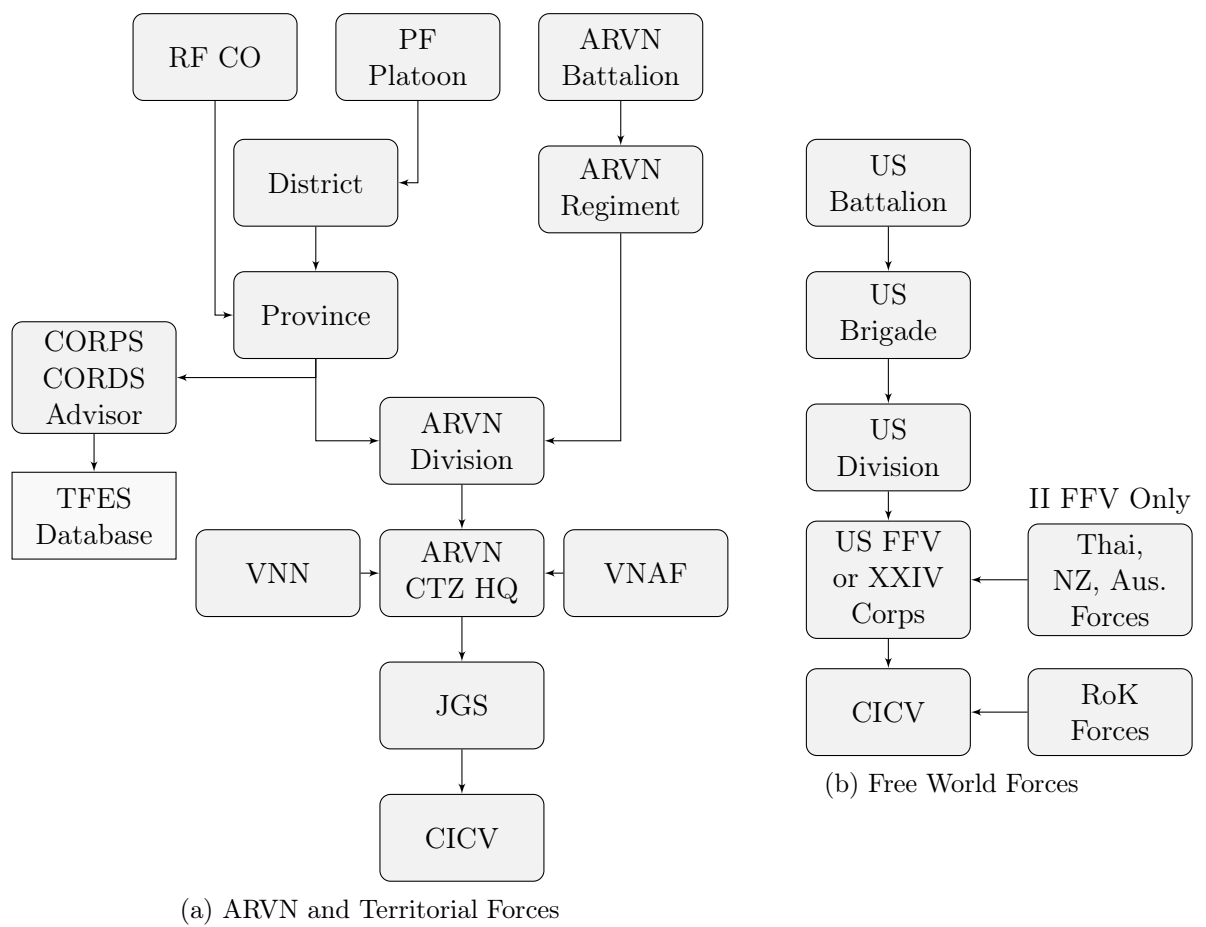
While the historical evidence available casts doubt on the conventional narrative regarding

Sometimes, estimates were filed as body counts as a ‘least worst’ options in organizational politics. In one bloody battle, II FFV HQ demanded a body count, but the commander on the ground refused to conduct one at night, under fire. Apparently concerned that the ground commander might be relieved by headquarters, the division submitted a spurious count of 256 enemy bodies found and 50 weapons captured; an actual count the next day produced only 70 enemy dead and 10 weapons. However, documents and prisoners captured shortly thereafter revealed that in fact over 170 VC had been killed, including the Battalion commander; the division’s guess had not been that far off the mark after all (MacGarrigle, *Combat Operations: Taking the Offensive, October 1966 to October 1967*, pp. 418–20). There is a lot to unpack in this anecdote, but it above all goes to the notion that falsified body counts were not necessarily dramatically inflated (they needed to be believable after all), and that estimates or guesses being reported in place of body counts spoke more to acute tactical or organizational need more than anything else. This is the only instance of an undoubtedly, intentionally spurious body count submission I have been able to verify in a primary-source account, and the problem it is solving is clearly about satisfying higher headquarters’ need for ‘a number’ more than anything else.

²³⁰Quoted in Christian G. Appy. *Patriots: The Vietnam War Remembered from All Sides*. London: Penguin Books, 2004, p. 365.

²³¹Milam, *Not a Gentleman’s War*, p. 105.

Figure 3.4: Body Count Reporting Data Flows



the Body Count, MACV officers and policy-makers in Washington, up to the President himself, doubted the veracity of Body Count reporting. At their behest, on several occasions, MACEVAL, the J2 and even the CIA conducted independent assessments, each reporting that Body Count reporting was sound, and even possibly conservative, and this conclusion was backed up by captured VC/NVA which reported losses in line with American Body Count reports.²³² Nonetheless, policymakers still took the Body Count with a grain of salt; rather than being a “Dominant Indicator”, it primarily played a role in two important assessment endeavors: enemy order of battle reports and (in a minor role) in the use of kill ratios as a fuzzy measure of RVNAF quality.

There is a vast analytical divide between criticizing the real operational pathologies to which the body count contributed (underlining and sometimes fueling an emphasis on offensive operations) and arguing that the body count distorted strategic assessment. At the level of strategic assessment, the body count was dealt with in a more or less pragmatic way. The body count did not exist for or in itself at this level, but as part of a broader environmental model that included the enemy’s replenishment rate as part of the series of analytical steps MACV took to estimate the enemy order of battle. When body count was used in the context of modeling attrition and recruitment in the VC/NVA, MACV planners duly noted an error term for enemy soldiers that did not appear to originate from infiltrations or recruitments (some of whom, logically, had mistakenly appeared in the body count). While some took this as evidence of duplicity or inaccuracy in the body count,²³³ it is of course evidence of a kind of goal- and evidence-oriented pragmatism by MACV strategic planners: the important thing was arriving at the estimate best supported by available evidence. And other indicators measuring other parts of the war were never ignored at the strategic level.²³⁴ Senior Pentagon leaders were more concerned about other aspects of the model; McNamara, for example, worried about indicators showing the enemy had the initiative – he might be taking heavy casualties, but he controlled the rate at which he took them by choosing to engage or not engage US troops.²³⁵ While more work remains to be done on the accuracy of the

²³²See ‘Notes of Meeting (409)’. This divergence frustrated MACV leaders, who attempted a number of ways to convince the media of the validity of the Body Count, to little avail.

²³³R. W. APPLE Jr Special to The New York Times. ‘Vietnam Numbers Game: Sharp Conflicts Noted in U.S. Figures On Size of Foe’s Force and Infiltration’. *New York Times* (1967), p. 2.

²³⁴Daddis, ‘The Problem of Metrics’.

²³⁵Robert S. McNamara. ‘Draft Memorandum From the McNamara to President Johnson’. *Foreign Relations of the United States, 1964–1968, Volume IV, Vietnam, 1966*. 19th May 1967. URL: <https://history.state.gov/historicaldocuments/frus1964-68v05/d177>.

body count, the best contemporary historiography casts serious doubt on the notion that an overemphasis on the body count was the substantial cause of American issues with strategic assessment in Vietnam.

Assessments in Retrospect

The diversity of Vietnam's provinces, the superficial treatment of indicators in both counter-insurgency theory and doctrine, the consistent debate over the nature of the threat, and the overall lack of clarity among MACV's objectives all inhibited the creation of an accurate and practicable measurement system.²³⁶

Daddis is only half correct.²³⁷ While it was resource intensive, ad hoc, and limited in scope, the measurement and assessment system built by MACV in Vietnam provided reasonably accurate, timely, and informative data on the political, military, and economic situation on the ground in Vietnam, on the state of the "Control War", and on both Free World Forces (FWF) and GVN performance, and there are no major known instances where a flaw in the assessment system led to an operational or strategic error, with the possible exception of the strategic bombing campaign (which was out of MACV's hands anyways). But as Daddis points out, what this measurement system – or *any* measurement system – could not provide was a theory of victory, a holistic analysis of the enemy, or a proper linkage of means to political ends. MACV's overarching strategy in Vietnam was never one of attrition, in the narrow sense of victory through defeating the enemy on the battlefield or merely exhausting him.²³⁸ However, MACV's operational approach inevitably took on the *logic of attrition*: make the good numbers go up and the bad numbers go down. One striking feature of command reports is not over-optimism or mis-measurement but the simple absence of the enemy's strategic adaptability, including his ability to choose when and where to muster his resources. There is no sense that operational setback or counteroffensive is a real possibility.

In retrospect, with nearly complete access to historical materials, the aspects of American assessments that seem most off are not those relating to metrics or factual questions about the

²³⁶Daddis, 'The Problem of Metrics'.

²³⁷His more recent scholarship bears out a growing awareness of the complexity of the question of what it means to have an "accurate and practicable measurement system" (Daddis, *Westmoreland's War*, p. 172; Gregory A. Daddis. *Withdrawal: Reassessing America's Final Years in Vietnam*. Oxford, New York: Oxford University Press, 2017, pp. 204–207).

²³⁸Daddis, *Westmoreland's War*, p. 182.

battlefield, neither of the simple sort (the so-called body count) nor of more complex measures of control, public opinion, or GVN performance. They are the most foundational assessments, about the political leadership of North and South Vietnam and the likelihood of victory in light of that leadership. One of the key issues with the American assessment process was a misunderstanding of the enemy; this was not only a general misunderstanding (interpreting his actions through a conventional or ideological lens), but a specific one. American military and political leaders assumed that Viet Minh heroes General Giap and Ho Chi Minh were the key decision-makers and that they were using a Maoist playbook (reflected in their earlier writing). But, as we now know, Le Duan and his allies had quietly seized control of the Politburo in about 1964. They turned Ho into a symbolic figure and marginalized Giap, in the former case until his death and, in the latter case, until the failure of the General Offensive General Uprising strategy. Thus, throughout the entirety of the Americanized portion of the war, *senior American leaders were mistaken about whom they were fighting*.²³⁹ In reality, Le Duan had sidelined both leaders by 1965 and remained the most dominant figure in the Politburo throughout the war.²⁴⁰ General Giap, far from being the notorious architect of the Tet Offensive, was in fact its staunchest opponent, believed it would fail, and made sure to be out of the country when it launched.²⁴¹

As the head of the CIA in the early 1990s, Robert Gates kept a quote on his desk: “As a general rule, the best way to achieve complete strategic surprise is to commit an act that makes no sense or is even self-destructive”.²⁴² While it is doubtful that North Vietnamese leadership would have acceded to an independent south under any conditions, Le Duan’s faction chose a far costlier strategy than Giap had advocated, a fact that was not apparent to MACV leaders, who apparently wondered why the great Giap had lost his edge or become indifferent to the suffering of his army.²⁴³ And despite significant American work on Bolshevik political organization and some application of that work at the tactical level of Viet Cong

²³⁹This analysis of North Vietnamese leadership is one of the most important recent historical findings overturning the conventional wisdom. See Lien-Hang T. Nguyen. *Hanoi’s War: An International History of the War for Peace in Vietnam*. Chapel Hill: The University of North Carolina Press, 2012. For examples of American failures of understanding at the highest levels throughout the war, see Westmoreland, *A Soldier Reports*, p. 405; National Intelligence Council. *Estimative Products on Vietnam, 1948-1975*. Government Printing Office, 2005, SNIE 14.3-70.

²⁴⁰Zachary Shore. *A Sense of the Enemy: The High Stakes History of Reading Your Rival’s Mind*. Oxford: Oxford University Press, 2014, p. 109.

²⁴¹Nguyen, *Hanoi’s War*, pp. 79, 119, 309.

²⁴²Christopher Andrew. *The Secret World: A History of Intelligence*. New Haven, CT: Yale University Press, 2018, p. 743.

²⁴³Westmoreland, *A Soldier Reports*, p. 406.

infrastructures, the extent to which war existed as part of a strategy of social revolution and transformation in both the North and the South was apparently lost on American leaders.²⁴⁴ The General Offensive General Uprising strategy, though unbelievably costly to the North as a whole, may have served the political goals of the Politburo. Indeed, the decimation of the Viet Cong in the Tet Offensive finalized their domination by the North, a fact that was not lost on National Liberation Front (NLF) leaders, some of whom wondered whether this had motivated Le Duan.²⁴⁵

That being said, the above analysis reveals the importance of taking an organizational approach to understanding adaptation. The assessment system described above is the one built by and for the American war effort within Vietnam. It is a system that evolved according to environmental or organizational pressures, especially to fill in knowledge gaps. And yet, intelligence collection against North Vietnamese leadership was not a knowledge gap that MACV was pressured to fill: in the overall American intelligence ecosystem, that task fell to the CIA. While battlefield intelligence provided by MACV could inform CIA estimates, the agency zealously guarded its role on providing strategic estimates, and was responsible throughout the war for assessing the North's leadership. With robust counterintelligence and a secretive organizational structure, the North's leadership proved a hard target, leading to substantial errors. A classified 1970 CIA review categorized its own critical 1964 estimate of Hanoi's will to fight as "totally wrong".²⁴⁶ The national intelligence estimates the CIA oversaw contained little analysis of North Vietnamese leadership; where they were specific, they were wrong.²⁴⁷ As late as 1974, CIA reports still over-estimated General Giap's influence in the height of the Vietnam War and believed Le Duan had consolidated power later than he actually had.²⁴⁸

In Vietnam, the United States developed an assessments process as sophisticated as its strategy, covering every major line of effort.²⁴⁹ Starting from scratch in 1965, by the end of the war had created "the single largest and most comprehensive military counterinsurgency

²⁴⁴Clemis, *Control War*, p. 5.

²⁴⁵Nhu Tang Truong, David Chanoff and Van Toai Doan. *A Vietcong Memoir*. New York: Vintage Books, 1986, p. 224.

²⁴⁶Central Intelligence Agency. *National Intelligence Estimates on the Vietnam War Since October 1964*. Staff Memorandum No. 27-70. 10th Aug. 1970. URL: <https://www.cia.gov/library/readingroom/docs/CIA-RDP80R01720R000400040006-4.pdf>.

²⁴⁷National Intelligence Council, *Estimative Products on Vietnam, 1948-1975*, SNIE 14.3-70.

²⁴⁸'Le Duan and the Post-Ho Chi Minh Leadership'. CIA Reading Room. Washington, D.C., Apr. 1974. URL: <https://www.cia.gov/library/readingroom/docs/CIA-RDP79B01737A002100040001-4.pdf>.

²⁴⁹Daddis, *Westmoreland's War*, p. 182.

assessment apparatus in the history of warfare”.²⁵⁰ It was, in fact, probably the largest military assessment apparatus for *any* war (conventional or otherwise) with the possible exception of World War II. This system was generally responsive to the needs of senior leaders, was repeatedly tested and probed for accuracy, and succeeded at conveying negative as well as positive information.²⁵¹ Contrary to dominant indicator theory, American decision-makers (both in Saigon and in Washington) did not use or monitor any particular indicator as a permanent measure of success, either in terms of change or rate of change. Rather, they made holistic assessments using dozens of indicators, matched to an operational and strategic context, in an attempt to continually update their beliefs about the situation on the ground, the likelihood of success, what Hanoi would do, and how the American people would react.²⁵²

Senior decision-makers such as Westmoreland and McNamara had reasonable understandings of the accuracy and precision of underlying models (discounting body count estimates, for example). Over the course of the war, the system repeatedly adapted as organizational and task pressures changed; deemphasizing certain metrics that had generated goal displacement in the field and promulgating new systems or metrics to better capture different aspects of the battlefield. While metrics could be (and were, especially by JUSPAO) used to tell a just-so story about the course of the war, they also made painfully clear the limits of American progress: casualty reporting showed how much of the tactical initiative the enemy retained; enemy order of battle estimates made it clear that the enemy’s will had not broken; the HES showed how difficult and transient pacification progress turned out to be.²⁵³ By December 1972, the HES and PAAS HES agreed that only 23-29% of the population lived where no VC operated. The organization was deeply battered, but it survived.²⁵⁴

²⁵⁰Connable, *Embracing*, p. 148.

²⁵¹Sorley conveys an unintentionally revealing anecdote. Shortly after Abrams takes command, he is meeting with Komer to discuss pacification. Komer pulls out a map, and after Abrams examines it, he pointedly asks Komer “Do you mean to say that, after all these years, and all this expenditure, we still have within firing range of this base a VC hamlet?” Regardless of what this might say about pacification progress, one of the merits of the HES and other systems like it is that they often conveyed negative or un-wished-for information (Sorley, *A Better War*, p. 63).

²⁵²Robert W. Komer. ‘Memorandum From the President’s Special Assistant (Komer) to President Johnson’. *Foreign Relations of the United States, 1964–1968, Volume IV, Vietnam, 1966*. 5th Oct. 1966. URL: <https://history.state.gov/historicaldocuments/frus1964-68v04/d262>; McNamara, ‘Memorandum From McNamara to President Johnson’; Jeffrey Allan Friedman. ‘Cumulative Dynamics and Strategic Assessment: U.S. Military Decision Making in Iraq, Vietnam, and the American Indian Wars’. Ph.D.. Cambridge, MA: Harvard University, 18th Sept. 2013, pp. 45–54.

²⁵³Perhaps the best indication of the HES’s accuracy is that it never actually painted a rosy picture. From the beginning to the end, the HES showed villages passing in and out of VC control and, even though it indicated the steady erosion of VC power at the village level, it also indicated that the GVN had a long ways to go when the US withdrew from Vietnam. See Douglass, ‘Why Not Divide and Conquer? Targeted Bargaining and Violence in Civil War’, p. 164.

²⁵⁴Hunt, *Pacification*, p. 249.

To the extent that the use of quantitative or qualitative assessments misled senior policy-makers, it was in creating a deluge of information to be consumed, a massive amount of noise that prevented key signals from coming through. American errors were clustered in precisely the areas where the sophisticated reporting system could not help; assessments of the quality of South Vietnamese governance, of North Vietnam's willpower and leadership structure, of the proper historical analogies to use. What the assessments system could not do, could not adapt to, were the assumptions driving American strategy in the first place, even as some of the information it furnished should have changed those assumptions.

After the war, the military's approach to metrics, and especially systems analysis, became a convenient punching bag for American critics of the war. On the left, it stood for the military-industrial complex and its inability to see the human dimension of war. On the right, it stood for the move away from true 'martial' spirit, the triumph of 'experts' over military men, and the high-handedness of Washington over America's military leaders in the field. While there is some merit to these considerations, the pathologies of systems analysis were grossly exaggerated.²⁵⁵ Moreover, in retrospect it is hard to say that those who had primarily approached the war through the lens of indicators were misled by them, as long as they resisted the temptation to see what they wanted to see. Some commentators have pointed out that those who relied primarily on statistics, like McNamara and Thayer, were some of the first within the Department of Defense and White House to realize the likely futility of the war. It was those who took a more metaphysical or spiritual approach, glorifying will, passion, and dramatic statesmanship, who held out hope longer.²⁵⁶ In any case, postwar demobilization, and the necessary re-tooling for a new strategic environment, apart from any beliefs about what had worked or what had not, drove organizational forgetting in the aftermath of Vietnam.

3.3 Iraq

In Iraq, American military leaders developed a complex assessments and metrics system, *ex nihilo*. Originally built to help American theater commanders make sense of the surprising return of violence and birth of insurgency, it also became a management and messaging tool.

²⁵⁵Van Creveld, *Command in War*, p. 241.

²⁵⁶Greg Grandin. *Kissinger's Shadow: The Long Reach of America's Most Controversial Statesman*. New York: Metropolitan Books, 2015, pp. 93–94.

In Iraq, as in Vietnam, the existence of these metrics, and how they ought to be interpreted, became of tremendous political importance, even though no single measurement took on the notoriety of the Body Count or the HES. While the military managed to more or less avoid accusations of “technowar” that had plagued the American war effort in Vietnam, it used metrics in much the same way, and for the same purposes in Iraq.²⁵⁷ While no single effort took on the scope and intensity of the HES, widespread information and communications technology (in both the military and civilian world) encouraged the rapid and surprisingly decentralized rise of quantitative assessments, which were integrated with and supported an analysis process more ad hoc but arguably more robust than the wave of social science that Vietnam had inspired. And yet, though there are numerous detailed parallels to and recapitulations of MACV’s experience, this system developed with little relationship to either “lessons learned” or doctrine.

These assessment efforts were adaptations to the nature of the conflict. The leaders of Combined Joint Task Force 7 (CJTF-7) and MNF-I, alongside their civilian managers, sought tools to make sense of unexpected categories of questions and events: diffuse, small-scale attacks on US forces and the Iraqi government; widespread, often-sectarian violence; and a broad array of “nation-building” activities carried about by the US military, which had entered the war expecting to do little of it. Where the authors of American escalation in Vietnam had some notion of the complexity, difficulty, and uniqueness of the task on which they were embarking, American military leaders found themselves, from the very beginning, building their decision-making structure, figuring out what war they were fighting, and acting upon it on the fly.

3.3.1 American Goals in Iraq

The American invasion of Iraq and subsequent counterinsurgency struggle was not the product of gradual escalation and reluctant intervention but was rather the sudden and violent culmination of three great geopolitical forces: the Bush Doctrine seeking to eliminate threats of terrorism (broadly construed) in the wake of 9/11 (with a particular concern about Weapon of Mass Destruction (WMD)); a decade of frustrated and (perceived-to-be) failing US policies to constrain Saddam Hussein after the First Gulf War; and a growing movement in influen-

²⁵⁷This development probably relates to two major factors: 1) the absence of the strategic bombing campaign that was conspicuously driven by metrics and 2) the growing digitalization and incorporation of statistical measures into everyday decision-making in developed countries.

tial parts of the American foreign-policy elite towards muscular democracy promotion in “the unipolar moment”.²⁵⁸ Even with the invasion of Afghanistan and overthrow of the Taliban ongoing in late 2001, some in the administration were already planning for a potential invasion of Iraq and overthrow of Saddam Hussein. As the Bush administration engaged in international diplomacy designed to persuade the world of Saddam’s danger, quiet preparations were being made for a post-Saddam Iraq, and for American goals in a military invasion designed to overthrow him. The original goals for the invasion were relatively clear, if unrealistic in both obvious and subtle ways.²⁵⁹

- “Liberate” the Iraqi people from the tyranny of Saddam Hussein and end Iraqi aggression in the Middle East (including support for terrorism)
- Find, secure, and destroy Iraq’s Weapons of Mass Destruction (WMDs)
- Place Iraq on a pathway to a “prosperous and free” society.

A wide variety of authors have commented on the various ways in which these goals were unrealistic. As the late Michael Gordon put it, “There was a contradiction at the heart of the Bush administration’s strategy in Iraq, which was a very simple one: It wanted to do regime change, and it didn’t want to take on any of the burdens of nation-building”.²⁶⁰ But the specific, and often misunderstood, reasons why the US military ended up being so unprepared for the aftermath of the war deserve special consideration, for they directly influence how and why the military ended up adapting to the war the way that it did. The conventional wisdom holds that an absence of planning for ‘Phase IV’, or post-invasion stabilization, lies at the root of subsequent American failure in Iraq.²⁶¹ The reality is more complicated, in an illustrative way.

First, the Bush administration’s NSC process resulted in ‘un-deconflicted’ policy guidance regarding the end state being sought in Iraq, and the means available to achieve that end-state. This breakdown was both caused by and furthered Donald Rumsfeld’s particular ambitions as Secretary of Defense, together with George W. Bush’s hands-off management style

²⁵⁸For more on the forces leading up to the American invasion of Iraq, see Bob Woodward. *State of Denial*. New York: Simon & Schuster, 2006; Michael R. Gordon and Bernard E. Trainor. *Cobra II: The inside Story of the Invasion and Occupation of Iraq*. New York: Vintage Books, 2007.

²⁵⁹‘Text: Bush’s Speech on Iraq’. *The New York Times. Politics* (18th Mar. 2003).

²⁶⁰J. Dana Stuster. *Ends and Means [Transcript]*. 15th Mar. 2013. URL: <https://foreignpolicy.com/2013/03/15/ends-and-means-2/>, Michael Gordon Commentary.

²⁶¹Walter Pincus. ‘Memo: U.S. Lacked Full Postwar Iraq Plan’. *Washington Post* (12th June 2005); Michael E. O’Hanlon. *Iraq Without a Plan*. 2005. URL: <https://www.brookings.edu/articles/iraq-without-a-plan/>; Stuster, *Ends and Means [Transcript]*, Michael Gordon Commentary.

and Rumsfeld's acumen as a bureaucratic infighter.²⁶² Rumsfeld's chief priority as Secretary of Defense was to usher in the greatest reform of the US military since Robert McNamara, one which fully incorporated the Revolution in Military Affairs (RMA) into the Pentagon's institutional DNA.²⁶³ Acquisitions reform and management modernization influenced by private sector practices would meet a high-tech, low-manpower vision of the future battlefield that would produce what one critic later called "immaculate warfare".²⁶⁴ The events of 9/11 did not change, but actually cemented, Rumsfeld's thinking, and the Quadrennial Defense Review (QDR) prepared in 2000 and 2001 was published on schedule on September 30 with the themes of agility and transformation to deal with strategic uncertainty.²⁶⁵ Rumsfeld's paradigmatic example of a military operation, and what he understood as proof of his vision, was the lightweight, networked, surgical invasion of Afghanistan, combining special operations forces and stealth bombers to destroy the Taliban in a matter of weeks in late 2001. As DoD received direction from the President to plan for the invasion of Iraq, Rumsfeld was determined not to allow the invasion to get in the way of the modernization of the force, and acted to spend the minimal resources possible to implement the President's decision. In other words, where the 'best practice' of the American civil-military command system is for civilian leaders to be flexible and responsive about the means and specific about the policy goals, the civilian direction under which the military operated during and immediately after the invasion was specific about the means available and fuzzy about the goals. When Army Chief of Staff Eric Shinseki (already a Rumsfeld antagonist) testified before Congress that (based on Army planning and experience in Kosovo) he believed the Army needed over 300,000 soldiers to accomplish regime change in Iraq, he was publicly contravened by the Secretary's staff and retired shortly thereafter.²⁶⁶ The American force would be limited to 145,000.

If we have become in retrospect too overawed of American performance in the First Gulf War, we have at the same time forgotten how stellar were American operations in the

²⁶²Peter J. Boyer. 'A Different War'. *The New Yorker* (24th June 2002).

²⁶³The Revolution in Military Affairs was an American military concept (derived from the Soviet notion of a military-technical revolution) that suggested that the advent of computer networks and precision weaponry had ushered in a new and radically discontinuous era of warfare.

²⁶⁴Paul C. Light. *Rumsfeld's Revolution at Defense*. Policy Brief 142. Washington, D.C.: The Brookings Institution, 1st July 2005. URL: <https://www.brookings.edu/research/rumsfelds-revolution-at-defense/>.

²⁶⁵John Y. Schrader, Leslie Lewis and Roger Allen Brown. *Quadrennial Defense Review 2001: Lessons on Managing Change in the Department of Defense*. DB-379-JS. Santa Monica, CA: RAND, 2003.

²⁶⁶In a speech at his retirement ceremony, he pointedly warned his confrères, "Beware the 12-division strategy for a 10-division Army" (Ann Scott Tyson. 'The Curtain Is Drawn On the Rumsfeld Era' (16th Dec. 2006)).

Second.²⁶⁷ What ultimately shattered American Phase IV planning was the rapidity of success.²⁶⁸ Initial planning had suggested Phase III could last up to three months; it ended up lasting little more than three weeks. Phase IV operations plans were not completed until well after most of the fighting was over, and so many units were left without effective orders and goals for stabilization (even if those goals were straightforwardly dictated by doctrine). Instead of having 250,000 troops in place, working with the Iraqi Army to provide security and rebuild infrastructure, Central Command (CENTCOM) ended up with well fewer than 150,000 troops, most of whom were out of place, with the Iraqi Army or police forces nowhere to be found.²⁶⁹ In fact, CENTCOM and Coalition Forces Land Component Command (CFLCC) planners had actually anticipated “catastrophic success” and laid out Operations Plan (OPLAN) ECLIPSE II for the rapid re-deployment and maneuver of stabilization forces into Iraq to ensure successful post-conflict transition - the plan was never fully implemented. The invasion’s stunning success convinced (or, more likely, permitted) Rumsfeld to stand down the over 17,000 soldiers of the 1st Cavalry Division who had been scheduled as follow-on forces and to accelerate the withdrawal of forces already in theater, many of whom had not yet even arrived at the places they were supposed to stabilize after the invasion. The timing of these orders was such that no senior Army leader was in a position to object, and despite this major change in plan, planning staff in CENTCOM, CFLCC, and V Corps were not consulted.²⁷⁰

²⁶⁷Nora Bensahel. *After Saddam: Prewar Planning and the Occupation of Iraq*. Ed. by Olga Oliker et al. Santa Monica, CA: Rand Arroyo Center, 2008.

²⁶⁸For the invasion, the Army deployed eight brigades, compared to twenty-one in the First Gulf War, and yet destroyed the Iraqi Army and overthrew the regime in twenty-two days, in contrast to the six-week air campaign and four-day ground campaign in 1991 (John J. McGrath. *The Brigade: A History, Its Organization and Employment in the US Army*. Fort Leavenworth, KS: Combat Studies Institute Press, 2004, p. 111).

²⁶⁹Bensahel, *After Saddam*; Gordon and Trainor, *Cobra II*, p. 550.

²⁷⁰Bensahel, *After Saddam*. Between April and June 2003, the Chief of Staff of the Army, commander of CENTCOM, and commander of V Corps (CJTF-7) were all replaced, and the transition between CFLCC and V Corps as CJTF-7 HQ staff took place (15 June). Lieutenant General (LTG) Sanchez later wrote that he was not informed at the time about Gen. Franks cancellation of follow-on forces and acceleration of withdrawal - at the time, he was technically just the commander of 1st Armor Division, whose orders were not changed (Ricardo S. Sanchez and Don T. Phillips. *Wiser in Battle: A Soldier's Story*. New York, NY: Harpercollins, 2008, p. 168). This course of events was highly unorthodox, but partially the result of the earlier delay of some personnel moves because of 9/11. When Chairman of the Joint Chiefs of Staff (CJCS) General Myers mentioned to General Franks that he might be asked to stay on longer to smooth over the question of who would take charge in Iraq, Franks, intent on retiring, responded with an emphatic, and unprintable, no (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: Vintage Books, 2013, p. 12). But it also appears that DoD’s goals for the size of the force played a role in the transition; neither McKiernan nor Wallace wanted to transition when they did, and Sanchez was in the end not notified that V Corps would form the headquarters component of CJTF-7 until the middle of May (Donald P. Wright and Timothy R. Reese. *The United States Army in Operation Iraqi Freedom, May 2003-January 2005: On Point II: Transition to the New Campaign*. Fort Leavenworth, KS: Combat Studies Institute Press, 2008, pp. 146–147).

It is often said that the military did not have a plan for the aftermath of the invasion.²⁷¹ This is simply not the case. There was a highly detailed military Phase IV plan that was more or less thrown out the window by events and by both military and civilian leadership (whether that plan was a sound one is a counterfactual question).²⁷² Not only was the plan discarded, but the institutional memory, interagency connections, and leadership that might have compensated for it were lost in the organizational churn of April-June 2003. In addition, it is also not the case that US forces did not have doctrine or were not trained to deal with the descent of Iraq into violence. Rather, the US Army in 2003 Iraq did not have the force structure or command guidance appropriate to the mission and in line with both doctrine and recent experience (a fact evident to senior Army staff at the time), and the forces that had doctrine, training, and even experience in post-conflict environments were some of the first redeployed. They were mostly replaced by inexperienced, untrained National Guard and Reserve units by summer 2003. By the time LTG Sanchez and Amb. Bremer got their bearings with something like an organizational blank slate, the conflict had been transformed. And so, even though American forces in Iraq ended up conducting many of the same kinds of missions and operations as their predecessors in Vietnam had, the organizational starting point could not have been more different. In Vietnam, MACV was stood up in explicit anticipation of introducing and integrating forces to conduct internal security, counterinsurgency, and the training of the RVNAF.²⁷³ In Iraq, CJTF-7 found itself in and amidst a confusing mélange of criminality and violence. In order to stabilize the country and protect rebuilding efforts, it needed to figure out what was going on.

3.3.2 Metrics and Assessments at the Start (2002-2006)

CJTF-7 was completely unstaffed, underresourced, and unprepared to make sense of the growing political instability. The CFLCC “Dream Team” staff (which Office for Reconstruction and Humanitarian Assistance (ORHA) chief Jay Garner later called “the best staff I had ever seen in my life”) had mostly departed, along with substantial and specialized intelligence assets; what remained was a handful of Sanchez’s trusted aides, a grab-bag of officers who had

²⁷¹Stuster, *Ends and Means* [Transcript].

²⁷²Bensahel, *After Saddam*; Stephen Benedict Dyson. ‘What Really Happened in Planning for Postwar Iraq?’ *Political Science Quarterly* 128.3 (2013), pp. 455–488.

²⁷³From an evolutionary standpoint, the MAAG and other agencies doing counterinsurgency support were swallowed up and integrated as MACV became the primary organization in charge of coordinating diverse American efforts. Certainly by the time American forces are introduced in 1965, MACV is recognized as running the show.

volunteered to stay on, and no interpreter.²⁷⁴ Moreover, less than eighteen months after 9/11, there were still nation-wide shortages in trained intelligence personnel, regional specialists, and Arabic speakers.

There was, however, a large, highly resourced intelligence apparatus operating in country – but it was solely focused on finding Saddam’s WMDs. Spun up in early 2003 in advance of the invasion, the Iraq Survey Group (ISG) spent two years and over a billion dollars, using over 1500 American, British, and Australian personnel deployed to Iraq in order to conclude that Saddam had already destroyed his WMD programs.²⁷⁵ Following in the footsteps of the American military’s ad hoc, rapidly put together Exploitation Task Force (XTF) (which had started looking for Saddam’s WMD as soon as the invasion started), members of the Iraq Survey Group (ISG) would access potential WMD sites as soon as Exploitation Task Force (XTF) secured them, seeking evidence on Saddam’s WMD program and locating any caches. In the aftermath of Saddam’s WMD programs being exposed as fantasy, it has been forgotten how extensive were the efforts to locate them: well over over \$1 Billion was spent between 2003-2005.²⁷⁶ New CENTCOM commander John Abizaid and Sanchez personally petitioned David Kay, leader of the ISG, to divert some of the more than 1400 CIA and DoD intelligence personnel searching for WMDs to assist CJTF-7 with intelligence-gathering and analysis.²⁷⁷ He resisted strongly, but was eventually over-ruled by Washington in November; in a classic instance of garbage-can decision-making, ISG was given a parallel mission of supporting CJTF-7 intelligence, most notably with language capabilities that the task force lacked.²⁷⁸ From late 2003 on, the ISG spent increasing amounts of its resources supporting counterinsurgency operations for CJTF-7 and MNF-I before disbanding in April 2005. Starting with a barebones staff, CJTF-7 continued to borrow or repurpose as many resources as it could. Weeks after 9/11, DoD and the intelligence community had stood up Joint Intelligence Task Force - Counter-Terrorism (JITF-CT) to gather intelligence for force protection against terrorism; under CJTF-7 and with aid from Joint Special Operations Command

²⁷⁴Wright and Reese, *The United States Army in Operation Iraqi Freedom, May 2003-January 2005*, p. 146; Gordon and Trainor, *The Endgame*, p. 20.

²⁷⁵They did issue a highly instructive report that was the first in-depth detailing of the intelligence failures that had beset the Coalition’s analysis of Saddam’s WMD capabilities and interests. See Iraq Survey Group. *Comprehensive Report of the Special Advisor to the DCI on Iraq’s WMD*. 30th Sept. 2004.

²⁷⁶See ‘Money No Object’. *Mother Jones* (3rd Oct. 2002). Former International Atomic Energy Agency (IAEA) director Mohommed El Baradei claims up to \$3 Billion was spent (Mohamed ElBaradei. *The Age of Deception: Nuclear Diplomacy in Treacherous Times*. Bloomsbury Publishing, 2012, p. 71).

²⁷⁷Sanchez and Phillips, *Wiser in Battle*, pp. 216–7.

²⁷⁸‘David Kay Testimony’ (Washington, D.C.). 28th Jan. 2004.

(JSOC), resources from Joint Intelligence Task Force - Counter-Terrorism (JITF-CT) were soon re-purposed to address the burgeoning problem of IEDs.²⁷⁹

Under the tenure of CJTF-7, complex campaign assessment took a backseat to simply figuring out what was going on; the operational design for which V Corps had originally planned was rapidly becoming irrelevant. Joint doctrine prescribed “continuous assessment” of the campaign plan, but key assumptions of pre-invasion planning had been a large stabilization force and continuity of the Iraqi state: moreover, any post-invasion violence imagined would be opportunistic or revenge-related, related to regime “dead-enders” and criminals. Col. Derek Harvey, a CFLCC intelligence staffer who had stayed on, circulated a briefing in early 2004 on the nature of the burgeoning insurgency. He highlighted the extent to which Saddam had built regime resilience in the late 1990s by preparing for unconventional warfare against Iran (and for internal instability), hiding weapons, encouraging militias, establishing smuggling routes, and even providing instruction on building IEDs.²⁸⁰ These now would provide invaluable resources for Sunnis looking to protect their physical and political turf from what they viewed as Shia and Kurdish predations.²⁸¹ Moreover, important Kurdish and Shia players had already established networks of militias, with the Shia further supported by Iranian connections. The American military in Iraq had stumbled onto a minefield of pre-built and readily deployable capacity for political violence, something completely missed in pre-invasion intelligence assessments.²⁸²

And so, one of CJTF-7’s first tasks was simply re-writing the campaign plan (a first draft was released in August 2003, and it remained a work in progress until January), after which it could lay out the desired “campaign effects” in terms of which it would assess its effectiveness, in keeping with the “effects-based operations” approach prescribed in Joint Doctrine.²⁸³ CJTF-7’s functional purposes for assessment in the first year were making sense

²⁷⁹Director of Central Intelligence. *The 2001 Annual Report of the United States Intelligence Community*. Feb. 2002. URL: https://www.cia.gov/library/reports/archived-reports-1/Ann_Rpt_2001/smo.html; Collins, ‘Military Innovation in War’, p. 232.

²⁸⁰These findings were also confirmed by the ISG (Iraq Study Group (U.S.), James Addison Baker and Lee Hamilton, eds. *The Iraq Study Group Report*. New York: Vintage Books, 2006) and the Iraqi Perspectives Project, put together by US Joint Forces Command (Kevin M. Woods et al. *Iraqi Perspectives Project. A View of Operation Iraqi Freedom from Saddam’s Senior Leadership*. Norfolk, VA: United States Joint Forces Command, Jan. 2006. URL: <https://apps.dtic.mil/docs/citations/ADA446305>).

²⁸¹Gordon and Trainor, *The Endgame*, pp. 20–22.

²⁸²Dyson, ‘What Really Happened in Planning for Postwar Iraq?’ In numerous wargames and discussion sections, the possibility of post-war violence was raised by and with American war planners. However, the specific weaknesses of the Iraqi state, and the networks and preparations Saddam had begun making in the 1990s were not part of the picture. American pre-war intelligence relied heavily on Iraqi expat networks and signals intelligence, both of which were particularly poorly suited to gathering this kind of information.

²⁸³The American military would end up having four campaign plans under three campaign organizations

of the battlespace and using intelligence and planning to make the case in Washington for the resources it needed. Because the Coalition Provisional Authority (CPA) was responsible for rebuilding the Iraqi state at this time, there was little for CJTF-7 to manage or message at this point, except to make the case for the force structure needed to accomplish the mission of building a sovereign, stable Iraq and returning home (this situation was furthered by the fact that CJTF-7 had no strategic communications cell until late 2003, and a planning cell a third of its authorized size).²⁸⁴ CPA Orders 1 and 2 – deactivating the Iraqi Army and laying out a stringent de-Baathification standard – had made this work even harder.²⁸⁵

However, though campaign assessment is a routine practice, doctrine and training gave little guidance as to how it ought to be done, and the “standard practices” were not cutting it. Normally in a military operation, units do not report every single contact or event that happens in its Area of Operations all the way up the chain of command. But in order to make sense of trends and patterns of violence Iraq was experiencing, so that a plan could be formed and resources could be called for, CJTF-7 needed data. As CJTF-7 looked to develop Measures of Effectiveness (MOEs) for its ongoing operations, it turned to a newly deployed ORSA, Captain Allison Stewart.²⁸⁶ CJTF-7 staff had begun collating events reported to them in Microsoft Powerpoint and then daily Microsoft Word documents (not exactly amenable to sophisticated manipulation). Working with stateside members of her organization and CJTF-7 IT personnel, Capt. Stewart began building a database in Microsoft Access, forming the seed of the first Significant Activities (SIGACTs) database, and her successor ORSAs on loan from CAA (including possibly the first of many civilian data analysts in December) furthered her developments. From the start, CJTF-7 was interested in two kinds of data: general event patterns related to ongoing violence, and IED incidents in particu-

within eighteen months (Wright and Reese, *The United States Army in Operation Iraqi Freedom, May 2003-January 2005*, pp. 161–162).

²⁸⁴ibid., p. 159. The CPA’s decision to take the lead in re-building the Iraqi military and police was highly unorthodox. This role is one the military trains for and has usually held in 20th Century conflicts and, indeed, was part of the original campaign plan. It seems that the chaos in CJTF-7, combined with the broad powers Bremer arrogated to himself, contributed to the decision to build the new Iraqi army through a new ad hoc organization, the Coalition Military Assistance Training Team, led by Major General Paul Eaton but underneath the oversight of the CPA. While the staff would grow to over two hundred from many of the coalition countries, the CPA contracted out most of the work, in keeping with its overall concept of operations (Bensahel, *After Saddam*, pp. 121–158).

²⁸⁵Gordon and Trainor, *The Endgame*, p. 14.

²⁸⁶Center for Army Analysis. *Deployed Analyst History Report, Volume I. Analytic Support to Combat Operations in Iraq (2002-2011)*. CAA-2014119. Fort Belvoir, VA: Center for Army Analysis, Mar. 2012, p. 26. Capt. Stewart worked for the CAA, a successor organization to various Army systems analysis efforts founded in 1973, which had been led for decades by a veteran of Vietnam ORSA projects, Ed Vandiver (Garrabone and Sheldon, ‘Military Operations Research Society (MORS) Oral History Project: Interview of E.B. Vandiver III, FS’).

lar. In so doing, CJTF-7/MNF-I could readily bring to bear complex computing power and analysis techniques that emerged with the Information Revolution; even early on, ORSAs in theater had developed cluster analysis algorithms for IED attacks, advanced geospatial mapping, and other automated methodologies, further supported by reachback contracts.²⁸⁷ Their primary constraints were a significant lack of data and lack of resources (especially staff and organization) to support their efforts; though CAA made a priority of supporting the war, it was rarely able to deploy more than one analyst at a time to the theater in the early years, and V Corps had not trained for or planned to run this kind of assessment effort when it took over CJTF-7. Assessments methods and technology was ad-hoc and cobbled together: “We were home-brew for the most part”.²⁸⁸ Even though the intelligence staff was augmented over time, it was still dramatically undermanned and focused on figuring out and finding the data for the basic measures of effectiveness it had identified by fall 2003, and a complex assessment or metrics process was not a Sanchez priority, as he directed his limited staff to focus on day-to-day tactical and operational needs.²⁸⁹

In the same way that it enabled CJTF-7 staff to quickly set up the SIGACTs database, widespread computing technology made possible a more decentralized approach to metrics collection in general, but also enabled a much greater variance in what was collected and how it was collected. On a single laptop running Microsoft Excel, a single Army officer with intermediate training could access more computing and analytics power than was available in the multi-million dollar Vietnam efforts, and could share his or her results nearly instantly. In the first phase of the war, there was dramatic variation in assessment efforts at division level and lower, depending chiefly on the beliefs and demands of commanding officers. Going into Iraq, the Army provided no training in and had no doctrine around counterinsurgency assessment, and little around the similarly relevant stabilization operations assessment.²⁹⁰ For many units, especially those which had not had time to plan or train for the mission before and were struggling to find their footing, these assessment efforts never evolved beyond meeting guidance from higher headquarters and gathering basic operational details, especially

²⁸⁷Center for Army Analysis, *Deployed*, pp. 31–32.

²⁸⁸Ben Connable et al. *Modeling, Simulation, and Operations Analysis in Afghanistan and Iraq: Operational Vignettes, Lessons Learned, and a Survey of Selected Efforts*. In collab. with Rand Corporation, National Defense Research Institute (U.S.) and International Security and Defense Policy Center. Santa Monica, CA: RAND Corporation, 2014, p. 77.

²⁸⁹Wright and Reese, *The United States Army in Operation Iraqi Freedom, May 2003-January 2005*, p. 160.

²⁹⁰Jonathan Schroden. ‘Why Operations Assessments Fail: It’s Not Just the Metrics’. *Naval War College Review* 64.4 (Aut. 2011).

as the campaign plan remained in flux. Other commanders quickly took a more energetic and complex approach: up in Mosul, David Petraeus quickly stood up the electronics infrastructure (supported by attached personnel from the 1st Signal Brigade) to conduct frequent Video-Teleconferences (VTCs) with subordinates and relevant participants, including civilian reconstruction personnel, briefings which quickly grew in length and intensity, and out of which General Petraeus sought specific metrics, ranging from the usual (number of electrical outages) to unusual indicators of stability and local satisfaction (the number of market stalls open). However, there was no capability or framework to aggregate this data at the theater level, and it remained at the commander's discretion, with little standardization.²⁹¹ There remained among many commanders a tendency to perform assessments with an eye towards the end of their tour, and not the Coalition's longer-term objectives.²⁹²

The SIGACTs database (or databases - it went through three iterations) suffered from a few well-known, but unresolved problems. First, the database only recorded incidents either observed by or reported to American troops. Especially in the first years of the war, this resulted in a somewhat skewed picture.²⁹³ Second, similar to the HES, a lack of reports could indicate that an area had been pacified, or that it was thoroughly controlled by the enemy; when American forces with 5-20 Infantry re-entered Baqubah during the surge, the SIGACTs data they pulled provided no indication of the danger they would face.²⁹⁴ Third, the exact definition of what qualified as a significant activity was left to the discretion of the reporter, though this became more stringent over time, and suffered from errors despite vetting by commanders throughout the chain of command.²⁹⁵

Nonetheless, early versions of the database, which included a graphical interface for easier use, permitted trend analysis that contributed directly to the battlefield. In addition to the early studies listed above, a 1st Cavalry Division intelligence staff used SIGACTs data to demonstrate that "constructive engagement" with local tribal and religious leaders (to include rapprochement with their militias) led to reductions in violence, which was then incorporated into TTPss for the theater.²⁹⁶ Analysts also contributed data to pattern analysis for IED and

²⁹¹Center for Army Analysis, *Deployed*, p. 33.

²⁹²Leo J. Blanken, Hy Rothstein and Jason J. Lepore, eds. *Assessing War: The Challenge of Measuring Success and Failure*. Washington, D.C: Georgetown University Press, 3rd Nov. 2015, p. 208.

²⁹³During and after the Surge, it appears that troop density was evenly distributed enough to mostly mitigate this concern (Berman, Shapiro and Felter, *Small Wars, Big Data*, pp. 36-37).

²⁹⁴Gordon and Trainor, *The Endgame*, p. 373.

²⁹⁵Center for Army Analysis, *Deployed*, p. 32.

²⁹⁶Wright and Reese, *The United States Army in Operation Iraqi Freedom, May 2003-January 2005*, p. 33.

convoy attacks, projected force requirements, and the broader development of MOE. And yet, the overall level of staffing and in-theater coordination for data-collection, assessment, and analysis remained low.²⁹⁷

Even by the time Operation Iraqi Freedom (OIF)2 began with the planned replacement of the V Corps staff by the III Corps staff, CENTCOM was already planning to substantially augment the command structure in Iraq, in anticipation of a longer-term commitment and in light of the January 2004 NSC assessment that finally gave the military, and not CPA, the task of building the Iraqi military.²⁹⁸ Even towards the end, the key J2 and J3 staff at CJTF-7 were rarely above fifty percent of their authorized strength, and were so snowed under with day-to-day operational matters that they had little ability to work on bigger picture issues.²⁹⁹ In May 2004, CJTF-7 was succeeded by Multinational Corps - Iraq (MNC-I), a three-star operational command within a new four-star theater-strategic command, Multi-National Force - Iraq (MNF-I), which also oversaw a second three-star command, Multi-National Security Transition Command - Iraq (MNSTC-I). In a brief tenure as leader of MNF-I, Sanchez was able to begin the transition from a “G-staff” organization (a flatter organization with a small staff) to a functional one capable of acting at the theater and strategic levels and augmenting/modifying its structure to a much greater extent.³⁰⁰ MNF-I’s substantially larger staff included a Strategy, Plans and Assessment division, one which the new commanding general George Casey decided would be co-located with the Embassy, rather than the military, as part of a broader plan of improving coordination between the American military and the US mission. Soon after arriving in June, Casey developed a system of goals linked to the August 2004 campaign plan, and a series of metrics and measurable items for these goals, alongside bimonthly and monthly assessment briefings. Early attempts to integrate the US Mission and the Iraqi government into this process proceeded slowly, with General Casey attempting to lead the way, including through the establishment of a joint US Embassy/MNF-I Red Team designed to provide completely independent assessments.³⁰¹ He also launched the Commander’s Assessment and Synchronization Board (CASB) in fall 2004, though he later expressed that it took a year of trial and error to provide him the

²⁹⁷Wright and Reese, *The United States Army in Operation Iraqi Freedom, May 2003-January 2005*, pp. 34–35.

²⁹⁸Ibid., p. 175.

²⁹⁹Ibid., pp. 159–160.

³⁰⁰Ibid., p. 176.

³⁰¹Ibid., p. 180.

data he sought and avoid the temptation of seeking information that was available, rather than doing the work of generating it as necessary.³⁰² Casey relied on a number of formal and informal assessments processes, and was especially responsive to congruences between separate, independent assessments.³⁰³ Underneath MNC-I, CENTCOM established seven approximately division-sized Areas of Operations dividing up the entire country, each with their own augmented staff. The establishment of MNF-I thus provided the organizational infrastructure to bring staff and resources into Iraq, and to augment in-country efforts with support from reachback organizations in the United States and contractors. Coordination across the force was augmented by monthly commanders' conferences, where MNF-I staff would share counterinsurgency best practices and examine the metrics against patterns of counterinsurgency to provide real-time assessment, identify risk areas, and highlight what commanders ought to focus on.³⁰⁴

Even before the advent of MNF-I, one area of analysis had begun attracting substantial resources: the fight against IEDs. Beset by questions of US strategy and organizational ownership (not to mention a budget-conscious Congress), many other areas where analysis resources could have been helpful were de-prioritized or neglected in the early years. But there were no ambiguities, partisan concerns, or organizational issues surrounding the rapidly multiplying number of American casualties from IEDs. One of the earliest staff augmentees to arrive in summer 2003 at CJTF-7 was Navy Special Operations Officer and qualified EOD LCDR Joseph "Dagger" DiGuardo, sent by JSOC to help develop TTPss to reduce IED casualties, which were already being used to dramatically worse effect than in Afghanistan. DiGuardo was able to focus the nascent ad hoc task force into what became known as the Combined Explosive Exploitation Cell (CEXC), formally sponsored by CJTF-7 and working with organizations across the defense and intelligence communities. From the beginning, Combined Explosive Exploitation Cell (CEXC) focused on forensics in the broader sense, working "left of boom" to identify patterns of IED design, manufacture, and emplacement that could be used to "attack the network", the extended IED supply chain. Since at least June 2003, when CENTCOM commander Abizaid declared IEDs his number-one threat, resources across DoD and Congressional staffers began mobilizing to provide resources to

³⁰²George W. Casey. *Strategic Reflections: Operation Iraqi Freedom, July 2004 - February 2007*. Washington, DC: National Defense University Press, 2012, p. 33.

³⁰³Blanken, Rothstein and Lepore, *Assessing War*, p. 210.

³⁰⁴*Ibid.*, p. 204.

the effort through emergency funding, staff augmentation, and contracts for supplemental support in response to a call by senior military commanders for a “Manhattan Project-like effort”.³⁰⁵ While this effort focused on developing forensics and counter-measures essentially from scratch and was hampered by a lack of coordination between several different service efforts, by June 2005, the Joint IED Task Force was created, and eventually formalized as Joint IED Defeat Organization (JIEDDO), receiving a budget of over \$3 Billion and with 360 personnel by late 2006, in addition to other efforts and personnel seconded from other organizations. While many veterans complained about Joint IED Defeat Organization (JIEDDO)’s high-tech focus, some 30% of the budget focused on projects “attacking the network”, making up significant portion of all research and analysis dollars spent in Iraq.³⁰⁶ These dollars funded early research attempting to analyze the insurgency or Iraqi society more broadly, including the pilot project which became the Human Terrain System (HTS). Much of the impetus and resources for expanding data connectivity across CENTCOM was the result of the use of SIGACTs data for IED forensics and adaptation - in many ways, the use of these databases for operations analysis was a spandrel from their original use against IEDs.³⁰⁷

Throughout this period, analysts struggled to integrate subjective and objective factors into the assessments framework, while also working on a broad variety of other tasks.³⁰⁸ ORSAs were often the first source for answering important and urgent operational problems (including the counter-IED efforts and the Neurosurgical Team Location Study). Though they were technically employed in the MNC-I Plans group, they worked to support requests from across MNC-I. ORSAs worked to build the database infrastructure and to train intelligence and operations staffers in division and brigade organizations on how to use the SIGACTs database.³⁰⁹ Analysis at all levels was made substantially easier by persistent, reliable internet access, which permitted data-sharing within and outside the country and facilitated reachback

³⁰⁵Richard F. Ellis, Richard D. Rogers and Bryan M. Cochran. *Joint Improvised Explosive Device Defeat Organization (JIEDDO): Tactical Successes Mired in Organizational Chaos; Roadblock in the Counter-IED Fight*. Joint Forces Staff College, 13th Mar. 2007, p. 20; *The Joint Improvised Explosive Device Defeat Organization: DOD’s Fight against IEDs Today and Tomorrow*. US House of Representatives, Committee on Armed Services, Subcommittee on Oversight and Investigations, Nov. 2008.

³⁰⁶*The Joint Improvised Explosive Device Defeat Organization: DOD’s Fight against IEDs Today and Tomorrow*.

³⁰⁷Brad Martin et al. *Assessment of Joint Improvised Explosive Device Defeat Organization (JIEDDO) Training Activity*. RR-421-OSD. Santa Monica, CA: RAND, 2013, p. 70.

³⁰⁸Center for Army Analysis, *Deployed*, p. 43.

³⁰⁹*Ibid.*, p. 36.

support.³¹⁰ However, ORSAs and other analysis repeatedly found themselves stymied by haphazard, error-prone data collection procedures and methodology.³¹¹

Improving the databases to enable better analysis and simpler reporting (CAA analysts were having to use their weekends to comb through errors) was made simpler by the weekly Knowledge Management Working Group which sought to improve and coordinate the various databases (over 300) being created within different sections and lines of effort in MNC-I and MNF-I.³¹² Besides the SIGACTs database controlled by MNF-I, III Corps had begun developing Combined Information Data Network Exchange (CIDNE) (a CENTCOM-wide data repository), and the XVIII Airborne Corps brought to the table FusionNet, an alternative to the SIGACTs web portal that it had developed for itself in Afghanistan which incorporated superior searchability and data standardization (deployed in early 2005).³¹³ In August 2006, the SIGACTsII system, designed to interface more readily with both FusionNet and CIDNE, was deployed. XVIII Airborne Corps also took on the herculean task of deconflicting theater communications, which had exploded to using four different network systems, 82,000 radio frequencies, and forty web domains.³¹⁴ These systems made SIGACTs more useful and accessible throughout the theater and began the push towards data standardization (see Figure 3.5).³¹⁵ They also made it easier for MNF-I staff to pull the data needed for their regular reports, including the daily Battlefield Update Assessment (BUA) briefings that served as one of General Casey's primary assessments inputs, and which he used as the basis for briefings of the Secretary of Defense, US Ambassador, and Iraqi President.³¹⁶

While commanders at all levels relied on and made use of trend analysis reports using various metrics delivered as Powerpoint slides, their primary sources of sense-making continued to be first-hand and impressionistic and (at higher levels) to incorporate battlefield circulation (visiting soldiers in the field).³¹⁷ General Casey would make a point of visiting every division and corps commander more than once a month, in addition to narrative reports from his Red Team and the Commander's Assessment and Synchronization Board (CASB).³¹⁸ Oftentimes,

³¹⁰Ibid., p. 37.

³¹¹Ibid., p. 43.

³¹²John R. Vines. 'The XVIII Airborne Corps on the Ground in Iraq'. *Military Review* (September-October 2006).

³¹³Center for Army Analysis, *Deployed*, p. 50.

³¹⁴Vines, 'The XVIII Airborne Corps on the Ground in Iraq'.

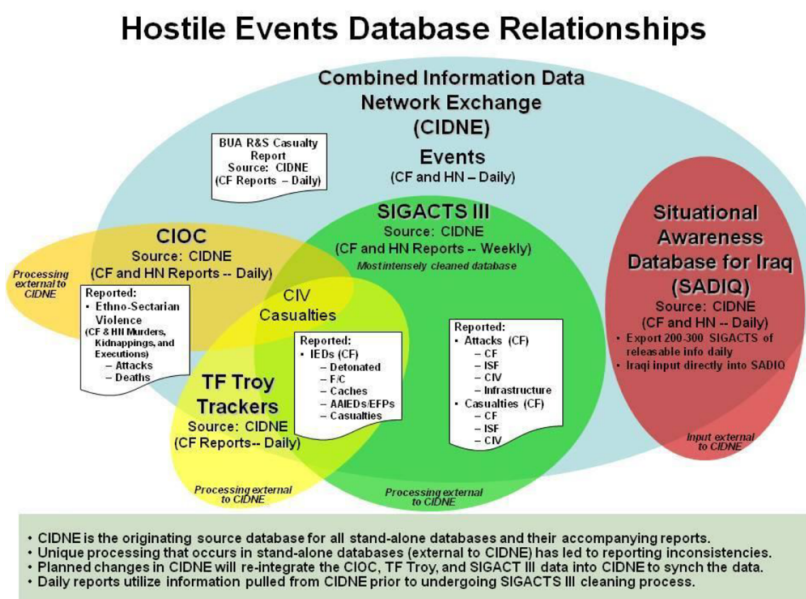
³¹⁵Center for Army Analysis, *Deployed*, p. 210.

³¹⁶Ibid., p. 52.

³¹⁷Connable, *Embracing*.

³¹⁸Casey, *Strategic Reflections*, pp. 160-1.

Figure 3.5: MNF-I Database Relationships



a military decision-maker had already reached an analysis or a decision *before* he reached out for analysis support to gain the metrics to justify his gut. “Decision makers often sought a quantitative basis to reinforce ‘gut feeling’ judgments made from military experience and expertise”.³¹⁹ For example, one research sponsor had observed that insurgents were making use of inland waterways for lines of communication and jumping-off points for attacks, and wanted to request Riverine forces to mitigate this threat. When he came to the ORSA, he was looking for evidence and ammunition, not improved understanding.³²⁰ Additional analyses incorporating these earlier datasets were often commissioned as one-off reports.³²¹

Increased resources for MNF-I brought increasing political attention and need for messaging or “managing up.” As part of the emergency appropriations bill for OIF passed in 2004 for 2005 (and every similar bill thereafter), Congress mandated regular “measuring progress” reports (called 9010 Reports) which required specific metrics and qualitative indicators related to economic rebuilding, violence and security, and political progress in Iraq. At the same time, the Bush administration grew increasingly sensitive about defending its policies in Iraq, particularly the rapid handover of sovereignty to the Iraqi people and security responsibilities to the Iraqi security forces.³²² Its late 2005 “National Strategy for Victory in Iraq” (an

³¹⁹Center for Army Analysis, *Deployed*, p. 44.

³²⁰Ibid., p. 76.

³²¹ibid. lists a great number.

³²²Ibid., p. 122.

NSC assessment prepared with MNF-I input) instituted benchmarks and measurements of performance against which progress could be measured. These pressures created requests for information (often in quantitative form) that MNF-I needed to meet.³²³ It also continued to shape General Casey's strategy, which, though substantially informed by counterinsurgency theory and practices throughout (see Chapter Four) was focused on the policy goals articulated by the civilian leadership, namely a rapid stand-up of Iraqi forces and stand-down of American ones.³²⁴

Sectarian Violence and the Anbar Awakening

Two discrete battlefield changes dramatically affected campaign assessment late in General Casey's tenure. As MNF-I focused on providing security with limited resources (including taking down insurgent groups) while standing up Iraqi security forces, steady progress appeared to be being made. While quality was still poor, more and more Iraqi Army units were being created, and both the handover of sovereignty and the 2005 parliamentary elections had gone relatively well, with Sunni parties participating in the latter for the first time (turnout improved from 2% to 86% in Al Anbar). And so the February 2006 9010 Report to Congress had reason to be relatively sanguine that steady progress was being made.³²⁵ Moreover, despite numerous attempts, the enemy (a sophisticated analysis of which the report contained) had failed to achieve its objectives, including "Derailing the Political Process", "fomenting large-scale ethno-sectarian violence", "detering the development of the Iraq Security Forces", or "Damaging Iraqi public trust in the Iraq Security Forces".³²⁶ That quickly changed after the February 22 bombing of the Samarra Mosque precipitated an ethno-sectarian civil war.

Later, it became popular to identify the violence of 2006 as the culmination of a longer, worrying trend, reflecting poor American strategy. The data does not bear this out. It is true that the lack of American personnel and the poor quality (and often sectarian) character of Iraqi forces made both security provision and assessing actual violence rates in un-patrolled parts of the country difficult; this state of affairs also gave insurgents a freedom of action which they exploited to the hilt. However, even incorporating conservative assumptions about

³²³For an unusually straightforward instance of metrics being demanded for messaging, see Donald Rumsfeld. 'Tracking Progress'. Rumsfeld Papers. 22nd June 2006. URL: <http://library.rumsfeld.com/doclib/sp/3966/2006-06-21%20To%20Pete%20Pace%20re%20Caseys%20Briefing-%20Memo%20Attachment.pdf#search=%22june%2022%202006%22>.)

³²⁴Gordon and Trainor, *The Endgame*, p. 93; Casey, *Strategic Reflections*, p. 56.

³²⁵Multi-National Force Iraq. 'Measuring Stability and Security in Iraq'. 9010 Report. Feb. 2006.

³²⁶*Ibid.*

“real” violence rates generated from all intelligence sources (including open source and NGO reports), violence was following normal, seasonal patterns in 2005, and activity clustered around major political milestones, as the MNF-I theory of victory predicted.³²⁷ While Sunni political dissatisfaction and both Shia and Sunni militia mobilization was growing throughout this time period, it had not yet had anything to ignite it, and it is not clear that there *would* have been a civil war without it. Moreover, though the fervor of this particular reaction seems to have blindsided MNF-I, Casey and his staff were well aware that most Sunnis were still unprepared to accept dominant Shia majorities in political power, and that this would continue to fuel the insurgency. Moreover, it was obvious to everyone involved that long-term success would rely on the capacity of the Iraqi government and achieving a political solution, and that this remained elusive. And so, as in Vietnam, optimistic progress reports to Congress cover up internal turmoil, pessimism, and doubt. In fact, concern about what the prospect of Shia consolidation would do to the insurgency (and the possible disruption of the Administration’s political strategy) had led MNF-I to surge troops into the country, so that troop levels by February 2006 were only 5000 short of the Surge at its November 2007 height.³²⁸ While the violence occurred too late to halt Spring 2006 withdrawals, the rest of the “off-ramp” was canceled.³²⁹ Though Casey adjusted the campaign plan to try to surge forces towards Baghdad, there were simply not enough forces to go around. Moreover, sectarian violence became a vicious cycle, amplifying the ‘reluctance’ Casey noted of the Iraqi government to constrain Shia death squads operating within the Ministry of the Interior and fueling the worst fears which the Shia and the Sunni had about each other, at every level from the grassroots to the highest levels of government.³³⁰

Paradoxically, at the same time that violence was exploding within Baghdad (where security dilemmas fueled Sunni and Shia militia mobilization), the American military was poised to finally take advantage of political cleavages between Sunni tribal insurgents who opposed the Iraqi state and radical Islamists who wished to transform Iraqi society into a Sunni caliphate ruled by sharia law. Early success at Tal Afar, though not driven by what would later be termed an awakening group, had persuaded American military leaders in the region that something different was possible, that social forces could be mobilized for

³²⁷Casey, *Strategic Reflections*, p. 92.

³²⁸Amy Belasco. *The Cost of Iraq, Afghanistan, and Other Global War on Terror Operations Since 9/11*. Washington, D.C.: Congressional Research Service, 8th Dec. 2014, p. 106.

³²⁹Casey, *Strategic Reflections*, p. 113.

³³⁰Ibid., pp. 91–92.

the Coalition and against Al-Qaeda in Iraq (AQI).³³¹ But Tal Afar was hundreds of miles north of Baghdad, far removed from the sweeping vortex of violence and power-struggle that characterized the so-called Sunni Triangle west of Baghdad. This area, encompassing Sunni neighborhoods in Baghdad and the outlying suburbs, stretching out to Ramadi, Fallujah, Tirkat, and Baqubah, was the heartland of both the Sunni insurgency and AQI, and a deadly source of resistance to the Coalition and the Iraqi national government. After the invasion, the area had been relatively quiet due to an explicit agreement set between the coalition and tribal leaders which essentially allowed them to police themselves. But Shia political ascendancy, combined with an outright hostility to the tribes having anything to do with Iraqi governance in official CPA policy had soured these relations and turned the triangle into an incubator for anti-government, anti-American actors. For years, the Marines responsible for the area, along with the CIA and JSOC assets concentrated in the region, had been attempting to foster a divide between what MNF-I called “Sunni rejectionists” (which was, in practice, almost every Sunni political actor in the area to one degree or another) and actual, vested Islamists who planned to develop a Caliphate there.³³² And yet, these efforts had always failed; the Sunni insurgency was not fueled by a lack of development/employment or by a dislike for the insurgency, but due to the actual political conditions which obtained between the Shia-dominated federal government and traditional Sunni power-networks.³³³ Marines who prided themselves on their light touch in counterinsurgency, fueled by the proud tradition of the *Small Wars Manual*, were in for a rude awakening.³³⁴

Even before the February 2006 Samarra Mosque bombings and the wave of sectarian attacks AQI unleashed, many Sunni tribal leaders were unsatisfied with AQI’s targeting of civilian Iraqis (whether for moral or pragmatic reasons) and the tribe’s diminished status in Sunni communities.³³⁵ Between 2003-6, there were at least four other nascent “awakening” type tribal movements before the Anbar Awakening, all of which ended violently and unsuccessfully for their proponents.³³⁶ While a full accounting of the Anbar Awakening is

³³¹George Packer. ‘The Lesson of Tal Afar’. *The New Yorker* (10th Apr. 2006).

³³²Gordon and Trainor, *The Endgame*, p. 241.

³³³For a thorough take-down of good governance counterinsurgency theory as applied to Anbar province, see Douglas Porch. *Counterinsurgency: Exposing the Myths of the New Way of War*. New York: Cambridge University Press, 2013, Ch. 10.

³³⁴David Morris. ‘The Big Suck: Notes from the Jarhead Underground’. *Virginia Quarterly Review* (Winter 2007 2007).

³³⁵These efforts were not necessarily civic-minded. AQI financed itself primarily through criminal activity, and apparently this cut into the profits of a number of the tribes, who did the same thing (Nicholas J. Schlosser. *The Surge*. Washington, D.C.: Center for Military History, 2017, p. 36).

³³⁶Berman, Shapiro and Felter, *Small Wars, Big Data*, pp. 174–5.

beyond the scope of this project, suffice it to say that the Marines leading in MNF-West (the Area of Operations in Anbar Province) desired for a long time to bring about an Awakening movement, but had not been able to succeed in getting one going due to policy and resource constraints on the Marines (including a reluctance to work with tribal militias) and Sunni elite political dynamics.³³⁷ And so, when this awakening movement began, the challenge was for local Marine leaders to assess what it meant, what would be needed to nurture it, and how the message could be spread.

Assessing a potential realignment of Sunni insurgency movements was a vital task in MNF-W by 2005-6. In late 2005, then-Major Ben Connable argued that MNC-I and MNF-I may have missed an opportunity, as rates of violence in Anbar plummeted to their lowest levels since 2003 in the wake of the 2005 parliamentary elections. In keeping with the overall campaign plan, Casey interpreted lulls in violence as progress towards defeating the insurgency, leading him to continue withdrawals, rather than as opportunities to break the back of a chastened insurgency.³³⁸ And so the challenge for junior officers in the field and intelligence and operations staff at the divisional level and higher was to both come to an understanding of what was going on and to make the case to higher headquarters.

We spent an extraordinary amount of time preparing ourselves intellectually for what we would face in the Anbar Province....And so understanding the human terrain, understanding the dynamics of the social fabric into which we were ultimately thrust gave us, I think, a number of opportunities....We really sensed that something was changing dramatically in the battle space, and we were very familiar with, and very aware of, the previous tribal attempts to organize, and how those had either failed or been stamped out by al Qaeda.³³⁹

A critical part of assessing the nascent Awakening was developing indicators and metrics that fit the strategic narrative the Marines were building; these 'objective' factors both confirmed trends the Marines believed they were seeing and allowed them to make a more effective case to MNC-I and MNF-I leaders (not to mention Washington policymakers and

³³⁷For a fuller accounting, see the five volume official history, *The Anbar Awakening*, including Timothy S. McWilliams and Kurtis P. Wheeler, eds. *Al-Anbar Awakening: Volume 1, American Perspectives*. Vol. 1. 5 vols. US Marines and Counterinsurgency in Iraq, 2004-2009. Quantico, VA: Marine Corps University Press, 2009. Note especially Interview 8, the comments of Marine intelligence officer Major Ben Connable (1st Marine Division Intelligence Operations Officer 2003-2004 and I and II MEF senior intelligence analyst 2005-2006).

³³⁸*Ibid.*, p. 128.

³³⁹Stuster, *Ends and Means [Transcript]*, Gen. John Allen Commentary.

influencers) that the US should invest resources in the previously recalcitrant Anbar. As he was preparing to take over command of MNF-W, Gen. John Allen brought onboard a civilian ORSA from CNA (a reachback support organization), Jonathan Schroden, to work with MNF-W to assess what was going on in Anbar. Beginning with the progress being made in Ramadi, Marine leaders could sense that something different was going on, that there was a sea change in Al Anbar, but these facts had yet to be appreciated by the broader US military.³⁴⁰ Working with the MNF-W Assessments Cell, Schroden developed a number of alternatives to simple counts of incidents, attacks or casualties, which (as veteran Vietnam assessors would have said) can be casually ambiguous. One was a measure of incident initiation (Figure 3.6), the intuition being that the metric would reflect improved Coalition intelligence and local support.³⁴¹ Another was a ratio of IED incidents to cache discoveries, as well as the number of tips; both suggested the extent to which civilians were cooperating with the Coalition.³⁴² One junior officer tasked his men with tracking the number of meals they were invited to by locals on their patrols (inadvertently re-discovering a CAP-era metric).³⁴³ With metrics like these (married to impressionistic, view-from-the-ground assessments), the Marines were able to develop a strategic narrative and provide detailed and persuasive evidence that Anbar was turning around and needed additional support, even when some of the conventional metrics (like overall incident levels) had not yet turned.

Towards the Surge

MNF-I assessments in Summer 2006 were not encouraging. The uptick in violence instigated by a vicious cycle of attacks between Sunni and Shia groups threatened to undo whatever fragile institutional gains had been made. A Red Team assessment concluded in July 2006 that MNF-I did not have the resources to accomplish its security mission.³⁴⁴ Moreover, it was clear that many units of the Army and National Police were unable or unwilling to work with the Coalition on population security; others that were “willing” were partisan outfits with ties to Shia militias. Moreover, the Iraqi parliament had still not formed a government, and the

³⁴⁰McWilliams and Wheeler, *Al-Anbar Awakening: Volume 1, American Perspectives*, pp. 229–230.

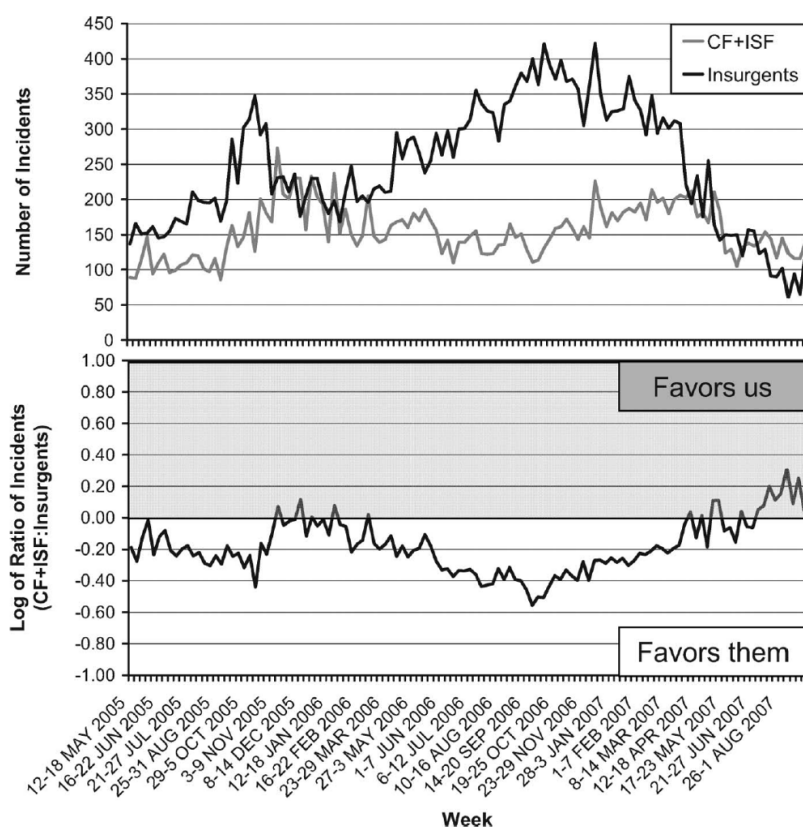
³⁴¹This was a classic Thayer metric from Vietnam. While Schroden later found and read Thayer’s *The War without Fronts*, it appears this innovation was independently arrived at.

³⁴²Jonathan J. Schroden. ‘Measures for Security in a Counterinsurgency’. *Journal of Strategic Studies* 32.5 (Oct. 2009), pp. 715–744.

³⁴³Jeannie L. Johnson. *The Marines, Counterinsurgency, and Strategic Culture: Lessons Learned and Lost in America’s Wars*. Washington, DC: Georgetown University Press, 2018, p. 196.

³⁴⁴Gordon and Trainor, *The Endgame*, p. 161.

Figure 3.6: Alternative Metrics in Anbar Province



From Figure 2 Jonathan J. Schrodin. 'Measures for Security in a Counterinsurgency'. *Journal of Strategic Studies* 32.5 (Oct. 2009), pp. 715–744, p. 727.

Americans viewed the likely winner (Jaafari) as indecisive, intractable and unacceptably pro-Iranian: the American ambassador worked directly behind the scenes to shape the formation of a government under Nouri al-Maliki.³⁴⁵ Though Casey attempted to “persuade” new Iraqi Prime Minister Maliki of the problems surrounding Shia infiltration, he was not successful.³⁴⁶ By this point, there was an extensive, White House led policy review underway, and so MNF-I staff were simultaneously engaging in 2007 Campaign Planning while preparing for a possible change. While the strategy remained unchanged, it was clear that institution-building would not work in the absence of security, and so Casey and his civilian counterpart Ambassador Khalilzad planned to surge forces (including theater reserve forces) into Baghdad to provide security and separate feuding areas. While not asking for significant additional forces, he stipulated that he would push them into the “belts” surrounding Baghdad (which MNC-I intelligence had shown to be crucial for insurgent freedom of action), Diyala and Anbar. But, Casey felt, any additional forces needed to be met by a commitment from the Iraqi federal government to pursue reconciliation.³⁴⁷

Even though it is nowhere found in assessments doctrine, as practiced at the highest levels of the American military, projected civilian policy and domestic political considerations find their way into recommended courses of action, as organizational and environmental pressures balance each other out. Casey’s strategy was predicated on finding a politically sustainable way forward in Iraq: Casey pointed out that the average successful 20th century counterinsurgency took nine years.³⁴⁸ In the leadup to the Surge and the years thereafter, Abizaid and Casey were criticized for withdrawing troops from urban bases to larger Forward Operating Bases (FOBs) and for relying on a strategy of transitioning the lead role in counterinsurgency to the Iraqi Security Forces.³⁴⁹ While Abizaid and Casey did have some evidence to support their purported beliefs (namely, polling data on Iraqi views of the coalition), it now seems evident that the so-called “antibody” strategy (which held that resentment of American troops was one factor fueling the insurgency) was a practical adaptation to policy guidance. Though Casey himself believed that locating forces on bases outside of cities was a ‘losing strategy’ for counterinsurgency, he was under significant policy and budgetary pressure to

³⁴⁵Dexter Filkins. ‘What We Left Behind’. *The New Yorker* (21st Apr. 2014).

³⁴⁶Daniel Bolger. *Why We Lost: A General’s Inside Account of the Iraq and Afghanistan Wars*. Boston: Eamon Dolan/Houghton Mifflin Harcourt, 2014, p. 230.

³⁴⁷Gordon and Trainor, *The Endgame*, pp. 293–295.

³⁴⁸Casey, *Strategic Reflections*, p. 45.

³⁴⁹Gordon and Trainor, *The Endgame*, pp. 162–163.

close bases and reduce expenses; MNF-I controlled about as many troops in country in 2005 as in 2008, but had twice the budget in 2008 (\$144 Billion).³⁵⁰ Similarly, Office of the Secretary of Defense (OSD) made it clear that a rapid transition to Iraqi Security Forces and the continuing consolidation of bases was the Secretary's policy, and, anyways, one "lesson learned" from the past insurgencies that Casey had studied since taking over MNF-I was the importance of the host nation learning to do internal defense themselves.³⁵¹ In a March 2005 email to Ambassador Negroponte, Casey cautioned that this approach would only work if the new government drew the Sunnis into the political process; did not undo important institutional and leadership reforms; and did not politicize Iraqi institutions.³⁵² The new Shia government would go on to flout every one of those considerations. There is also a certain cold-eyed strategic logic that Casey invoked; as long as coalition forces were present in force and acting to provide security, there was insufficient pressure to force a political solution.³⁵³ Still, it is telling that, as we will see in Chapter Four, in the areas where Casey had the most discretion (military operations and procedures themselves), he attempted to implement full-throated counterinsurgency from 2004 on. And so, it is myopic to accuse Casey of making poor military strategy, when said strategy was in line with his reasonable expectations for the resources which would be available to MNF-I and the policy under which it would operate.³⁵⁴ Put simply, President Bush's decision to double-down on Iraq in the December 2006 surprised many veteran White House watchers: it seems unreasonable to criticize operational military leaders thousands of miles away for not envisioning it, or for not advocating more vigorously for a politically unpopular, risky strategy that their civilian leadership opposed. For that, they would have to rely on the insurgency *within* the military.

As it had in Vietnam, the gap in assessments between public optimism and private pessimism reached a boiling point in 2006; unlike in Vietnam, the military's own internal formal

³⁵⁰Casey, *Strategic Reflections*, pp. 44–45; Gordon and Trainor, *The Endgame*, p. 138; Belasco, *The Cost of Iraq, Afghanistan, and Other Global War on Terror Operations Since 9/11*.

³⁵¹Transitioning responsibilities to Iraqis were a repeated concern in memorandum from Rumsfeld to Casey, as was continuing reduction of troop levels (see, for instance, Donald Rumsfeld. 'Troop Disposition in Iraq'. Rumsfeld Papers. 30th Oct. 2006). As late as *December 2006*, after his resignation was announced, the Secretary continued to encourage the closing of bases and the drawdown of forces in Iraq (Donald Rumsfeld. 'Iraq Policy: Proposal for the New Phase'. Rumsfeld Papers. 8th Dec. 2006).

³⁵²Gordon and Trainor, *The Endgame*, p. 138.

³⁵³Casey, *Strategic Reflections*, p. 108. This was probably a riskier strategy than Casey realized at the time, though it was also the product of domestic political pressure. Still, Casey was later proven right that robust American military action merely delayed an attempt at a political solution.

³⁵⁴He later admitted that (regarding changes in American policy starting in Summer 2006) "I should have forced a more in-depth discussion with my civilian leadership about their strategic expectations" (*ibid.*, p. 168).

and informal assessments were diametrically opposed to the policy - in other words, organizational and environmental pressures were pushing in opposite directions, and environmental pressures were winning. Perhaps to an unprecedented degree, the American military in Iraq resisted civilian policy direction, in keeping with what was viewed as military necessity. In the CPA years, the DoD demurred from CPA oversight, undertook public goods provision, security training, and working with local militias against the CPA's wishes and despite official US policy. Official direction to stand-up and support Iraqi national police and Army units as they took control of security in Baghdad faced growing resistance, even disobedience, as commanders on the ground observed the sectarian violence they contributed to, even participated in. Quietly, senior military leaders worked with staffers and policy-makers in the State Department and NSC to push back *against* DoD's official policy agenda.³⁵⁵ MNC-I commander Peter Chiarelli, on background, arranged for Western media to expose the depth of issues the Coalition was having with its Iraqi partners, earning his boss's ire.³⁵⁶ Eventually, this divide culminated in the Revolt of the Generals - over six recently retired generals calling directly for Donald Rumsfeld's resignation, an event perhaps unparalleled in the annals of American civil-military relations.³⁵⁷ While Bush's dissatisfaction with Rumsfeld had grown over time, the Secretary's loss of military support was a critical factor in Bush's choice to replace him in October 2006 (a decision not announced until after the midterm Congressional elections). Where Rumsfeld had maintained his laser-focus on "transformation," the new Defense Secretary, Robert Gates, would be committed to putting the wars in Iraq and Afghanistan first.³⁵⁸

This internal military "insurgency" worked together with White House staffers, influential journalists, and connected think tank denizens to advocate for a change in strategy in Iraq, coming from the very top. It worked to instigate and then influence simultaneous reassessments in the White House NSC and, through the ad-hoc "Council of Colonels", in the JCS.³⁵⁹ Rather than try to support the hapless Iraqi security forces in providing the security necessary for reconstruction efforts, the COINdinistas argued that American forces needed to do it themselves to quiet down the conflict so that rebuilding would begin; for that, more troops were needed, along with a new strategy and new leadership.³⁶⁰

³⁵⁵See example Kaplan, *The Insurgents*, p. 231; Gordon and Trainor, *The Endgame*, p. 301.

³⁵⁶Gordon and Trainor, *The Endgame*, pp. 228–229.

³⁵⁷Martin L. Cook. 'Revolt of the Generals: A Case Study in Professional Ethics'. *Parameters* (Spr. 2008).

³⁵⁸Robert Michael Gates. *Duty: Memoirs of a Secretary at War*. New York: Alfred A. Knopf, 2014, p. 18.

³⁵⁹Kaplan, *The Insurgents*, pp. 284–286.

³⁶⁰For the conventional narrative, see Kimberly Kagan. *The Surge: A Military History*. New York: En-

3.3.3 Adapting the Metrics and Assessment System to the Conflict (2007-2011)

One of the first things that the new MNF-I commander did after arriving with his new team was engage in a bottom-to-top reassessment of the war, at the same time that he was re-writing the campaign plan and overseeing the war. Though it was formally born in March 2007, Petraeus had de facto established the Joint Strategic Assessment Team (JSAT) as his brain trust a few months earlier, and stocked it with historians, social scientists, military free-thinkers, and rogue intelligence analysts.³⁶¹ Their initial assessment was, as he put it in a note to Gates, “accurate, forthright, and a bit disheartening.” The crux of the issue was that MNF-I under Casey had engaged in a counterinsurgency strategy, but focusing primarily on the Sunni insurgency and AQI, while ignoring the continued weaknesses of the Iraqi state and the role that the US played in preventing the emergence of a civil war. The internecine power struggle which the US had effectively made worse by its emphasis on strengthening the power of the Iraqi government was worsened by a “proxy war” being raged by Iran’s Quds Force and by Syria, for their own purposes.³⁶² An un-trumpeted aspect of this change in strategy was a reversal of the emphasis on Iraqi sovereignty and putting an Iraqi face on Coalition activity.³⁶³ Though Bush would stand side-by-side with Maliki to sign a “statement of principles” and emphasize that American and Iraqi forces would work together, the Surge was an American strategy, and Petraeus and Crocker were going to do everything they could to prevent the Iraqi government from getting in the way.³⁶⁴ While the Joint Strategic Assessment Team (JSAT)’s analysis and recommendations were essentially in line with MNF-I’s thinking in 2006, its truly new contributions were in the realm of political strategy. To succeed in Iraq, the American government had to take a hands-on approach to shaping the Iraqi state, at every level and often against Iraqi wishes, especially to root out

counter Books, 2008. For a less hagiographic interpretation, see Colonel Gian Gentile. *Wrong Turn: America’s Deadly Embrace of Counterinsurgency*. New York: The New Press, 2013; Carter Malkasian. *Illusions of Victory: The Anbar Awakening and the Rise of the Islamic State*. Oxford ; New York: Oxford University Press, 2017.

³⁶¹Gordon and Trainor, *The Endgame*, p. 354.

³⁶²*ibid.*, pp. 356–7. In a later review, Casey and his staff would note that their assumptions and prescriptions were essentially identical to the Surge strategy: what differed was the resources available and the political direction (Gentile, *Wrong Turn*, p. 107).

³⁶³Gordon and Trainor, *The Endgame*, p. 334. For an enlightening discussion of how the emphasis on sovereignty had operational effects, see Casey, *Strategic Reflections*, pp. 170–172.

³⁶⁴Filkins, ‘What We Left Behind’; Stephen Benedict Dyson. ‘George W. Bush, the Surge, and Presidential Leadership’. *Political Science Quarterly* 125.4 (2010), pp. 557–585.

the militias and overly sectarian officials.³⁶⁵

At the same time that he was engaging in strategic re-assessment, General Petraeus was reshaping campaign assessment at the MNF-I level and, working with the new MNC-I commander LTG Ray Odierno, at the corps level as well. American military commanders tend to have a tremendous latitude for shaping assessments processes in their commands (outside of what are demanded for their superiors). General Casey had not relied intensively on metrics, preferring event milestones and traditional narrative reporting (though, due to the long time lines involved for his campaign goals, he resorted to metrics for management and reporting).³⁶⁶ Petraeus, in contrast, took a metrics-heavy approach, pushing his assessments team to generate both conventional and unconventional ways of taking stock of the environment and measuring progress in Iraq, and encouraging his subordinates to do the same.³⁶⁷ Petraeus' emphasis on metrics did not appear to arise from a preference for the quantitative, but as part of a broader information-heavy assessments process, marrying high-volume data with frequent coordinating meetings. The BUA, which had been a routine affair for Casey, soon became a vital coordination tool, as thousands of civilian and military participants joined in in-person and via VTCs.³⁶⁸ Afterwards, Petraeus would sometimes meet with a 'small group' and even a second, even smaller group for discussions of particularly sensitive matters.³⁶⁹ As much as an information source, Petraeus used the BUA as a management and messaging tool, showing his subordinates and civilian counterparts what was important and what he was paying attention to. Information sources that he wanted to included in the BUA became items that needed to be produced by MNF-I staff and often, therefore, tracked by units in the field. More often than permanent additions to the BUA (though there were a few), these were temporary requests for information to help Petraeus think through or communicate about specific issues.³⁷⁰

In order to support Petraeus' preferred information streams, the theater-wide data-sharing infrastructure had to be improved. Funding was appropriated to improving CIDNE (which replaced FusionNet as the system-of-record in November 2006), and by September 2007 one or

³⁶⁵Gordon and Trainor, *The Endgame*, pp. 358–359. Ambassador Robert Ford recommended a “lamp post strategy” for Iraqi officials with blood on their hands.

³⁶⁶Casey, *Strategic Reflections*, pp. 168–170.

³⁶⁷Schroden, ‘Measures for Security in a Counterinsurgency’.

³⁶⁸Most of Casey's metrics apparently stayed the same for almost two years (Center for Army Analysis, *Deployed*, p. 83).

³⁶⁹Peter R. Mansoor. *Surge: My Journey with General David Petraeus and the Remaking of the Iraq War*. New Haven: Yale University Press, 2013, pp. 92–93.

³⁷⁰*Ibid.*, p. 100.

two ORSAs worked for hours each day just cleaning data from CIDNE for the new SIGACTs III database.³⁷¹ Previously, ORSAs had pulled raw data out of CIDNE and cleaned it for use in assessments. This data was not, however, as accessible to the wider community or re-uploaded to CIDNE. The updated SIGACTs III was accessible, (relatively) accurate, and was able to support a broad number of fields and data hierarchies useful for more sophisticated analyses.³⁷² By this time, the SIGACTs III database had become the “key enabler for the Corps and Force analytical community” and a key data source for leadership reports across the chain of command.³⁷³ CAA ORSAs also built in special Baghdad shapefiles for the database, improving analysts’ ability to search and draw results geographically.³⁷⁴ By now, MNC-I and MNF-I employed 11 and 14 ORSAs, respectively, with even more civilian augmentees, researchers working in the United States, and ORSA-trained military officers.³⁷⁵

Petraeus soaked up information as part of an impressionistic assessments process in other ways. He built several days of battlefield circulation visits into his “battle rhythm”.³⁷⁶ He would routinely take helicopter flights over Baghdad in order to gather ‘at-a-glance’ impressions of life in the city: whether children were playing, markets or parks open, electricity on, and whether there were signs of violence (like wreckage or smoke).³⁷⁷

Petraeus’ voracious appetite for information was not merely the reflection of his intellectual predilections. He had a Surge to sell, and he needed data to do so. From the start, Petraeus was aware that he had less than six months to show some kind of progress in Iraq and to win the confidence of the administration, Congress, and the American people (not to mention, the Iraqi public). Worse yet, the Surge brigades would not begin arriving until the summer; while he could make some operational adjustments, he would not have what he needed to fully implement his population-centric, Baghdad-centric strategy until July. And so, Petraeus set out on a messaging blitz, attempting to find, nourish, and spread word of positive trends in Iraq (the Anbar Awakening being the most notable). Gen. Petraeus was interested in using metrics to shape strategic narratives both within Iraq and in Western media; under Petraeus, ORSA analysts began including media talking points in their weekly reports and distributed them as “Command Messages” so that field commanders and PAOs

³⁷¹Center for Army Analysis, *Deployed*, pp. 81, 112–113.

³⁷²*Ibid.*, pp. 82–83.

³⁷³*Ibid.*, p. 79.

³⁷⁴*Ibid.*, p. 87.

³⁷⁵*Ibid.*, p. 83.

³⁷⁶Mansoor, *Surge*, p. 99.

³⁷⁷Gordon and Trainor, *The Endgame*, p. 333; Mansoor, *Surge*, p. 101.

would be on message.³⁷⁸

General Petraeus was under enormous pressure to message progress; his success or failure in messaging would have direct operational consequences. Having taken control of both houses of Congress in the November 2006 elections, the Democrats were eager to end the war in Iraq, and strongly opposed Bush's new surge policy, with they viewed as foolhardy and unlikely-to-succeed. In February 2007, the House decisively passed a non-binding resolution condemning the Surge, with more than a few Republican votes. A few months later, the House and Senate passed a bill ordering America's withdrawal from Iraq by October 1st. On the fourth anniversary of his "Mission Accomplished" speech, President Bush vetoed the bill.³⁷⁹ After tense negotiations (and the political death warrant of failing to 'support the troops' looming), the Congress passed an appropriations bill that funded the war through September, and made future funding contingent on meeting a number of explicit military and political benchmarks.³⁸⁰

The White House report found "satisfactory" progress on 11 of 18 benchmarks.³⁸¹ Petraeus' 9010 report to Congress reported much similar findings.³⁸² However, the independent Government Accountability Office (GAO) was much more pessimistic, finding that, of the benchmarks not essentially under American control (like deploying additional American brigades and setting up Joint Security Stations (JSSs)), only one part of one benchmark had been met.³⁸³ One Congressman accused General Petraeus of "cherry-picking statistics" and "massaging information" and compared the report to Gen. Westmoreland's 1967 speech to Congress where he touted American progress.³⁸⁴ But the confidence and charisma of Gen. Petraeus and Amb. Crocker, combined with the apparent decline in violence, bought additional time for the strategy, even as middling progress was made on the political benchmarks

³⁷⁸Center for Army Analysis, *Deployed*, p. 86.

³⁷⁹Anne Flaherty and Jennifer Loven. 'Bush Vetoes Troop Withdrawal Bill'. *Washington Post* (2nd May 2007).

³⁸⁰Karen DeYoung and Jonathan Weisman. 'House Bill Ties War Funding to Iraq Benchmarks' (9th May 2007).

³⁸¹National Security Council. *Initial Benchmark Assessment Report*. 12th July 2007. URL: <http://web.archive.org/web/20080213031036/https://www.whitehouse.gov/nsc/iraq/2007/FinalBenchmarkReport.pdf>.

³⁸²Multi-National Force Iraq. *Charts to Accompany the Testimony of Gen. David H. Petraeus*. 10th–11th Sept. 2007.

³⁸³Government Accountability Office. *Securing, Stabilizing, and Rebuilding Iraq*. GAO-07-1195. Washington, D.C.: Government Accountability Office, Sept. 2007. The difference was that, essentially the White House was a) very generous with grading progress in things like reducing the partisanship of the Iraqi Army or ensuring minority rights and b) counted various non-binding actions like forming committees or drafting (but not passing) legislation as "satisfactory."

³⁸⁴David S. Cloud and Thom Shanker. 'Petraeus Warns Against Quick Pullback in Iraq'. *The New York Times*. *Washington* (11th Sept. 2007).

that were supposed to be the criterion for decision.³⁸⁵

Even as the leaders of America's efforts in Iraq looked to re-formulate political strategy and buy time, organizations and people in theater continued to scale their efforts. By this time, JIEDDO was a program of record with billions of dollars in funding and broad authorities to spend it, rapidly. JIEDDO took at times a creative approach to what it could fund, contributing to developing software and network capacities that could re-purposed for other kinds of analysis and funding the pilot project for what would become the Human Terrain System (HTS).³⁸⁶ JIEDDO and the counter-IED Task Force Troy even paid for analysts to work at the Brigade Combat Team (BCT) level to ensure super-detailed, high-quality IED data reporting.³⁸⁷ JIEDDO's "Attack the Network" programs paid for a diverse array of tools and capabilities that also contributed to assessment and analysis, including training forensics and biometrics collectors and analysts, building a cadre of network analysts both in Iraq and the US, and software allowing members to connect the dots more easily.³⁸⁸

The Human Terrain System (HTS) began as an urgent requirement request in both Iraq and Afghanistan in 2005. American commanders on the ground felt that counterinsurgency was being hampered by a lack of awareness of local cultures: not generic national cultural factors but dynamics that might be specific to a small geographical area. Moreover, American officers (besides being loaded with other responsibilities) did not have the time nor the skills to analyze and operationalize local culture. The HTS was an attempted solution: an expeditionary anthropology team to help local commanders learn about and work within the cultures they were facing. Moreover, the Human Terrain Teams (HTTs) that formed the heart of the program provided geographic continuity, as they were permanently geographically located and used individual rotation, smoothing over knowledge loss when units rotated out. By 2008, the HTS had a budget of over \$150 Million and dozens of HTTs.³⁸⁹

From nearly the beginning, social scientists had been interested in assisting with the war effort, and had made contributions on and off. But Petraeus made a point of integrat-

³⁸⁵See Peter D. Feaver. 'The Right to Be Right: Civil-Military Relations and the Iraq Surge Decision'. *International Security* 35.4 (2011), pp. 87–125.

³⁸⁶Janice H. Laurence. 'The Human Terrain System'. General David Petraeus. *Social Science Goes to War*. Ed. by Montgomery McFate and Janice H. Laurence. Oxford University Press, 1st Nov. 2015, pp. 291–316. URL: <http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780190216726.001.0001/acprof-9780190216726-chapter-11>, p. 299.

³⁸⁷Center for Army Analysis, *Deployed*.

³⁸⁸Connable et al., *Modeling*, p. 24.

³⁸⁹Montgomery McFate and Steve Fondacaro. 'Reflections on the Human Terrain System During the First 4 Years'. *PRISM* 2.4 (2012), pp. 63–82.

ing historians and academics into his JSAT and other efforts, and from his tenure on, the floodgates opened. In particular, widespread interest in Iraq met an increasing emphasis in the academy on quantitative approaches to the study of violence (and especially civil war) at just the right time. Using sophisticated techniques married with data from CIDNE and other proprietary sources, these academics, many affiliated with the Empirical Studies of Conflict Project, began to provided operational-level insights on the best uses of aid; on the role of cell-phone towers in generating tips; and on the causes of early Surge success (the combination of the Awakenings and the surge had done the trick).³⁹⁰ These one-off academic efforts were matched by new sources of funding from DoD, member organizations of which were eager to get on-board with the new command priorities. Of particular note was the Minerva program, which allowed officials in the DoD policy shop to identify urgent efforts and devote substantial resources to them.³⁹¹

Some of the most interesting and innovative assessments works actually occurred as violence declined across the country. Throughout the war, an official assessments doctrine called Effects-Based Operations (EBO) had dominated many assumptions, especially through the work of ORSAs. In essence, Effects-Based Operations (EBO) takes a system-of-systems approach to identifying enemy vulnerabilities, mapping them onto effects which the military can reliable achieve, and assessing those effects. The problem that senior leaders like McMaster and Mattis had with EBO is that it takes operations out of their holistic, political contexts and assumes even effects over time; Mattis's ascent to commander of Joint Forces Command allowed him to put the global kibosh on EBO.³⁹² Moreover, while EBO had a certain logic in militarized settings, it made even less sense in the later stages of counterinsurgency, where "progress" entailed coordinating political, economic, and military concerns. So in its place, forces in Iraq and later Afghanistan began experimenting with semi-structured qualitative assessments designed to provide at-a-glance legibility of complex trends. While at times this led to simplistic and problematic "stoplight charts", where programmatic weightings of variables "rolled up" into higher levels of analysis, it also led, at times, to innovation. Commanders were able to identify what trends were important in their areas, develop measures of those trends, and report on those up the chain of command. Other experiments were conducted

³⁹⁰Berman, Shapiro and Felter, *Small Wars, Big Data*, Ch. 3-5.

³⁹¹Montgomery McFate and Janice H Laurence. *Social Science Goes to War the Human Terrain System in Iraq and Afghanistan*. 2015, p. 89.

³⁹²Connable, *Embracing*, p. 281.

with using “layered, contextual, and carefully analyzed” assessments.³⁹³

By the time American efforts in Iraq began to wind down in 2010 and 2011, a plethora of data streams were being used in Iraq and across the theater, not only for incident analysis but for pattern detection and decision support for the counter-IED and counter-terrorism fights, for tracking development projects, and for any number of other concerns. By the time the United States left, in addition to CIDNE/SIGACTs III, the US controlled datasets on Mosque Sermon Trends, Arb’een/Ashura Trends, Attacks Following Surge/Transfer of Authority, Foreign Fighter Flow, Insurgency Size, and more.³⁹⁴ But while military officials attempted to put a positive spin on the withdrawal, their politically attuned assessments processes, not to mention standard narrative campaign assessments, suggest that major political milestones needed for Iraqi security had yet to be reached.³⁹⁵

3.3.4 Drawdown

The lack of specialized in-country personnel, combined with unit rotation, made Iraq’s information environment more malleable, but also more fragile and destructible. In Vietnam, the Army still had specialized MOSs for computer programmers to run computer systems (along with civilian personnel who often had some longevity) and special file clerks to track files and documentation. These ensured that all efforts were continuous and intelligible, and that records were saved in accordance with the law. But these MOSs were done away with after technology enabled officers and soldiers to perform similar roles with less specialized training and software. As a result, outside of centralized databases like CIDNE, data retention was haphazard, and much was lost.³⁹⁶

While there have been doctrinal changes and “lessons learned” regarding the Standing Joint Force Headquarters (SJFHQ) and Joint Task Force (JTF) standup processes (such that later stand-ups did not have the same issues), there still is no doctrinal guidance on comprehensive assessment for counterinsurgency campaigns, nor does it appear that such

³⁹³Jonathan Schroden. ‘A Best Practice for Assessment in Counterinsurgency’. *Small Wars & Insurgencies* 25.2 (4th Mar. 2014), pp. 479–486; Ben Connable and Martin C. Libicki. *How Insurgencies End*. Santa Monica, CA: RAND, 2010.

³⁹⁴Center for Army Analysis, *Deployed*. Moreover, when US forces return home, they brought with them one of the first military biometrics databases ever (Spencer Ackerman. ‘U.S. Holds On to Biometrics Database of 3 Million Iraqis’. *Wired* (21st Dec. 2011)).

³⁹⁵Rick Brennan. ‘Withdrawal Symptoms: The Bungling of the Iraq Exit Lessons from a Decade of War’. *Foreign Affairs* 93 (2014), [i]–36.

³⁹⁶John Spencer. ‘How the Military Is Making It Hard to Remember Our Wars’. *Washington Post. Outlook Perspective Discussion of news topics with a point of view, including narratives by individuals regarding their own experiences* (10th Nov. 2017).

guidance is likely to emerge.³⁹⁷ The next time that the United States enters into a complex counterinsurgency campaign, it is likely to do so with essentially a blank slate when it comes to assessment. Just as with Vietnam and Iraq, assessments structures in the future will be built adaptively, evolutionarily, and on-the-fly. As the Army Counterinsurgency Center identified in its official Lessons Learned for Iraq regarding Assessments and Metrics: “no lessons recorded at this time”.³⁹⁸

Cultural Knowledge and The Human Terrain System

While the HTS was technically a permanent “program of record” under US Army Training and Doctrine Command (TRADOC), its funding was heavily dependent on other organizations, Congress was skeptical, and it was expensive. As early as 2012, its managers tried to pivot to “Phase Zero” operations, which would involved sending small teams in peacetime to conduct anthropological analysis of local populations, a mission which evidently did not excite HTS’s funders within the military or the House Armed Services Committee, which had always been somewhat skeptical of its value to the taxpayer. Despite arguments that it ought be retained as a residual capacity for future wars, it ended with a whimper on September 30, 2014.³⁹⁹ Among other items, it was the victim of the emerging belief by many in the military that people are not terrain, and that cultural knowledge within tribal culture was *so* specific that anthropologists did little better than military officers at getting to understand their immediate surrounds.⁴⁰⁰ The HTS was only one part of a broader intellectual apparatus which was spun up or augmented for Iraq. Many of these organizations are already being hit by budget cuts. The Army’s Peacekeeping and Stability Operations Institute (a post-1993 effort that had been greatly expanded during the wars in Iraq and Vietnam) is on the verge of being defunded, not fitting in with the Army’s current strategic concept.⁴⁰¹ This does not include all of the academic research and reachback support which was robustly funded,

³⁹⁷Connable, *Embracing*, p. 171.

³⁹⁸John Paganini, ed. *Counterinsurgency Lessons Learned*. 16th Nov. 2011. URL: <https://usacac.army.mil/cac2/AIWFC/repository/Counterinsurgency%20Lessons%20Learned%2016NOV11.pdf>.

³⁹⁹Christopher J. Sims. *The Human Terrain System: Operationally Relevant Social Science Research in Iraq and Afghanistan*. Carlisle, PA: Strategic Studies Institute and U.S. Army War College Press, 2015; Roberto Gonzalez. *The Rise and Fall of the Human Terrain System*. 29th June 2015. URL: <https://www.counterpunch.org/2015/06/29/the-rise-and-fall-of-the-human-terrain-system/>.

⁴⁰⁰Conrad C. Crane. *Cassandra in Oz: Counterinsurgency and Future War*. La Vergne, UNITED STATES: Naval Institute Press, 2016, p. 214.

⁴⁰¹War on the Rocks Staff. *Save the U.S. Army’s Peacekeeping and Stability Operations Institute: An Open Letter*. 8th Aug. 2018. URL: <https://warontherocks.com/2018/08/save-the-u-s-armys-peacekeeping-and-stability-operations-institute-an-open-letter/>.

2006-2012 or so, and no longer.

ORSAs

Going into the Iraq War, ORSAs had little training for the role they ended up playing, of complex counterinsurgency assessor, database operator, and staff-wide trainer. It is possible that this expeditionary need in particular will be institutionalized. CAA is developing materials, doctrine, and training around preparing ORSAs for deployment and the proper use of ORSAs and reachback support in theater, but not necessarily continuing to teach counterinsurgency campaign assessment.⁴⁰² Indeed, experts suggest that the ORSAs community is in the midst of forgetting almost everything that was done in Iraq and Afghanistan.⁴⁰³

Doctrine

Doctrine is little better. Joint Doctrine 5-0 does include an entire chapter on assessment, but it remains notably vague, generic, and abstract. Counterinsurgency manuals 3-24 and 3-24.2 have only a few paragraphs on assessment, focused on metrics, with little regard given to what it takes to build and run a complex operational assessments process in counterinsurgency. Those who helped run the assessments processes in Iraq and Afghanistan do not feel the lessons of these wars have been institutionally embedded in substantial ways.⁴⁰⁴ Part of the problem is that an institutional seam runs along the assessments process (visible in the narrative above): staff officers in assessments billets receive *no* analysis training, and ORSAs receive *operations research* training (a specialized set of math-based analytical skills), not training for campaign assessments. Neither of these changed during the Iraq war, and no change appears likely now.

Reachback Support and Analysis

Research funding for reassessments or thinking about best-practices for assessment has mostly dried up. The Minerva Research Initiative has continued, by showing a great deal of flexibility and pivoting from a focus on counterinsurgency to being a general contracting vehicle allowing DoD to commission academic social science research on a variety of priorities loosely linked to the National Defense Strategy. However, as occurred between Vietnam and Iraq, there is

⁴⁰²Center for Army Analysis, *Deployed*, p. 224.

⁴⁰³Schroden, 'Why Operations Assessments Fail'.

⁴⁰⁴Ibid.

high likelihood that analytical tools useful for counterinsurgency assessments will continue to organically improve due to their “dual use” characteristics. Continuing refinement in social scientific techniques will shape the tools available the next time social science mobilizes for war.

3.3.5 Discussion: Adaptation and Analysis in Iraq

In Iraq, the United States military built the most sophisticated assessments system since its efforts forty years prior in Vietnam. Many of the most challenging aspects of doing national, campaign assessments in Vietnam were simple in Iraq, due to widespread American adoption of information technology and the American military’s investment in networks and communications beginning, in fact, with the 1st Signal Brigade in Vietnam. Setting up national data connectivity, database access, data management, and computing, while not a trivial task, was quick and routine, not a herculean effort. This also had a dramatic effect on the kinds of assessments that were done and metrics collected, because officers and analysts at the division, BCT, and even battalion level could and did conduct their own assessments and build their own analysis tools.

In this regard, almost everything that was done was learned “on the job”. ORSAs received operations research training but nothing on complex assessment or counterinsurgency assessment; those in operations, intelligence, or assessments billets, even if they had studied counterinsurgency strategy or tactics, had likewise received essentially no training. This lack of training was backed up by a lack of doctrine, and even a lack of accessible ‘lessons learned’ military history - apart from teasing clues in a few counterinsurgency gurus, those working assessments in CJTF-7 and MNF-I built their analysis skills, their systems, and their methodologies essentially from scratch, both for routine assessments and for periodic, larger-scale re-assessments.⁴⁰⁵ In Iraq, as MACV had in Vietnam, MNF-I produced unique, compelling and high quality data, not only through CIDNE but also through support from reachback resources. This task was made dramatically easier by widespread information technology, not only within MNF-I but also within targets of analysis, so that MNF-I was able to produce datasets as large or larger than what was produced in Vietnam, without any of the collection and generation infrastructure. They were then able to subject this data to sophisticated and computationally intensive techniques developed in the civilian world over the previous

⁴⁰⁵Ibid.

forty years. When Berman, Felter, and Shapiro (Ivy League scientists who had conducted analysis in Iraq with Defense Department funding) write that “demand and processing power have outpaced the actual data supply,” they are referring to a situation exactly the reverse of Vietnam.⁴⁰⁶

In Iraq, as in Vietnam, managing and messaging quickly became predominate functions for formal assessments, especially in the face of Congressional scrutiny. As with Vietnam, we would be wise not to confuse public testimony with private thinking. While a lack of archival data makes it difficult to firmly establish what was being said internally at the time (memoirs and post-hoc recollections being subject to hindsight bias), the evidence suggests that military assessments given to the public and to the White House were tailored to what it was believed the policy was and would be. Moreover, as in Vietnam, military leaders (especially General Petraeus and his team) were highly sensitive to the political bases of support for counter-insurgency and the need to cultivate public support. Despite concerns about data accuracy (especially for enemy and civilian casualty data), one is again hard-pressed to identify analytical mistakes deriving from these metrics. Rather, the biggest analytical failures emerged in the early years, prior to the creation of the assessments apparatus. In addition, realistic and often pessimistic assessment was continuous throughout - what remained difficult for the senior military leadership in Iraq was figuring out the range of end states acceptable to the American people, balancing those against the needs of an overstretched military, and making sense of political maneuvering in both Washington and Baghdad. Decisions that were held by the conventional wisdom to be the result of poor doctrine, assessment, or analysis were revealed to be far more easily traced to problems of organizational capacity, coordination, resources, and politics (including problems of Phase IV planning, training/retaining the Iraqi Army and police, counterinsurgency 2004-2006, responding to increased violence in 2006, failure to reform Iraqi political institutions during the Surge and the 2011 withdrawal).

Messaging the Surge and the Messaging Surge

The extent to which assessment systems and outcomes come to be shaped by messaging and managing factors can be seen in how the Surge was sold. In stark contrast to earlier official optimism about the war, President Bush, General Petraeus, and Ambassador Crocker starkly emphasized the danger America faced if Iraq continued its descent into chaos, and the hard

⁴⁰⁶Berman, Shapiro and Felter, *Small Wars, Big Data*, p. 43.

road ahead.⁴⁰⁷ Petraeus arrived in Iraq knowing he would shortly need to make a report to Congress in which he reported some tangible progress. This definitive political deadline produced strong organizational pressure to improve assessments, both by improving their messaging and by generating performance to drive metrical improvement (management).⁴⁰⁸ As a result, when it came time to assess the Surge in September 2007, even modest progress appeared to match or improve upon the expectations of many Americans and many on Capital Hill, at least enough to buy additional time.

A careful reading of the academic writing of the COINdinistas (Petraeus, Kilcullen, McMaster, and Nagl) suggests one common takeaway which is arguably a stronger thread in their work than specific counterinsurgency techniques: the strategic importance of military decision-makers ‘managing up’ to civilian policymakers and, indeed, to the public.⁴⁰⁹ Each found, in their own way, that inattention to the information sphere and to synchronizing the military mission with public support was a catastrophic mistake in counterinsurgencies. To put it in American military jargon, information operations (including those targeted at home) could, in counterinsurgency, become a primary line-of-effort.

This philosophy shaped the savvy way in which MNF-I came to control and manipulate metrics and reporting. Even more than JUSPAO in Vietnam, MNF-I’s PAOs became expert in selective leaks of assessments to journalists to beat back political foes.⁴¹⁰ One important motivating factor for the proliferation of metrics in Iraq under Petraeus was to permit a selective approach to their use in public relations. There is strong circumstantial evidence that the decline in “sectarian violence” that was an essential part of Petraeus’ Congressional testimony was an artifact of changes in collection methods, and that the real world decline was less dramatic.⁴¹¹ As Ben Connable points out, statistics could mix coalition and Iraqi

⁴⁰⁷George W. Bush. *President’s Address to the Nation*. 10th Jan. 2007. URL: <https://georgewbush-whitehouse.archives.gov/news/releases/2007/01/20070110-7.html>.

⁴⁰⁸Petraeus and Crocker’s jobs was made easier by a wariness, even late in an unpopular war, to criticize someone in uniform, and by tone-deaf and over-reaching attacks by progressive advocacy groups, including MoveOn.org.

⁴⁰⁹See David Petraeus. ‘The American Military and the Lessons of Vietnam: A Study of Military Influence and the Use of Force in the Post-Vietnam Era’. Ph.D.. Princeton, NJ: Princeton University, Oct. 1987; H. R. McMaster. *Dereliction of Duty: Lyndon Johnson, Robert McNamara, the Joint Chiefs of Staff, and the Lies That Led to Vietnam*. New York: HarperCollins, 1997; Nagl, *Learning to Eat Soup with a Knife*; George Packer. ‘Knowing the Enemy’. *The New Yorker* (11th Dec. 2006). While Petraeus and McMaster are often said to have written dissertations on Vietnam, this is not strictly true: they each wrote dissertations about civil-military relations between senior military officers and politicians during (McMaster) and after (Petraeus) the Vietnam War.

⁴¹⁰Spencer Ackerman. ‘How I Was Drawn Into the Cult of David Petraeus’. *Wired* (11th Nov. 2012).

⁴¹¹The MNF-I formulas for deciding what counted as “sectarian violence” was over-precise and somewhat arbitrary. If a Sunni man was found, hands bound, shot in the head, and dumped in the river, that was sectarian violence (this was a favorite and characteristic technique of Shia militias). On the other hand, a

data without attribution, sometimes in convenient or misleading ways.⁴¹² In his September 2007 briefing to Congress, Petraeus stated that civilian casualties had declined from their height in December 2006. He did not mention that the decline in the coalition's internal data had been modest, and the decline shown in his slides depended almost solely on Iraqi data (see Figure 3.7). Besides the two examples of declines in sectarian violence and civilian casualties, the rest of Petraeus' report relied on a masterful use of persuasive rhetoric and sleight-of-hand.⁴¹³ Petraeus and Crocker essentially called their opponents' political bluff: Even though Congress had set eighteen indicators to assess (against which essentially no progress had been made by September), in practice the American media and political figures had focused on dramatic casualties. By improving these (by hook or crook) and by engaging in their own "Success Offensive", Petraeus and Crocker bought more time for the strategy to work.

The Credibility Gap, Redux

Because MNF-I under General Petraeus was able to reduce violence and sell a narrative of progress during the timespan bought by their own "Success Offensive," American political and military leaders managed to reduce and eliminate the "credibility gap" that had emerged 2004-2007.⁴¹⁴ This did not, however, reflect a superior assessments process but rather savvy leadership and a strategy that was working for a time. The same perennial issues re-asserted themselves in Afghanistan to generate a new "Credibility Gap."

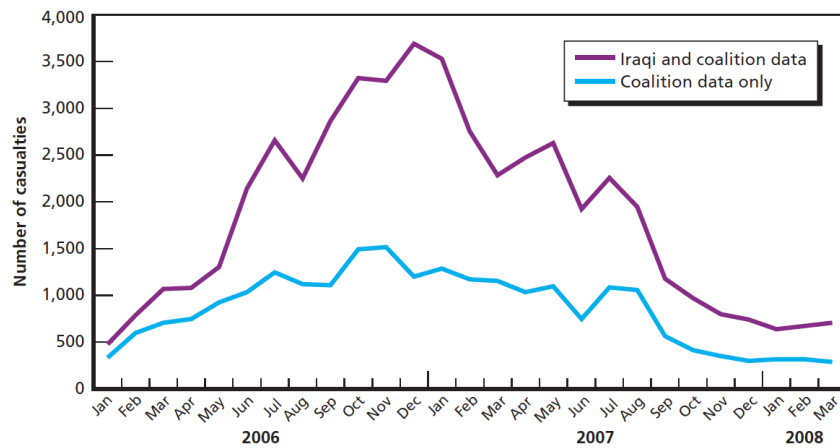
car bomb in a Sunni marketplace, without additional evidence, would not be counted as sectarian violence. There is strong circumstantial evidence that reporting criteria changed under the new leadership team, when "sectarian violence" in Baghdad dropped almost 50% in the month (January-February 2007) when General Petraeus took command, but well before the Surge or even the Baghdad Security Plan had begun (see Multi-National Force Iraq, *Charts*). This trend was not necessarily completely artificial - Operation Enforce the Laws had begun clearing out Sadrists in mid-February, and a modest decline continued into March when the most intense parts of the operation took place (Kagan, *The Surge*, pp. 42-45). But along every other metric of violence in Baghdad, major decline trends do not begin until June when Surge troops begin arriving in force. Later that year, the GAO comptroller pointedly noted disagreement between MNF-I statistics and those of independent assessors over MNF-I's "questionable methodology," especially regarding sectarian violence (Karen DeYoung. 'What Defines a Killing as Sectarian?' *Washington Post* (25th Sept. 2007)). MNF-I's statistics showed declines that the GAO's and National Intelligence Estimate (NIE)'s did not (David Petraeus. *Report to Congress on the Situation in Iraq*. 10th-11th Sept. 2007; National Intelligence Council. *Prospects for Iraq's Stability: Some Security Progress but Political Reconciliation Elusive*. National Intelligence Estimate. Aug. 2007. URL: https://www.dni.gov/files/documents/Newsroom/Press%20Releases/2007%20Press%20Releases/20070823_release.pdf).

⁴¹²Connable, *Embracing*, pp. 196-198.

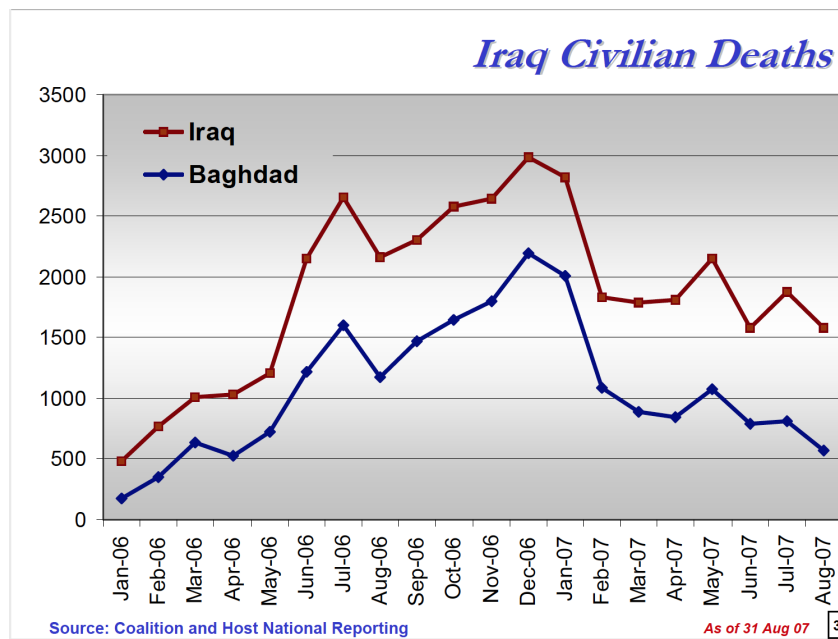
⁴¹³Sheryl Gay Stolberg. 'See You in September, Whatever That Means'. *The New York Times*. *Week in Review* (13th May 2007).

⁴¹⁴Ellen Knickmeyer. *Blood on Our Hands*. 25th Oct. 2010. URL: <https://foreignpolicy.com/2010/10/25/blood-on-our-hands/>. Presenting Rumsfeld, Casey, and Bremer as scapegoats was also an important part of this process.

Figure 3.7: Divergent Estimates of Civilian Casualties



(a) MNF-I Data, (Ben Connable. *Embracing the Fog of War Assessment and Metrics in Counterinsurgency*. Santa Monica, CA: RAND, 2012, Figure 8.4).



(b) Data Petraeus Presented to Congress (Multi-National Force Iraq. *Charts to Accompany the Testimony of Gen. David H. Petraeus*. 10th–11th Sept. 2007)

Under President Obama, Petraeus, McChrystal and other senior veterans of Iraq used the same techniques they had in Iraq to manage up through strategic communications to get the Afghan Surge. But the rapid bogging-down of that strategy created enmity and distrust between President Obama and the military.⁴¹⁵ The messaging tactics of 2007 Iraq used in Afghanistan, put into place by the architects of the Surge, would be dubbed by one internal military critic as a “Dereliction of Duty II,” referring to H.R. McMaster’s thesis blaming dishonest or misleading reports by military leaders in Vietnam for poor decisions by civilian leaders.⁴¹⁶ While a discussion of why the Afghan strategy failed is beyond the scope of this work, I bring it up to point out that the same assessments system, with the same leaders (including under Petraeus’s own watchful eye 2008-2011) led to many of the pathologies that characterized assessments in Vietnam and Iraq, especially when it came to public reporting. Petraeus, against the dictates of FM 3-24, would even bring back body counts in order to show progress in Afghanistan ahead of the Obama administration’s withdrawal schedule.⁴¹⁷ As the war ground on, the Army would be accused again of the same inflations and misleading assessments it had been accused of in Vietnam.⁴¹⁸ This cycle reflects not a flaw per se, but the real adaptive pressures that shape the construction and use of assessments systems.

3.4 Conclusion

A frequent theme in writing on assessments and metrics in Vietnam and Iraq is their perceived maladaptive character, originating supposedly from an obsession with metrics and seen in the optimistic progress reports which they justified. One novel fact predicted by our evolutionary model was that perceived maladaptations nearly always have some purposes towards which they are, in fact, adaptive. The assessments structure, in the context of the overall operational decision-making and intelligence process, helped senior military decision-makers make sense of the battlefield, helped them manage myriad programs and activities, and helped them meet political imperatives for messaging the war at home and abroad. In both instances, task and organizational pressure forced American joint commands to develop elaborate and accurate

⁴¹⁵Richard D. Hooker Jr. and Joseph J. Collins. *Lessons Encountered: Learning from the Long War*. Washington, D.C.: National Defense University Press, 2015, p. 411.

⁴¹⁶Michael Hastings. *The Afghanistan Report the Pentagon Doesn’t Want You to Read*. 10th Feb. 2012. URL: <https://www.rollingstone.com/politics/politics-news/the-afghanistan-report-the-pentagon-doesnt-want-you-to-read-203507/>.

⁴¹⁷Spencer Ackerman. ‘Team Petraeus Brings Body Counts Back’. *Wired* (8th Mar. 2011).

⁴¹⁸Chad Garland. ‘Numbers on US Counterterrorism Efforts in Afghanistan Don’t Add Up’. *Stars and Stripes* (6th Mar. 2018).

metrics infrastructures. In both Vietnam and Iraq, despite local information problems that plague insurgencies, US commanders usually had an adequate (and sometimes had a superior) sense of the tactical and operational environment, driven by assessments and intelligence systems that provided them insight into their own force dispositions, the enemy's, and the local population. Assessment systems evolved to meet felt needs until decision-makers were generally satisfied.

Some critics have argued that superior regional or cultural expertise would have prevented wider disaster in Vietnam and Iraq. We have reason to be skeptical of this claim, as it essentializes the enemy and denies his political agency. The course of violence in these conflicts was not driven by atavistic cultural or social forces but emerged complexly from military action and political dynamics, at home and abroad. While it may be the case that some kind of violent response was easily predicted in the wake of escalation in Vietnam or the dethroning of Saddam Hussein, that prediction says nothing about the specific course the conflict would take. Predicting that a dropped glass will shatter provides no insight into what the shards will look like thereafter.

We also found strong evidence against the idea that metrics in either war were actually faked or strongly distorted. Metrics are usually falsified when there is a single or a small set of metrics on which everything rests: an annual quota, a quarterly profit, or a politically important indicator.⁴¹⁹ Modern examples include Enron (quarterly profits), Volkswagen (emissions of diesel engines), or many American public schools (standardized test scores); in each case, literally hundred of millions or billions of dollars rested on one single reported metric. In both Vietnam and Iraq, there was little incentive to falsify data, because the plethora of potential indicators allowed commanders to build the narratives they wished to from the numbers they had. A slip in one potential indicator could be explained by circumstances, or an alternative 'good' indicator could be pointed to instead.

To the extent that there were significant mis-assessments in both wars, they occurred in areas that it seems unlikely any imaginable assessment system might have fixed. In Vietnam, early misconceptions about Vietnamese society and optimistic early reporting under loose and ad hoc measurement and reporting systems drove poor initial decision-making, while an enduring belief in the efficacy of American military power (broadly construed) to overcome weaknesses in South Vietnamese society combined with a caricatured view of the enemy to

⁴¹⁹Muller, *The Tyranny of Metrics*, pp. 24–25.

produce an unsustainable military strategy. In Iraq, early misconceptions about Iraqi society and optimistic early reporting under loose and ad hoc measurement and reporting systems drove poor initial decision-making, while an enduring belief in the efficacy of American military power (broadly construed) to overcome weaknesses in Iraqi society combined with a caricatured view of the enemy to produce an unsustainable military strategy. In both wars, the worst mistakes were made *before* assessments and metrics were built; intelligence on enemy and host nation decision-making, thinking, and strategy (rather than operations or force-disposition) was a consistent weakness; and while assessments systems reported relative progress (which was handy for messaging), they also reported overall weakness.

3.4.1 Assessment and Its Critics

The arguments that critics have assessment have made have tended to rest on two mistaken analytical claims that our evolutionary model helps identify.

Overvaluing Precision

Paradoxically, many critics of assessment adopt the same assumptions they purport to criticize. They ignore the caveats and disclaimers about the fuzzy accuracy of statistics proffered by their producers, and then accuse them of being under-precise. Pointing out that one statistic or another does not accurately capture every shift or scintilla of change in war, they argue for ignoring them all together, as if they could only have value *if they did* reliably track 'overall progress'. In reality, the critics of metrics have always tended to be more rigoristic or narrow about their application than their makers, who, being closer to the site of production, are usually aware of their faults.⁴²⁰

Complex military assessments, as their critics correctly state, are theoretical chimeras with problems ranging from inconsistent survey design to a pseudoscientific veneer of respectability. In practice, they seem to work fine for what they are used for, and to serve the needs of the parties who channel the organizational and environmental pressures that lead to their evolution. One of the key findings in this chapter is that *there is little-to-no empirical evidence that military leaders rely on metrics or quantitative assessments to form their primary opinions about the state of operations and strategy*. At the field level, commanders'

⁴²⁰See, for instance, Gelb and Betts, *The Irony of Vietnam*; Thayer, *War without Fronts*; Schroden, 'Measures for Security in a Counterinsurgency'; Connable, *Embracing*.

opinions are chiefly shaped by narrative reporting, battlefield circulation, and the normal intelligence process. At the strategic level, concerns about resources, political maneuvering, and the challenge of command shaped decisions that were made in light of a variety of information flows in addition to the field command's assessments process. Even with some of the most complex assessments produced in Vietnam and Iraq (such as the HES or late-MNF-I stoplight charts), they tended to perform well-enough to permit senior decision-makers to make high-level decisions: anything more detailed would include relevant intelligence briefings that included qualitative evidence and first-person accounts.

Misunderstanding Messaging

Perhaps the most common criticism of assessment processes is that they were used to mislead or lie to the American people.⁴²¹ Measures of enemy casualties, infiltrations, defections, captured insurgents, development dollars spent, and host country units trained up were used to assure the electorate and political leaders alike that progress was being made, that there was indeed light at the end of the tunnel. And yet, any assessment system can be, and will be, used to the ends of responding to political pressure through salesmanship, and the need to do so did not strongly shape the development of the systems (the use of metrics for messaging instead acted as a spandrel - a creative repurposing of something developed for another reason). Moreover, actual military decision-makers were not deceived by these misleading assessment, but using them to strategic effect.⁴²² It is not as if intentionally misleading statements were unknown in international relations prior to the advent of metrical reporting systems.⁴²³

3.4.2 Overestimating operational challenges, underestimating strategic ones

In sum, critics of assessment processes for counterinsurgency have overestimated the operational challenges their operators faced and underestimated the difficulty of making sense of counterinsurgency at the strategic level. In both Vietnam and Iraq, the American joint command entered the war with metrics systems that left it blind to what was happening on

⁴²¹Indeed, it is notable that Connable does not list a single example of a *decision* that was misled by MACV's centralized assessments process, instead focusing on misleading messages and reports to Congress and the public (Connable, *Embracing*, pp. 142–5).

⁴²²Gelb and Betts, *The Irony of Vietnam*.

⁴²³John J. Mearsheimer. *Why Leaders Lie: The Truth About Lying in International Politics*. Oxford: Oxford University Press, 2013.

the ground and overdependent on local proxies and haphazard reporting. Each developed a bewildering array of reporting systems that gave commanders a detailed and more-or-less accurate picture of the ground truth. And these reporting systems were put to operational use and helped commanders make decisions, monitor their subordinates, and report the war's progress to their superiors, to Congress and to the public.

And yet, we can observe a number of repeated issues. The task and organizational pressures the joint commands faced favored the proliferation and refining of reporting processes over analysis, and satisficing shaped the sense-making dimension exaptively, as metrics were developed primarily to meet managing and reporting needs, but then became part of the information stream. Some degree of bias towards progress can become structural in part due to the asymmetric selection pressure exerted by management and reporting requirements: the former ensures that metrics will be collected in terms of activities which the organization already believes are important (and with regard to which promotion decisions will be made), and the latter triggers bureaucratic politics concerns for protecting the autonomy and resources of 'our' organization.⁴²⁴ Military commands were less likely to adopt or emphasize metrics of failure: collateral damage, wrongful detentions, civilian deaths, or enemy-initiated battlefield contact.⁴²⁵ The sheer volume of data collected had a flattening effect that made it more difficult to understand which particular data points mattered most.⁴²⁶

Most importantly, except where it was *operationally* relevant (in some hamlets in Vietnam and in tribes in Iraq), politics at the strategic level was glossed over in the assessments process. Even though the most senior policymakers repeatedly emphasized the need to reform the client government to make a political solution of some kind possible, this kind of politics was backgrounded in the assessments process in favor of various measures of progress. Then again, it is not clear that this is, so to speak, the military commander's job (which explains why there was no task pressure towards it). Even though the successful development of a legitimate and strong central government was the single most important factor for success or failure in the two wars examined here, in neither case did the military commander have leverage or decision-making authority to directly treat with the host nation's political leadership - such matters were reserved for the ambassador and, ultimately, the president.

In one sense, assessments and metrics processes in Vietnam and Iraq clearly worked,

⁴²⁴See, for instance, Connable, *Embracing*, pp. 190–1.

⁴²⁵Daddis, *No Sure Victory*, p. 15.

⁴²⁶Thayer, *War without Fronts*, p. 5.

despite or because of their ad hoc, adaptive nature. In retrospect, it is difficult to make the case that inaccuracy or over-optimism of assessments did any independent work in shaping outcomes. And it is doubtful any other assessment system would not have lent itself to willful misrepresentation or selective emphasis.⁴²⁷

Much of the literature on strategic assessment assumes that strategic failure is evidence of poor strategic assessment.⁴²⁸ Yet why would this be so? Knowing the odds of winning the lottery does not improve one's performance, nor does an accurate assessment of an opposing side improve one's abilities on the pitch. The evidence gathered here suggests that strategic assessment processes adapted strongly to these conflicts, that policymakers took these assessments into realistic consideration, but that political and operational concerns (including geopolitical ones) continued to exert an important influence. Intelligence estimates can advise, but cannot obviate, fundamentally political tradeoffs.⁴²⁹

3.4.3 The View from the Enemy

These failures may help us evaluate one of the limits of the “dominant indicator” model. Rather than being a universal characteristic of militaries, it is in fact specific to one kind of human grouping – the rational-bureaucratic organization. Neither of the enemies America faced in Vietnam and Iraq built sophisticated assessments and metrics systems. In Vietnam, though a number of sub-organizations (including the NVA and Main Force VC) had relatively rational-bureaucratic structures, the overall decision-making structure was a revolutionary communist organization on the Leninist model, controlled by the Politburo and specifically Le Duan's faction, bureaucratic in form but often not in function.⁴³⁰ In Iraq, there were a great diversity of metrically unsophisticated, often ideological, insurgent organizations. In each case they did, in fact, have some crude indicators that they used. But, driven by scarce organizational capacity, their assessments were highly qualitative, biased by ideology, and

⁴²⁷Curiously, something that Gelb and Betts pointed out regarding Vietnam has held true in Iraq and Afghanistan; escalation occurs not in moments of optimism (where additional 'investment' might be warranted) but in the deepest valleys of pessimism about the likely outcome of the war (Gelb and Betts, *The Irony of Vietnam*, p. 319). What breaks the decisional impasse in favor of escalation is not the sense that all is going well, but the sense that imminent failure is likely to occur without it, bringing those political costs into the short-term. One sees this pattern in the quiet return of recently-departed units to Iraq in 2004-5; the Iraq Surge; Obama's Afghan Surge; and Trump's smaller Afghan surge.

⁴²⁸Friedman, 'Cumulative Dynamics and Strategic Assessment', p. 20.

⁴²⁹Leo Blanken and Justin Overbaugh. 'Looking for Intel? ... or Looking for Answers? Reforming Military Intelligence for a Counterinsurgency Environment'. *Intelligence and National Security* 27.4 (Aug. 2012), pp. 559–575.

⁴³⁰One of the great weaknesses of Gartner's Dominant Indicator model is that it does not make sense of the wide variety of bureaucratic organizations

focused intensely on making sense of the political questions at stake. Neither in Vietnam nor Iraq did the enemy have an assessments and metrics process that remotely approached the sophistication of MACV's or MNF-I's.

Though North Vietnam did collect metrics, its strategic assessments process was not driven by them. Lacking reliable and steady metrics reporting, North Vietnamese leaders relied on qualitative assessments of things like morale and combat initiative. But the North Vietnamese leadership maintained an obsessive focus on qualitative political assessments, chiefly of South Vietnam's leadership, popular support for the regime, and American political goals (both at the policy level and in mass politics). Contrary to the dominant indicator model, they employed a highly flexible and at times contradictory theory of victory (oscillating between rapid victory and protracted war).⁴³¹ In contrast to the Americans, they relied primarily at the strategic level on qualitative assessments from committees led by senior Party and military officials. The North Vietnamese did not have similar confusions about American leaders; party analysis of 1968 and 1972 elections and choices reflected a generally sophisticated understanding of the American political system and how it might affect the Vietnam battlefield.⁴³²

At the operational level, the North Vietnamese relied on a highly flawed quantitative reporting system that contributed to repeated errors, but that inadvertently generated surprise. Ironically, it appears that the North Vietnamese opted at times for a 'big unit war', relied on assessments of enemy casualties, and thought about US decision-making in terms of 'signaling theory' (all common criticisms of the American side). North Vietnamese assessment of the southern battlefield was shaped by mandated reporting of force composition and quality; popular support; friendly and enemy morale; and friendly and enemy casualties. VC cadres were under strong pressure to obtain the "right" results: thus, these estimates were often wildly distorted. MACV had captured plenty of documents attesting to the weakness of Southern morale, the readiness of the people to rise up, the enormous casualties the Americans and the "puppet government" were taking, and the fighting spirit and unit strength of the VC; MACV had, correctly, dismissed them as wildly false. They had not, it appears, considered that the Politburo *did* believe these reports, or that the North might have worse intelligence on the balance of forces in the South than MACV did. These operational problems in North

⁴³¹Shore, *A Sense of the Enemy*, pp. 118–9.

⁴³²*Ibid.*, pp. 121–122.

Vietnamese assessments (due to low organizational capacity) contributed to the decision to escalate in 1965, the 1968 Tet Offensive, and the 1972 Easter Offensive. They were costly errors, and the Communists learned their lessons in blood.⁴³³

In the Iraqi case, the disparate nature of the insurgency makes a definitive statement of the assessment process difficult, and many of the captured documents are still classified.⁴³⁴ Obviously, the Iraqi insurgents had nothing like the sophisticated, networked American assessment system. But we do have a few clues as to how they made sense of the war, and verbose public rhetoric and propaganda with which their private beliefs seem consistent, according to captured documents and interrogated prisoners. No insurgent groups in Iraq had a “strategic assessments process” in the sense of identifying a long-term end state and identifying definitive indicators of progress towards that end state. Still, there were things that insurgents kept track of (formally or informally) that shaped their understanding of how things were going.

Zarqawi and his followers sought to build an Islamic caliphate out of the ashes of the Iraqi state - they were not interested in maintaining the Iraqi homeland as such. Thus, measures of civilian casualties (including of Sunnis) were meaningless compared to the development of AQI as an organization: the number of successful suicide bombs, the influx of foreign fighters, weapons, and money, and popularity in the global jihadist movement. Zarqawi also looked to plummeting support for the war in US public opinion polls on war support as a sign of success.⁴³⁵ AQI also kept a close watch on American withdrawals and changes in US foreign policy, timing reprisal actions to take advantage of shifts in troop numbers.⁴³⁶ It is almost cliché for American strategic thinkers to lament the lack of historical, cultural, geographic, or linguistic knowledge in military and political decision-making at all levels, making the implicit argument that greater knowledge and sensitivity would improve. And yet, it is not clear at all that the Vietnamese or Iraqi insurgencies had a good understanding of American leaders or *even of their own countrymen*. For example, in a classic example of mirroring, one of Le Duan’s arguments for launching the Tet Offensive was the sincere belief that Johnson might invade the North in advance of the 1968 election.⁴³⁷ Vietnamese and Iraqi insurgent leaders

⁴³³Ibid., pp. 143–146.

⁴³⁴Blanken, Rothstein and Lepore, *Assessing War*, p. 235.

⁴³⁵Joby Warrick. *Black Flags: The Rise of ISIS*. New York: Anchor Books, a division of Penguin Random House LLC, 2016, p. 187.

⁴³⁶McWilliams and Wheeler, *Al-Anbar Awakening: Volume 1, American Perspectives*, p. 128.

⁴³⁷Mark Bowden. *Hue 1968: A Turning Point of the American War in Vietnam*. New York: Atlantic Monthly Press, 2017, p. 62.

often greatly overestimated the attractiveness of their ideology to their compatriots, and the level of passive support in the population. But what both did have were key insights into the overarching political constraints under which American leaders were operating and how battlefield developments would influence those constraints, married with an eschatological ideology that would permit no self-doubt on their end.

In both instances, the complexity of the American theory of victory (and thus of assessment and metrics) stands in contrast to the simplicity of its enemies'. The North Vietnamese believed that escalation and casualties would be politically unsustainable in the United States, leading to withdrawal. The United States would be forced to choose between continuing the war and its global interests, and would choose the latter.⁴³⁸ The hard-core Sunni Iraqi insurgents believed that eliminating the 'gray zone' of Sunni-Shia coexistence and sparking a civil war would rally Sunnis to their side and destroy the Iraqi state, but on advantageous terms for Sunnis; in the case of AQI, this would be the first step in the renewal of a caliphate.⁴³⁹ In both cases, insurgents believed that the forces of history ensured their success. These strategies were incredibly costly - far more than either side had believed at the start - but the fundamental underlying assessments proved correct. The American sophisticated assessments and metrics systems picked up nearly everything about the battlespace, but made the political just another background factor (if it was picked up at all). America's enemies employed assessments that successfully picked up little *other than politics*.

Our evolutionary analogy suggests something of what is going on here. Nature does not necessarily select for 'better' sensory organs in the sense of organs with the most accurate or detailed mapping of underlying reality. In fact, sensory or cognitive biases are often highly adaptive, including in human warfare.⁴⁴⁰ It is not a coincidence that both the North Vietnamese and Iraqi insurgents maintained something like apocalyptic worldviews wherein American aggression was unlimited and existential, but where victory was inevitably assured by history. These beliefs, even if they are false, may be adaptive, in that they bolster morale and resolve despite setbacks. In both Vietnam and Iraq, these apocalyptic beliefs allowed the underlying organizations to survive despite unbelievable attrition and hardship. In fact,

⁴³⁸Shore, *A Sense of the Enemy*, pp. 113, 132.

⁴³⁹See Warrick, *Black Flags*, p. 202; Ahmed Hashim. *Insurgency and Counter-Insurgency in Iraq*. Ithaca, NY: Cornell University Press, 2006, p. 182. One also should not underestimate the eschatological component of this theory.

⁴⁴⁰Johnson, Wrangham and Rosen, 'Is Military Incompetence Adaptive?'; Johnson, *Overconfidence and War*; Ellen J. Gerl and Molly R. Morris. 'The Causes and Consequences of Color Vision'. *Evolution: Education and Outreach* 1.4 (Oct. 2008), p. 476.

natural selection might explain some of the longevity of some insurgent groups: those that do not involve eschatologically optimistic ideologies are deterred by battlefield hardship and dissolve or compromise, leaving a population skewed towards unfalsifiable optimism.⁴⁴¹

3.4.4 Organizational Forgetting and The Paradox of Accurate Assessment

The above points to a paradox: the more accurate a holistic campaign assessment has proven to be, the less likely it is to be generalized. Which is to say, an accurate holistic campaign assessment internalizes a substantial amount of environmental structure: this is the source of its accuracy.⁴⁴² Each war also produced vital analytical questions entirely unique. In Vietnam, it was the question of characterizing and measuring degree of population control exercised by the GVN and VC as they fought “the Control War”, the question towards which the HES, VSSG and PAAS were concerned. In Iraq, it was the question of what characterized, drove, and counted as “sectarian violence” in a burgeoning civil war. In each case, vast amounts of measurement and analytical firepower were directed at the question (both in-country and at home). It is not clear what the “lessons” emerging from them are.

Just as systems analysts in Vietnam may have felt they were pioneering the future of military assessments, so there was for a short time the belief that ORSAs and campaign assessors in Iraq were working towards a doctrinal, universal, scale-free methodology of campaign assessments in EBO and System of Systems Analysis (SoSA). By the mid 2010s, they had been chastened, and no such method has entered into doctrine.⁴⁴³ Produced in unusual circumstances with limited utility for the military’s operations outside of large-scale, lengthy, complex expeditionary counterinsurgency, housed mostly in temporary, ad hoc command structures, knowledge of counterinsurgency metrics and assessments was quickly forgotten.

⁴⁴¹Paul Staniland. ‘Whither ISIS? Insights from Insurgent Responses to Decline’. *The Washington Quarterly* 40.3 (3rd July 2017), pp. 29–43.

⁴⁴²Connable, *Embracing*, p. 42.

⁴⁴³Schroden, ‘Why Operations Assessments Fail’.

Chapter 4

Acculturation: Surviving on the Battlefield

There are always two ways to do something—the right way and the John Wayne way.

—Apocryphal Marine Saying

While assessing progress is a critical task of military commanders, it occupies a minuscule fraction of the day-to-day activities of most members of military units in wartime. For units in the field (not only combat arms units but every sort of unit), conducting their missions under environmental constraints occupied their focus, not strategic questions. Operating in a specific wartime environment shapes these tasks across the board, but one task in particular assumes outsize importance for every field unit - surviving on the battlefield. Against a thinking, reacting enemy, this challenge necessarily encompasses finding and destroying enemy forces.

In this chapter, I examine how US military units adapted to the challenge of surviving on the battlefield, against both a hostile and unfamiliar physical environment and a canny enemy, amidst an ambiguous and ambivalent civilian population. I principally look at adaptations in US Army combat arms units, though I briefly address the Marine infantry experience (not least because Marine adaptations affected the Army).

It is impossible to give a thorough account in one chapter of every technological, tactical, and operational adaptation the US Army underwent in these two wars. And so the goal of this chapter is not to give an exhaustive account of adaptation. My goal is to show the

reader how organizational structures and choices encouraged and shaped adaptation, and what happened to these structures during demobilization. I also hope to give the reader a sense of the scale and pervasiveness of adaptation, at every level, so as to militate against the commonplace assertion that American military adaptation was slow, fragmented, or reluctant. I hope to persuade the reader that whatever battlefield difficulties and failures the American military might have encountered, they cannot be chalked up to a recalcitrant or reflexively conservative military unable or unwilling to adapt to the environment at hand. Each case starts by examining *Indigenous Adaptation*, of the sort often associated with the “bottom-up learning” process. These are solution-searches and ad hoc experiments organized within field units to solve problems they encounter through their normal activities. While I am subsuming all informal adaptation under this heading, military bureaucracies being what they are, many kinds of indigenous adaptation have some kind of formal footprint: TO&Es must be modified, money must be spent, policies must be written, and people must be assigned. What distinguishes Indigenous Adaptation from other kinds of adaptation are the originating agents- the people dealing directly with the problems “in the field” or in their own units.¹ These initial adaptations, if seen as successful by higher headquarters may lead to formalization, but they may also diffuse informally through word-of-mouth, peer networks, or emulation.

Next, I examine the formalized adaptations that emerge in both cases. Some of these adaptations started as indigenous adaptations, while others emerged from higher headquarters or even from the Pentagon. *Formal Adaptations* are the military bureaucracy’s own attempt to cope with the war; the agents which create them are not directly responsible for wartime activity in the field. The organizing agents can be staff officers of the joint task force, commanders of training units, research scientists, or leaders of the military bureaucracy. While formalized adaptations will usually have informal origins (in advocacy networks, professional conversations, and the like), bureaucratic formalization is the *goal*, and not an afterthought. These adaptations take the form of establishing new training schools or new kinds of units; changing organizational structures, doctrine, or personnel systems; or procuring new equipment. There are of course gray areas between the two kinds of adaptation listed above; they

¹One problem with the bottom-up adaptation literature so far, with Kollars’ gun truck studies excepted, is an over-focus on infantry units, usually battalions or smaller. In reality, modern militaries have many different kinds of units, and indigenous adaptation can occur in any of them, to include logistics, communications, intelligence, aviation, etc.

should be understood as an organizing typology and little more.

4.1 Vietnam

American adaptation to the Vietnam battlefield began well before the arrival of infantry units and the escalation of the war in 1965. The American organizations heavily involved in Vietnam prior to this period, especially the CIA, military advisors and the US Army SF, also known as the Green Berets, had been experimenting with ways of building support for the Government of [South] Vietnam and fighting the nascent Viet Cong insurgency.² The MAAG set up a comprehensive strategy, “The Counterinsurgency Plan”, which focused on winning the population’s “hearts and minds” while finding and destroying insurgent forces.³ Efforts included the Strategic Hamlet Program (inspired by British efforts in Malaya) and Civilian Irregular Defense Groups (CIDGs) – Green Beret-organized guerrilla units centered on highland villages and non-ethnically Vietnamese mountain peoples.

By 1965, while American activities experienced a learning curve, and efforts were bedeviled by political instability and corruption in the South Vietnamese regime, US forces had made substantial progress building the South Vietnamese army from scratch, progress that was now endangered by both the VC insurgency and the looming threat from the North. As American forces deployed en masse, they did so with a variety of missions in mind. Some would patrol the northern Demilitarized Zone (DMZ) and conduct border operations along the Laotian and Cambodian borders to deter a conventional attack and to hamper the infiltration of supplies and personnel into South Vietnam. Some would engage in “pacification”, working to win over the South Vietnamese population to the legitimacy of the Republic of South Vietnam, to protect them from VC coercion and violence, and to unveil and destroy the insurgency. And some would seek to find, fix, and finish Main Force VC and North Vietnamese Army units operating throughout and wreaking havoc in South Vietnam. They would conduct these missions in tremendously varied environments: rice paddies, river valleys, swamps and river deltas, mountain highlands, beaches, and jungles, in changing political climates, against a savvy enemy. In each of these missions, the US military would display ingenuity, flexibility, and resolve. But while efforts specifically aimed at counterinsurgency improved over time, the selection pressures shaping pacification adaptations produced a more

²The Viet Cong were formally activated in 1960, and COSVN set up in 1961.

³Cosmas, *Years of Escalation*, pp. 16–17.

complicated story.

4.1.1 Indigenous Adaptation

The key to understanding indigenous adaptation in Vietnam is an appreciation for the dramatically varying conditions American soldiers found themselves in when they landed in Vietnam. The war's appearance changed depending on specific location and mission, although almost everything about Vietnam differed from the European and Korean environments in which Army leaders had fought and for which the Army had 'prepared'. There was no typical Vietnam experience.

Specialized bodies of knowledge developed to cover the variety of missions and environments, complete with their own knowledge networks, lore, and equipment. These included learning small unit patrol and fighting tactics in Vietnam's various environs (including at night); learning Viet Cong tactics, booby traps, building patterns (especially of hiding places) and habits; fighting in tunnels; operating with helicopters; coordinating fires in a decentralized fashion, including close air support; operating from small patrol boats in riverine systems; working with ARVN, Revolutionary Development, and other pacification authorities; working with and among the local populace to provide security and development; operating logistics convoys against both ambushes and booby traps/IEDs; conducting border-sealing and base area operations; countering conventional NVA units; operating at night; and more.

Adaptation pressures were driven by the physical environment, but also by fundamental information asymmetries. Up through 1968, 85% of contacts were initiated by the VC/NVA, and the VC/NVA had substantial control over their casualties. Because they usually initiated fights, the VC/NVA could choose to hide instead of engage whenever they deemed the tactical situation unsuitable, and they were frequently able to break contact and melt into the jungle.⁴ And so much American adaptation aimed to right or exploit these asymmetries, by building American abilities to find the enemy on the battlefield, maintain contact, and rapidly destroy him.

Americans faced three kinds of enemies in Vietnam. The first was the North Vietnamese military, principally the army (NVA), which trained in the North and then sent units south. The second was the 'main force' Viet Cong-trained guerrillas operating in centrally-organized

⁴The Army Combat Operations Vietnam (ARCOV) study in early 1966 found that almost half of all contacts began in prepared enemy ambushes, and 88% of contacts were initiated by the enemy Department of the Army. *Southeast Asia Analysis Report, Vol 4*. 1973.

units, often operating from jungle redoubts, sophisticated base complexes, or cleverly disguised fortified villages. The third were local political units, including the paramilitary Guerrilla Popular Army.⁵ Like any good Leninist revolutionary organization, the Viet Cong often placed political development over military advantage, and VC members not engaged in violent activities were very difficult to root out. The need to root out *both* the political and military organizations accounted for much of the American difficulty.

Interestingly enough, numerous sources noted the surprising lack of flexibility and ingenuity in Viet Cong units (the NVA were reckoned more challenging in this regard).⁶ While the Viet Cong generally understood the battlefield much better than American soldiers, they had a tendency to over-plan and to stick to their plans despite changing circumstances. As the war went on, American soldiers found ways of exploiting these tendencies.

Early on, the North Vietnamese realized that the best way to mitigate overwhelming American firepower was to “grab them by the belt to fight them”—close rapidly with American forces, so that it would be too dangerous to call in fire support.⁷ They also used a variety of raids, some designed to harass American positions, some designed to totally overrun them. American units adapted most rapidly under this deadly pressure, engaging in wide-ranging solution search and experimentation. As soon as they arrived, units began to experiment with new SOPs and ways of organizing themselves, producing Modified Table of Organization and Equipments (MTO&Es)—armor or vehicles might be dropped, machine guns added, etc. To protect against ambushes, American infantrymen began using elaborate patrol patterns which would send out small looping side-patrols to encounter would-be ambushers early. Reducing the margin of error on fire support and adding gunships allowed American soldiers to call in support closer and closer to their own positions.

Riverine Operations

In late 1965, it was becoming apparent that the GVN was losing control in much of the swampy IV Corps Tactical Zone, South Vietnam’s agricultural breadbasket and a hotbed of Communist activity since the 1930s. Operations staff officers settled on the notion of pair-

⁵Douglas Pike. *Viet Cong: The Organization and Technique of the National Liberation Front of South Vietnam*. Cambridge, MA: The MIT Press, 1966, pp. 323–9.

⁶James R. McDonough. *Platoon Leader*. Novato, CA: Presidio, 1985, p. 109; MACV. *Handbook For US Forces in Vietnam*. DoD GEN-25. Washington, D.C.: Department of Defense, 10th June 1966; Charles P. Stone. ‘Senior Officer Debriefing Report’. RG 472, A1 887. NARA II, College Park, MD, 15th Nov. 1968.

⁷Warren Wilkins. *Grab Their Belts to Fight Them: The Viet Cong’s Big Unit-War Against the U.S., 1965-1966*. Annapolis, Md: Naval Institute Press, 2011, pp. 26–28.

ing an Army brigade with a complementary Navy organization, split across two land bases and a mobile base ship. These would then feed into airmobile and boat-driven operations. Navy assault group boats or helicopters would deliver infantry to the start of their operations, where they would proceed on foot, supported by mobile, floating fire-bases, and command and communications boats.⁸ There were also organizational difficulties to counter; the floating artillery (and the entire riverine operation) created a unique dual chain of command, where the Army controlled operations and fire support clearance and the Navy handled transportation and logistics.⁹

The Mobile Riverine Task Force (MRF) played a unique role alongside the Navy's existing River Patrol Force and coastal interdiction operations, and was formed in part due to Viet Cong adaptation to the initial successes of the River Patrol Force. While initially intimidated by the Navy's aggressive river patrols, the Viet Cong responded with the use of heavier and heavier weapons, ambush techniques, and resort to base areas inaccessible by river.¹⁰ The Mobile Riverine Task Force (MRF) would allow MACV to project force throughout the swampy Southern reaches and eliminate important VC base areas and logistics hubs. Needless to say, there was no doctrine for this kind of arrangement, and soldiers and sailors worked together to improvise and improve based on the lessons of the battlefield from the bottom-up, developing a variety of sophisticated techniques for operating in the alluvial area and finding and destroying the enemy.¹¹ They developed floating bases and artillery, tactics for pinning VC units, countering ambushes, and coordinating fire support, and numerous other minor improvements.¹² While the MRF successfully dampened Viet Cong activity in IV CTZ and reduced attacks on ARVN and RF/PF units, it came into its own during the Tet Offensive. Despite the element of surprise and perhaps the strongest local support of anywhere in Vietnam, the Viet Cong were routed in IV CTZ largely due to the speed and ferocity with which the MRF was able to respond. Moreover, after the Tet attacks on urban areas had been foiled, the MRF was able to pursue the enemy into the swamps and rural areas.

⁸William B. Fulton. *Riverine Operations, 1966-1969*. Washington, D.C: Department of the Army, 1973, p. 37.

⁹R.A. Wall. *Development of the Floating Artillery Platform in the Mekong Delta During the Period 1 January 1967 through 31 October 1967*. 1967.

¹⁰John Darrell Sherwood. *War in the Shallows: U.S. Navy Coastal and Riverine Warfare in Vietnam, 1965-1968*. Washington, DC: Naval History and Heritage Command, Department of the Navy, 2015, pp. 153-4.

¹¹Fulton, *Riverine Operations, 1966-1969*, p. 188. That being said, senior leadership apparently did seek inspiration in previous American riverine operations, as well as the experiences of French riverine forces, there there was some initial doctrinal brainstorming done by the Army's planners for the "Mobile Afloat Force concept", though this was not completed by the time the units deployed (*ibid.*, pp. 3-17, 187-188).

¹²*Ibid.*, p. 206.

This speed and mobility was only possible due to the highly specific capacity the Task Force had built up. The MRF's rescue of numerous cities and bases led General Westmoreland to state the it had "saved the Delta".¹³ An unusual unit organization generated by unusual circumstances, the Riverine Task Force provided valuable force projection capabilities in IV CTZ that a more "normal" unit could not have.

Airmobility

Following the Korean War and inspired by French and British efforts in Algeria and Malaysia, respectively, the Army began experimenting with helicopter battalions and tactical doctrine, with an eye towards mitigating some of the terrain problems the Army had faced in Korea.¹⁴ The Army decided to develop up to twelve helicopter battalions as part of its native aviation component, including as part of an airmobile division with 459 aircraft instead of the usual 100.¹⁵ However, while the Army was laying the organizational and material basis for airmobility, the new mission lacked form and substance prior to experience in Vietnam.

Thus as helicopter pilots deployed to Vietnam (in large measure to advise the nascent South Vietnamese Air Force), they were themselves figuring out how to best employ their aircraft. Variations in physical environment required experimentation and localized best practices; transport helicopters needed to disembark troops in environments ranging from swamps, where they needed to hover above shallow water, to mountain clearings where the rotor wash would push against ten-foot tall elephant grass.¹⁶ As pilots worked through problems as a community of practice, other tactics emerged, such as convoys landing troops all at the same time - while this maneuver was more difficult, it spread out any enemy fire over more vehicles. One thing that rapidly became clear was that it was the synthesis of multiple kinds of aircraft that made airmobility powerful. Hueys - cheap, reliable, and easy to maintain - formed the backbone of transport. Chinooks undertook heavy lifting (of troops, artillery, supplies and light vehicles), and a variety of attack birds and gunships provided additional firepower (partially to make up for necessarily weakened artillery support). These attack helicopters were an innovation native to Vietnam; the first armed escort helicopters were locally modified Hueys. They proved invaluable because they worked to dramatically

¹³Sherwood, *War in the Shallows*, p. 311.

¹⁴John J. Tolson. *Airmobility 1961-1971*. Washington: Department of the Army, 1973, p. 4.

¹⁵This was also connected to the early Army/Air Force turf wars over aviation. The specific impetus for airmobility also supports the Posen civil-military model (*ibid.*, p. 19).

¹⁶*Ibid.*, p. 38.

suppress enemy fire against landing transport helicopters, to say nothing of their ability to rapidly attack enemy positions, and these early field tests were rapidly exploited.¹⁷ Early tests shaped new techniques, tactics, and procurement, as limitations of the ad hoc armed helicopter gunships (such as weight and reduced maneuverability) were discovered.¹⁸

While the Army Aviation units in Vietnam were able to begin working out the mechanics of deploying and withdrawing tactics during this period, it wasn't until the arrival en masse of American soldiers that the entire airmobility concept could be tested and modified to fit the environment. The initial success of airmobile units like the 1st Cav led to more airmobile units being spun up, and more airmobile components being added to existing units.¹⁹ The 1st Cav (Airmobile), frustrated by difficulty finding the enemy during arduous patrols, began experimenting with what they termed "Hunter-Killer Teams" in early 1966.²⁰ Rather than send out platoons or even companies, heavily armed and therefore slow and loud, they sent out small, lightly armed, nimble patrols, whose goal it was to find the enemy and achieve 'contact' (which usually meant being shot at). After making contact, the hunter teams focused on maintaining it (slowing or preventing enemy retreat) and called in the Killer teams, which were heavily armed Quick Reaction Forces (QRFs) waiting to spring into action.²¹ Between fire support and the Killer teams, enemy units were quickly destroyed. Ideas like the Hunter-Killer concept evolved organically into a repertoire of practices, none of which were derived from doctrine. From Killer teams waiting on the ground evolved Eagle Flights, effectively Killer teams roaming the battlefield seeking enemies or responding to contact.²² With the arrival of helicopter gunships and scout copters (procured as purpose-built alternatives to theater-modified Hueys) evolved Pink Teams—airborne hunter-killer squads with scout helicopters roaming the battlefield, calling in gunship fire independently or in support of forces on the ground. Rather than proscribe the one-best-way, Army practice evolved towards a repertoire of on-call capabilities which commanders could flexibly, rapidly mold to ongo-

¹⁷One of the ACTIV's first projects was to evaluate the nascent attack helicopter capability in early 1963 (Tolson, *Airmobility 1961-1971*, p. 29).

¹⁸*Ibid.*, p. 34.

¹⁹While airmobility has come into grief as a counterinsurgency tactic, it's worth noting that the original counterinsurgency guru, David Galula, whole-heartedly embraced it (David Galula. *Counterinsurgency Warfare: Theory and Practice*. Westport, CT: Praeger Security International, 2006, p. 65).

²⁰Department of the Army. *1st Cavalry (Airmobile) OR LLS*. 1973, 31 July 1966.

²¹The term QRF, if not the concept itself, seems to be another invention or at least popularization of Vietnam. QRFs were task organized in the field, especially from Long Range Reconnaissance Patrol (LRRP) and airmobile units. A Google N-gram corpus search of all books published in English supports this notion, with uses of the term beginning in 1965 (see https://books.google.com/ngrams/graph?content=quick+reaction+force&case_insensitive=on&year_start=1800&year_end=2000&corpus=15&smoothing=2).

²²MACV. *Collected Lessons Learned Bulletins*. 1973, ORLL 38.

ing operations.²³ Best practices and “lessons learned” spread organically through informal interconnections between helicopter pilots and through pamphlets published by MACV.²⁴ Tactics adapted to the terrain and the nature of the enemy, and included new techniques like “jitterbugging” (landing many patrols in a target area simultaneously) “checkerboarding” (inserting ambushes via helicopter, which would remain in place up to three days) in addition to those mentioned above.²⁵ Nascent night vision technologies and growing American confidence about night operations also helped American soldiers use airmobility to its fullest advantage; besides setting night ambushes, some units began using “Night Hunters” - sniper teams with starlight scopes to mark targets for accompanying gunships.²⁶

Artillery and Air Support

Artillery and Air Support were critical survival tools in Vietnam. Informational asymmetries and the reality of fighting in triple canopy jungle meant that symmetrical fights were by no means guaranteed. An American platoon or company could easily run into a Main Force VC or NVA battalion or regiment. The ability to quickly marshal massive amounts of firepower against the enemy was not only critical for battlefield success; it was often a matter of life and death for the infantry units who had made contact. Recent International Relations scholarship has completely misunderstood the use of firepower in Vietnam combat; rather than being used as an alternative to ‘labor-intensive’ approaches to counterinsurgency,²⁷ American firepower made possible small-unit operations, by protecting soldiers from unexpected battlefield asymmetries. However, delivering accurate fire (and accuracy was paramount to avoid friendly fire) in Vietnam was a challenging enterprise, and there were limitations to both Artillery and Close Air Support (CAS). Artillery was normally organic to each division, and

²³David Tyler. ‘The Leverage of Technology: The Evolution of Armed Helicopters in Vietnam’. *Military Review; Fort Leavenworth* 83.4 (Jul/Aug 2003), pp. 32–37.

²⁴MACV, *Handbook For US Forces in Vietnam*.

²⁵Villard, *Combat Operations: Staying the Course, October 1967 to September 1968*, pp. 632–633.

²⁶9th Infantry Division in Vietnam, December 1966 - July 1969 Statistics’. Vietnam Center and Archive. Texas Tech University, Lubbock, TX, July 1969. URL: <https://www.vietnam.ttu.edu/virtualarchive/items.php?item=8850421002>; USARV. ‘Combat Lessons Bulletin, Number 1’. RG 472, A1 905. NARA II, College Park, MD, 19th Apr. 1969. URL: <https://catalog.archives.gov/id/29006876#.XI61jhNZFa0.link>; USARV. ‘Combat Lessons Bulletin, Number 14: Taking the Night Away from Charlie’. Vietnam Center and Archive. Texas Tech University, Lubbock, TX, 1969. URL: <https://www.vietnam.ttu.edu/reports/images.php?img=/images/F0158/F015800441525.pdf>.

²⁷Jonathan D. Caverley. ‘The Myth of Military Myopia: Democracy, Small Wars, and Vietnam’. *International Security* 34.3 (2009), pp. 119–157; James McAllister. ‘Who Lost Vietnam? Soldiers, Civilians, and U.S. Military Strategy’. *International Security* 35.3 (1st Dec. 2010), pp. 95–123; Jonathan D. Caverley. ‘Explaining U.S. Military Strategy in Vietnam: Thinking Clearly about Causation’. *International Security* 35.3 (1st Dec. 2010), pp. 124–143. This applies to direct support fire. Caverley’s argument regarding harassment and interdiction fire as a capital-substituting strategy still has merit.

there was usually plenty to go around, but coordination and observation had to be exquisite, and the artillery support had to already be in place and in range.²⁸ CAS missions were in high demand, and coordinating with pilots in the air required a different set of skills, even if there was sometimes some room to allow for their judgment (especially in the case of attack helicopters). The American military acted with great ingenuity to provide both.

What the Army learned to do with fire support in Vietnam was nothing short of revolutionary. When the Army went in, its methods for supplying and coordinating fire had evolved little since World War Two. By the time it exited, we see the roots of contemporary practices which lie at the heart of the "Revolution in Military Affairs". Innovations either born in or perfected in Vietnam included: air assault; air assault artillery/fire-basing; tactical air controller teams coordinating fires; helicopter gunships; fixed-wing gunships; use of gunships to coordinate and call in artillery strikes; airborne hunter-killer teams; precision-guided munitions; unmanned aerial vehicle surveillance; laser target designators; and sophisticated fires coordination networks.

Artillery For Field Artillery, the new challenge of Vietnam was getting artillery into the right place and then coordinating with units operating over wide areas. While artillery could sometimes be maneuvered into position by truck, supporting units operating in more remote locales, or relocating quickly, required new methods.

Artillery support was a vital component of the Army's ongoing experiment with airmobile operations. Before a mission or operation, artillery batteries would be lifted into suitable locations. Once there, they would set up fire bases, temporary defensive structures designed to support the operation and protect artillery support. The practicalities of sling-loading howitzers beneath Chinooks and optimal fire-base construction were worked out over time, and fire-bases became increasingly elaborate.²⁹ Because fire-bases supported units operating in a full circle around them, artillerymen would need to swivel cumbersome howitzers (especially the large 155-mm) up to 180 degrees when switching between supported units. As a result, artillerymen began tinkering with ways of changing the firing vector more rapidly and with less effort, using basic materials to build "speed shifters", essentially levers applied to the howitzer's center of gravity. Using speed-shifts on the 155mm howitzer, two men could do

²⁸Shelby L. Stanton. *Vietnam Order of Battle*. Washington, D.C: U.S. News Books, 1981, pp. 49–50.

²⁹Tolson, *Airmobility 1961-1971*, p. 96.

in under a minute what otherwise took eight men and several minutes.³⁰ As the war ground on and smaller and smaller unit-sized operations prevailed, units began experimenting with using an 81mm mortar to establish mini fire-bases, accentuated by new close air support capabilities.³¹ The speed and flexibility of Airmobile operations drove dramatic changes in techniques for fire support coordination, which affected close air support as well.³²

Artillery units supporting operations in the Mekong Delta ran into their own issues. They attempted to provide fire support from fixed locations throughout the delta, but found that they could not easily reposition or provide adequate coverage. The riverbanks were not navigable by the deuce-and-a-half trucks which pulled howitzers around.³³ Helicopter transport was attempted, but gun crews transported by helicopter were lightly armored and vulnerable. In late 1966, Captain John Beiler, commander of Battery B, 3d Battalion, 34th Artillery, and Major Daniel Charlton, the battalion operations officer, began to experiment with a novel technique; putting howitzers on barges in the river.³⁴ Borrowing barges from the navy, the battalion began experimenting with configurations, settling on a barge platform cobbled together from standard Navy pontoons, on which would be situated the howitzer and armored living space, operations posts, and ammunition storage. To encourage these experiments, the USARV deputy commanding general assigned a special logistics liaison officer to the brigade to assist with procuring any special materials the unit might need.³⁵ Individuals throughout both the Army and Navy chain-of-command contributed ideas and resources for experimentation where they could.³⁶

Building the floating artillery was not merely a matter of putting howitzers on barges. Every technical and operational detail had to be worked out. A variety of barges were tested, as were methods for securing the howitzers to the deck (the initial solution involved telephone poles – later models used howitzers welded to rotating platforms), stabilizing the barges for firing, and estimating azimuths from moving platforms (Figure 4.1).³⁷ But the combination

³⁰Terry L. Beckenbaugh. 'Artillery Speed Shifter'. *A History of Innovation: US Army Adaptation in War and Peace*. Ed. by Jon Hoffman. Washington, D.C.: Center for Military History, 2009, pp. 139–144.

³¹Tolson, *Airmobility 1961-1971*, p. 235.

³²*Ibid.*, p. 121.

³³Wall, *Development of the Floating Artillery Platform in the Mekong Delta During the Period 1 January 1967 through 31 October 1967*.

³⁴David Ewing Ott. *Field Artillery, 1954-1973*. Washington, D.C: Department of the Army, 1975, pp. 76–77.

³⁵Fulton, *Riverine Operations, 1966-1969*, p. 72.

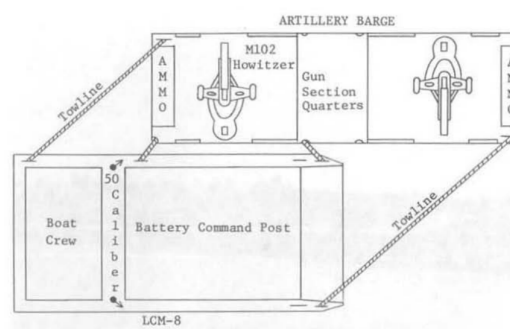
³⁶Wall, *Development of the Floating Artillery Platform in the Mekong Delta During the Period 1 January 1967 through 31 October 1967*.

³⁷Fulton, *Riverine Operations, 1966-1969*, p. 72.

Figure 4.1: Floating Riverine Artillery Battery



(a) Armored Howitzer Barge



(b) Schematic of Artillery Barge

of a supportive command, iterative experimentation, and the relatively clear selection pressures (it was clear when something wasn't working) produced steady improvement and useful operational adaptation.

Close Air Support Vietnam was a revolution for Close Air Support. Prior to Vietnam, CAS fell in an organizational gap. The Army was interested in CAS, but lacked appropriate platforms to conduct missions. The Air Force subordinated CAS to a tactical airpower mission that was more focused on supporting bombing and air superiority. In Korea, air superiority and the lack of other missions meant that Air Force support was adequate, though Army and Air Force post-mortems revealed substantial problems with the actual coordination of battlefield fires (the thing that makes CAS hard). In the period following the war, the two services continued to bicker and under-resource the mission. Because both services had to agree on any changes to joint doctrine and training, stalemate ensued.³⁸

Prior to Vietnam, the Army had been slow to procure a helicopter gunship, seeing them as impractical. But as Army commanders began using the armed helicopters which had been modified in-theater to protect transports independently and for other missions, their virtues began to emerge. Moreover, the proliferation of different kinds of helicopters (and further modification of vehicles) created new repertoires and configurations for Army commanders to add fire support to their missions. Desperate not to lose an important mission and budgetary line, and to support the war effort, the Air Force, too, began experimenting with new firepower concepts. Since as early as the 1920s, a small number of enthusiasts advocated for marrying an aerial maneuver called the pylon turn with lateral-mounted weapons to create a gunship

³⁸John Schlight. *Help from Above: Air Force Close Air Support of the Army 1946-1973*. Washington, D.C.: Air Force History and Museums Program, 2003, pp. 166–77.

platform, but no air force was interested in the idea (which flew in the face of other developing doctrine about employing airpower). However, with the rising interest in (and contracting dollars available for) limited warfare and counterinsurgency study in the early 1960s, a motley crew of outside contractors and ancillary personnel in the Air Force research establishment succeeded in getting a barebones testing project authorized, not through the Air Force, but the new Pentagon Limited Warfare Office; even then the project ground to a halt, denied testing flights as Air Force resources were diverted to Vietnam. But escalation in Vietnam, interest in the Air Force Special Operations community, and the tenacity of Captain Ron Terry (who joined the project as a test pilot after an early tour of Vietnam) pushed the project up the chain of command as a potential Air Force contribution to counterinsurgency. The Air Force Chief of Staff approved a test, overriding the head of Tactical Air Command, but the Air Force considered the project a “unique R&D item” suitable for “operational use in Republic of Vietnam (RVN)” for the counterinsurgency mission only, not a test platform for a future procurement.³⁹ Once in Vietnam, operational need and the specialized, ad hoc Vietnam R&D apparatus (especially JRATA, discussed later) took over. A few Air Force Special Operations C-47 cargo planes were modified with surplus machine guns, and shortly proved their value for night operations and hamlet protection, just as advocates had long theorized. Enthusiastically adopted by the Air Force Special Operations community, the AC-47 and its successor the AC-130 became essential to close air support in Vietnam and gained a tremendous Army constituency, able to pour in tremendous amounts of highly accurate fire to stop Vietcong advances in their tracks. The AC-47 led the way in developing specialized close air support aircraft, overcoming significant resistance from the Air Force establishment (which preferred multi-role jet fighters). Fears of losing turf to the Army and a 1965 Congressional investigation into close air support in Vietnam also helped move the Air Force Pentagon bureaucracy to support the close air support mission in Vietnam.⁴⁰ The thick Vietnam jungle increasingly led Air Force Forward Air Controllers to work from planes calling in airstrikes (including using marking rockets and later laser designators), and the Air Force reluctantly acquired the OV-10 Bronco as a FAC aircraft, and later the more heavily armed light attack and FAC aircraft, the A-10 Thunderbolt II (whose production began just

³⁹Jack S. Ballard. *Development and Employment of Fixed-Wing Gunships 1962-1972*. Washington, D.C.: Office of Air Force History, Jan. 1982. URL: <https://apps.dtic.mil/docs/citations/ADA122538>, p. 13.

⁴⁰Ballard, *Development and Employment of Fixed-Wing Gunships 1962-1972*, pp. 14–15; Douglas N. Campbell. *The Warthog and the Close Air Support Debate*. Annapolis, Md: Naval Institute Press, 2003, pp. 54–55; Schlight, *Help from Above*, p. 352.

too late to see Vietnam service).⁴¹

Beyond acquiring new platforms or modifying existing ones for CAS, Vietnam drove the Army and Air Force to figure out how to use new communications and computational capabilities for fire control. One of the most common platforms in the Air Force inventory (and by far the one carrying the most firepower) was the B-52 Stratofortress strategic bomber, which was also the workhorse of the strategic bombing campaign against North Vietnam. However, dropping "dumb" bombs from 45,000 feet was extremely dangerous in any kind of close air support mission. But enterprising researchers figured out how to reverse engineer an Air Force accuracy computation system into a radar bombing system called Skyspot, which allowed radar operators to act as Forward Air Controllers, telling B-52 bombardiers exactly when to drop their bombs, allowing them to engage targets much closer to friendly troops. In the end, over half of all B-52 sorties were conducted over South Vietnam, and a substantial portion of these were for close air support.⁴² It was also in Vietnam that Air Force pilots began figuring out how to use new precision-guided weapons, both using helicopters and airborne-FACs to designate targets for fighters and "lasing" targets directly from the bombing aircraft. Early "smart" bombs also enabled a raft of new tactics designed to keep fighter aircraft safer, by "lofting" bombs up and into a target for example.⁴³

But the most important developments were using new communications technologies to deal with a radically decentralized battlefield.⁴⁴ Prior to the start of the Vietnam War, the American fire support mission was essentially unchanged from World War Two. Artillery would be raised by infantry in the field over the radio, coordinating headings. Calling in Air Support required coordinating with the Air Force via a division or corps level fire-support center or working with an Air Force Forward Air Controller (FAC). While in previous wars, workarounds had been often organized on the battlefield, they disappeared after those wars, due to their improvisational nature. In the years leading up to Vietnam, as the Pentagon pivoted to Flexible Response and Limited Warfare, the Army and Air Force were forced to begin conceptualizing a new approach to their close air support coordination, but no

⁴¹Schlight, *Help from Above*, pp. 352–362.

⁴²*Ibid.*, pp. 323–324.

⁴³C.R. Anderegg. *Sierra Hotel : Flying Air Force Fighters in the Decade after Vietnam*. Washington, D.C.: Air Force History and Museums Program, 2001, pp. 125–6; Wayne Thompson. *To Hanoi and Back: The United States Air Force and North Vietnam, 1966-1973*. Fort Belvoir, VA: Defense Technical Information Center, 1st Jan. 2000. URL: <http://www.dtic.mil/docs/citations/ADA439924>, p. 127; Charles J. Quilter II and John C. Chapin. *A History of Marine Fighter Attack Squadron 531*. Washington, D.C.: History and Museums Division, Headquarters U.S. Marine Corps, 2001, p. 60.

⁴⁴Bergen, *Military Communications: A Test for Technology*, p. 476.

concrete changes had been made (all-the-while, the contest over the mission continued). The exigencies of Vietnam forced both parties to adopt a system that was more decentralized than the Air Force would ever have permitted but that still gave Air Force senior leadership more control over resources than the Army wanted.⁴⁵ The Army adopted the Air Force “request net” system, and established a parallel Tactical Air Control System, integrated down to the battalion level. Five Direct Air Control Centers controlled air traffic and resources at a few levels lower than in World War II and Korea, and communicated with Forward Air Controllers all over the country, who themselves coordinated directly with Army forces on the ground. In principle, any agent with a tie into the communications net could direct any other, and response times were noticeably faster than in previous wars. This allowed for the rapid, self-organizing fire-support which characterizes American firepower superiority to this day. By the end of Vietnam, the American military was in another world of CAS. The proliferation of and the distributed nature of battle created a devolved and distributed command-and-control system.⁴⁶

What catalyzed this shift was precisely the scale of Vietnam-era combat. In World War Two and Korea, US Army ground forces needed to coordinate fires in battalion-level engagements or higher; this permitted a degree of centralized control and planning. But most combat in Vietnam was at the company or platoon level. The search for better, less labor-intensive means of coordinating fires for small-scale forced the Army and the Air Force to adopt new processes, which had the effect of decentralizing decision-making. Paradoxically, even though decentralized fire support control later became crucial to scaling up the “Revolution in Military Affairs”, it was the challenge of *small-scale operations* that knocked the Army and Air Force into a new and more effective equilibrium for close air support.

Individual Rotation and Collective Experience

Paradoxically, the individual rotation system was key to retaining learning in American units. Individual soldiers would deploy for twelve-month tours (thirteen for Marines) until they reached their Date Estimated Return from Overseas (DEROS), an individual calendar for coming home.⁴⁷ While the individual rotation system was created for purposes of morale

⁴⁵Campbell, *The Warthog and the Close Air Support Debate*, p. 51.

⁴⁶Schlight, *Help from Above*, pp. 371–382.

⁴⁷While longer tours of duty or even staying for the duration would have improved learning retention, they were politically impossible: the tour length policy was driven by the twenty-four month conscription length given by Congress, not to mention the Army’s various manning requirements around the globe. It took six to

and military effectiveness based on the lessons of World War Two and Korea, it inadvertently proved valuable for the hyper-localized, unfamiliar environment of Vietnam. It created an ‘Alexander’s Ship’ phenomenon where, even though no individual stayed longer than a year, the entire unit remained in theater for longer with an unbroken chain of experience. Over time, units learned how to navigate their local physical and social environment, detect enemy activity, and counter enemy tactics. The members of the units who had been there the longest might grasp this knowledge at an often-intuitive level, but they would also teach new unit members. At the very least, new unit members would be given the opportunity to watch and learn, protected from their own inexperience by the intuitions and knowledge of their comrades.

As has been noted, Vietnam veterans recognized the benefits of using experienced soldiers to train new men. One recalled: “The best training I received was from the ‘old timers’ in my company after I reached the field. They taught the real skills needed for survival. It was not always the best or quickest shots who made it to DEROS. It was knowing how the enemy employed his weapons in the terrain that made the difference. The observant Sky Trooper knew that the VC and NVA built their bunker complexes on reverse slopes near water sources, or [that] the presence of fresh tree stumps in the jungle indicated a bunker complex nearby. Failure to observe such warning signs handed down by years of experience could result in entering the enemy kill zone”.⁴⁸

When a new soldier arrived in Vietnam, he would process through the 22nd or 90th Replacement Battalion, be assigned a unit by a clerk working with a computer system to determine operational need, and be shipped out to his unit after a short seminar familiarizing him with the war, the pacification mission, and some basic language and cultural knowledge.⁴⁹ When he arrived at his unit, he would attempt to learn the ropes. If he was an officer, he would need to quickly learn his environment, not least to win the respect of his troops; to

eight months to fully train a soldier in his specific specialization, after which he could be deployed. While the Army could have deployed soldiers for a few months longer or discriminated between draftees and volunteers who could have been deployed for longer, this would have been an organizational headache, and may have led to resentment in the ranks. It is worth noting that nearly all of the early critics of individual rotation had staying for the duration, not unit rotation, as the alternative in mind.

⁴⁸First Cavalry Division survey respondent quoted in Russell W. Glenn. *Reading Athena’s Dance Card: Men Against Fire in Vietnam*. Annapolis, MD: Naval Institute Press, 2000, p. 110.

⁴⁹Richard Verrone. *The Vietnam Archive Oral History Project*. In collab. with Gary Noller. 2006.

some extent “experience spoke more forcefully than rank”.⁵⁰ The informal but ubiquitous practice was to assign a new enlisted soldier a more experienced mentor in the unit to show him the ropes.⁵¹ Through his mentor, he would learn about VC tactics in the area, about the practicalities of operational life in a demanding physical environment (the specifics, of course, being local to the area), about detecting traps, ambushes, or booby traps, etc. After his initial training, he would begin taking more and more of his share of the task. Helping instruct new arrivals worked in everyone’s survival interest. In the small-unit tactics which characterized Vietnam battles, every man was vital. Moreover, newbie mistakes that revealed the unit’s position, that triggered booby traps, or the like were a threat to everyone. While some oral histories reference a certain amount of awkwardness in these first few weeks (especially if a soldier arrived as a replacement due to casualties), soldiers universally said that they gelled with their units after a few weeks or the first combat experience (whichever came first).⁵² This initial period provided vital acculturation and knowledge transfer.

In addition to informal acculturation, units used a variety of training systems to maintain their skills and train replacements. Different units had in-country training programs, usually at the divisional level, to instruct replacements on the specifics of a unit’s battlefield and TTPs; indeed, for this very reason, MACV chose to devolve training to field units.⁵³ The burden of training replacements varied tremendously by the type of unit and quality of replacements (often influenced by the training schools they had attended and qualifications they had earned). Artilleryman noted that frequent retraining was not arduous; the centralized and standardized nature of their task and the teamwork and supervision required for normal activity facilitated integrating replacements.⁵⁴ Infantry officers sometimes complained that the need to train replacements did hamper operational tempo, but it also seems that re-training may have been beneficial to unit effectiveness and teamwork, and it wasn’t a universal complaint.⁵⁵ Retraining seems to have been more arduous in specialized functions,

⁵⁰Glenn, *Reading Athena’s Dance Card*, p. 121. See also Gabriel and Savage, *Crisis in Command*, pp. 13–14.

⁵¹Glenn, *Reading Athena’s Dance Card*, p. 109.

⁵²Bradley Dean Helton. ‘Revolving Door War: Former Commanders Reflect on the Impact of the Twelve-Month Tour upon Their Companies in Vietnam’. MA Thesis. North Carolina State University, 2004, p. 54; Richard Verrone. *The Vietnam Archive Oral History Project*. In collab. with Andrew DeBona. 2003; Richard Verrone. *The Vietnam Archive Oral History Project*. In collab. with Antoine Roy. 2003.

⁵³“Standardization of replacement training is not considered desirable in Vietnam due to the variation of the operational environment” (Department of the Army. ‘USARV Training Seminar - Seminar Report’. RG472, A1 901, Box 304. NARA II, College Park, MD, 29th Nov. 1967. URL: <https://catalog.archives.gov/id/57577416>).

⁵⁴Helton, ‘Revolving Door War: Former Commanders Reflect on the Impact of the Twelve-Month Tour upon Their Companies in Vietnam’.

⁵⁵Jason Stewart. *The Vietnam Archive Oral History Project*. In collab. with Lawrence Dacunto. 2008. URL:

often in rear areas.⁵⁶

Individual rotation did create its share of problems for knowledge retention. If commanders weren't careful, a large number of soldiers could rotate out in a short period of time. In one extreme case in 1966, one year after the 1st Cav (Airmobile) had deployed to Vietnam, 90 percent of the unit rotated home in a one month period, devastating the unit's organizational memory.⁵⁷ However by 1966, the US military began to adjust to some of the problems of rotation, using techniques to avoid sudden drops in strength or experience by rotating some soldiers into different units. Commanding officers had some sense of their unit experience levels: they spoke of a unit being "too green", meaning it lacked combat veterans and those who had already experienced battle.⁵⁸

A more serious and intractable problem was the universally panned six-month field command rotation for officers. While junior officers deployed to Vietnam for at least a year, it was expected that they would spend six months commanding a unit in the field before taking a staff position. The policy was adopted early in the war, apparently in order to "bloody" as many Army officers as possible, and to spread out command experience (for career fairness as much as for retaining knowledge).⁵⁹ Senior officers, necessarily removed from the battlefield and from their units scattered around the countryside, also found it helpful to have subordinates who could 'tell it like it is' with the air of recent experience.⁶⁰ Vertical cohesion –the willingness of enlisted soldiers to follow their formal leaders– was greatly hampered by officers' lack of skin in the game; after six months, they would fly away to cushy staff jobs, leaving their units in the malarial jungles. Effectively capping officer experience at six months unnecessarily endangered the soldiers who had to follow inexperienced leadership. For example, Thayer showed that soldiers were a quarter as likely to die in battalions commanded by officers for more than six months, and he also showed that company commanders were themselves more than half as likely to die if they survived to four months.⁶¹ Moreover, junior officers were under pressure to rapidly show progress, contributing to short-sighted strategy.⁶² If this policy was so destructive, why wasn't it changed? Remember that there

<https://www.vietnam.ttu.edu/reports/images.php?img=/OH/OH0645/OH0645.pdf>.

⁵⁶Department of the Army. *Memo DTG 220020Z*. Feb. 1969.

⁵⁷Glenn, *Reading Athena's Dance Card*, p. 104.

⁵⁸For examples, see McDonough, *Platoon Leader*, p. 112; Verrone, *The Vietnam Archive Oral History Project*.

⁵⁹Kinnard, *The War Managers*, p. 110.

⁶⁰McDonough, *Platoon Leader*, p. 183.

⁶¹Department of the Army. *Southeast Asia Analysis Report, Vol 8*. 1973.

⁶²Kinnard, *The War Managers*, p. 110; Daddis, *No Sure Victory*, p. 100.

must be a selection pathway to create change (not just a need). For the individual officers, the six-month command tour promised both variety of experience and safety (though many resisted leaving their units out of loyalty). Moreover, change would have to come from senior leaders, who were both removed from problems on the ground and who benefited from the policy through the fresh eyes it brought to their staffs. By the time the scale of the problem was clear, America was headed out of the war.

If the Army's infantry culture in Vietnam broadly worked to acclimatize replacements and provide life-saving battlefield knowledge in a reliable way, why did Vietnam postmortems partially blame the rotation policy (and accompanying unit culture) for the Army's post-war crisis?⁶³ The rotation policy had been consistent throughout the war, without any accompanying breakdowns in morale or cohesion. Even through 1972, field commanders expressed satisfaction with the replacement policy in general.⁶⁴ However, two factors did change in the late war. First, political imperatives mean that fewer American forces were deployed operationally. With the boredom of base (and without the danger of battle), soldiers found many ways to get into trouble, and also were exposed to fewer bonding pressures. Second, as units began to withdraw, MACV instituted a policy of transferring servicemen with more time left on their tour into other units, and servicemen with upcoming DEROSs into redeploying units, for fairness' sake.⁶⁵ As a result, average unit experience and unit stability both declined in the last years of the war: 'Mix-mastering', as the process was known, undermined both cohesion and learning.

Counterinsurgency and Pacification

The sections above hopefully served to rebut the notion that the military and the US Army in particular refused to adapt to Vietnam warfare and instead stuck to "big-unit" and "conventional" operations. But even if it is impossible to avoid the conclusion that the Army's operations in Vietnam were deeply unconventional and innovative, another line of criticism has held that the Army nonetheless failed to adapt at a higher, conceptual level.⁶⁶ The tac-

⁶³For a partial list, see Helton, 'Revolving Door War: Former Commanders Reflect on the Impact of the Twelve-Month Tour upon Their Companies in Vietnam', 15fn52.

⁶⁴Department of the Army. *Donn A. Starry: Senior Officer Debriefing Reports*. 1972.

⁶⁵Sorley makes a point of blaming the policy on Westmoreland. While I have not been able to confirm this detail, I have been able to confirm that the policy was active. See MACV. *VNIT 939: Conference with Secretary of the Army Stanley Resor*. 23rd Apr. 1971.

⁶⁶See, for example, Craig M. Cameron. 'The U.S. Military's "Two-Front War," 1963-1988'. *The Sources of Military Change: Culture, Politics, Technology*. Ed. by Theo Farrell and Terry Terriff. Boulder, Colo: Lynne Rienner Pub, 1st Dec. 2001, pp. 119-138, p. 122.

tics and operations may have been unconventional, but the deeper purpose was still to find and destroy the enemy and not to “win hearts and minds” or “protect the population.” While the section below will address these questions further, when it comes to informal adaptation, two important caveats to this criticism must be made: 1) it ignores actual Army counterinsurgency activity and 2) a focus on Army infantry operations creates a selection bias which misrepresents MACV’s overall counterinsurgency strategy.⁶⁷

First, the Army engaged in traditional counterinsurgency activities to a degree far greater than is acknowledged by the Army’s critics. The Army infantry units tasked with rooting out the Main Force Viet Cong and infiltrated NVA units nonetheless regularly conducted “civic action” projects designed to win over local populations (including building infrastructure and providing medical care); trained with ARVN and RF/PF units; and gathered intelligence on local Viet Cong activity (sometimes through civic action projects). They provided security for CORDS advisors and Vietnamese Revolutionary Development (designed to counter Viet Cong political activities) operating in less friendly areas, not to mention other pacification partners. They helped open up roads and canals, and secure them against the Viet Cong, aiding economic growth. Moreover, the Army provided substantial manpower to the pacification effort. The majority of CORDS advisors were Army officers (6400 out of 7400 at the height), and the Army also supplied hundreds of military advisors to ARVN at all levels.⁶⁸ Army intelligence personnel helped run the Phoenix program and related intelligence-gathering activities, and Army Special Forces lived and worked alongside Vietnamese villagers, especially in the Central Highlands. Soldiers worked side-by-side with Vietnamese counterparts, including through the widely acclaimed Kit Carson Scouts program (examined later). In many parts of the country, VC/NVA infiltration and logistical activity was timed for the dry season, and both sides would more or less hunker down during the wet season. For many Army units, this meant focusing on counterinsurgency close to home.⁶⁹ For many soldiers

⁶⁷There is a cottage industry of revisionist historians and critics who argue that Westmoreland did not “really” focus on pacification, and that the critical turning point was under Creighton Abrams in 1968 (Krepinevich, *The Army and Vietnam*; Sorley, *A Better War*). Recent scholarship has demolished this argument, see Daddis, *Westmoreland’s War*; Daddis, *Withdrawal*; Daddis, ‘Eating Soup with a Spoon: The U.S. Army as a “Learning Organization” in the Vietnam War’; Birtle, *Doctrine, 1942-1976*; Cosmas, *Years of Escalation*; Dale Andrade. ‘Westmoreland Was Right: Learning the Wrong Lessons from the Vietnam War’. *Small Wars & Insurgencies* 19.2 (1st June 2008), pp. 145–181

⁶⁸Mark Moyar. *Phoenix and the Birds of Prey: Counterinsurgency and Counterterrorism in Vietnam*. Lincoln: Bison Books, 2007, p. 49; Gregory A. Daddis. ‘CORDS in Charge: Organizing for Pacification Support in the Vietnam War’. *Stand up and Fight! The Creation of U.S. Security Organizations, 1942-2005*. Ed. by Ty Seidule and Jacqueline E. Whitt. Carlisle, PA: Strategic Studies Institute and U.S. Army War College Press, 2015, pp. 139–158, p. 151.

⁶⁹Villard, *Combat Operations: Staying the Course, October 1967 to September 1968*, pp. 119–120.

(in and out of regular combat units), “non-kinetic” counterinsurgency aimed at winning the loyalty of the population, generating intelligence about the Viet Cong, and improving GVN control was a routine part of life. The parts of the Army acting primarily with a counterinsurgency environment (some combat arms units, and a variety of specialized task forces and groups) adapted quickly, guided by experience as well as an active interest in counterinsurgency theory.⁷⁰ American soldiers routinely expressed frustration with the degree to which the South Vietnamese did not seem to take pacification seriously, and worked to improve governance at the local level.⁷¹

Second, critics of counterinsurgency in Vietnam has fallen victim to selection bias in their focus on Army infantry units. Paradoxically, while condemning MACV for its supposed focus on the “conventional war”, critics like Krepinevich and Nagl have assumed that conventional forces should have been the primary tools for counterinsurgency.⁷² In reality, MACV leaders (driven in part by their reading of major counterinsurgency theorists) developed a complex campaign plan in which most conventional forces would serve (at least initially) not to conduct counterinsurgency themselves but to make counterinsurgency possible. The main task of counterinsurgency was to build up the legitimacy and capacity of the GVN and ensure its control of the population; this task would be accomplished by bolstering and working with GVN forces and through advisory, aid, and intelligence programs; building up South Vietnam’s intelligence, police, and local militia forces was especially vital. These efforts needed to be protected by the threat that the ARVN could not deal with, the *raison d’être* for escalation: increasingly bold, well-armed, and well-organized Main Force VC units acting as a guerrilla army in keeping with the North Vietnamese concept of victory. North Vietnamese strategy is curiously absent from many criticisms of American performance in Vietnam, but MACV leaders, working from captured documents and interrogations among other things, had some sense of the plan (now confirmed by archival evidence) to deliver a knock-out blow to the GVN before American forces could be firmly established, or to deliver such a blow to the Americans as to make continuing politically impossible.⁷³

Veterans and historians have noted how different the war appeared to people who served in different times and places. In bustling IV Corps, the 9th Infantry Division were almost

⁷⁰Daddis, ‘Eating Soup with a Spoon: The U.S. Army as a “Learning Organization” in the Vietnam War’.

⁷¹Villard, *Combat Operations: Staying the Course, October 1967 to September 1968*, p. 143.

⁷²Krepinevich, *The Army and Vietnam*, p. 4; Nagl, *Learning to Eat Soup with a Knife*, Ch. 1.

⁷³Cosmas, *Years of Escalation*, p. 673.

constantly involved in civic action and intelligence missions, and even those engaged in interdicting Viet Cong logistics (like the Mobile Riverine Task Force) were frequently engaging with civilians going about their business.⁷⁴ Other areas of Vietnam involved purely conventional war, at the enemy's choice, with few civilians around.⁷⁵ One veteran of the Pacific campaign in World War Two stated that jungle warfare in I Corps was as fierce and tactically disciplined as anything he had encountered.⁷⁶ The result is that the modal soldier experience in Vietnam does not reflect the extent to which MACV incorporated counterinsurgency into its overall strategy. For every thirty enlisted infantrymen slogging through isolated patrols in the Central Highlands chasing after an infiltrating NVA unit, there was one or two Army officers acting as CORDS advisors, totally focused on using every tool in the counterinsurgent's toolkit at the local level; that level of effort still reflects one of the greatest third-party commitments to counterinsurgency in history.⁷⁷ You can see this disparity in 4.2. By substantial numbers, most US combat arms units were deployed, and took the heaviest US casualties, in the northern part of the country facing off against infiltrating NVA units and Main Force VC guarding logistical base areas, and in screening the provinces between the Ho Chi Minh trail and Saigon. The population of South Vietnam (derived from HES data) was concentrated along the coast in the North and massively in Saigon and south in the Mekong Delta, where US forces took exponentially fewer casualties. After the Tet Offensive and the subsequent setback of the VC/NVA war effort, Westmoreland launched the Accelerated Pacification Campaign (continued by Abrams), after which many more American units were shifted into Phase II and even Phase III of the campaign plan, providing security for pacification at a local level, a task to which they adapted using many of the same responses later found in American units in Iraq. In this regard, there is also a tremendous temporal divide in the American experience.⁷⁸

These two factors be seen in interaction in the controversy surrounding the Marines' Combined Action Program (CAP), which placed Marine platoons in villages in the coastal plain of I CTZ, where they lived, conducted civic action, and assisted RF/PF in repelling

⁷⁴Villard, *Combat Operations: Staying the Course, October 1967 to September 1968*, pp. 139–140; Sherwood, *War in the Shallows*, p. 147.

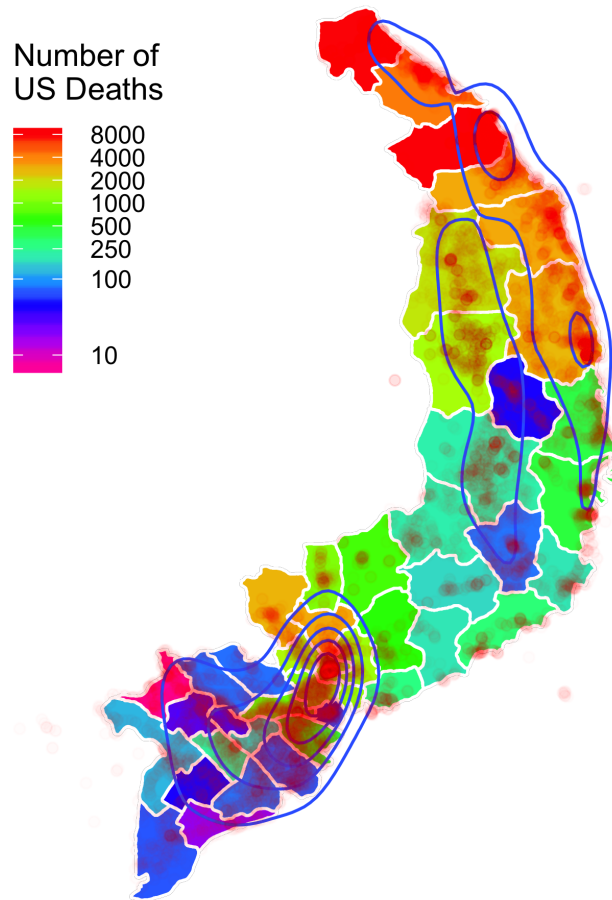
⁷⁵MacGarrigle, *Combat Operations: Taking the Offensive, October 1966 to October 1967*, pp. 255–256.

⁷⁶Villard, *Combat Operations: Staying the Course, October 1967 to September 1968*, p. 147.

⁷⁷Former district advisor Jack Wright makes this point, about how few American troops were in his district (Richard Verrone. *The Vietnam Archive Oral History Project*. In collab. with Jack Wright. 12th Dec. 2002).

⁷⁸For a typical example of the late (1970-1971) American experience in Vietnam, including relatively static, patrol-based village-level counterinsurgency and its attendant challenges, see McDonough, *Platoon Leader*.

Figure 4.2: US Casualties by Province, Overlaid with Population



Casualty statistics from the Coffelt database, population statistics from the HES Gazetteer database.

the Viet Cong.⁷⁹ Since the war, a common reproach (especially from Marines) was that the program represented an alternative “road not taken” for American pacification strategy but that Westmoreland (and the Army) disapproved of the CAPs.⁸⁰ Neither is correct.

Westmoreland’s concerns about CAP have to be contextualized by his strategic vision for the war. The CAP program began in a bottom-up way because local GVN forces could not secure the villages around the Marines’ Danang base, leaving it vulnerable to mortar and rocket attacks, and it expanded as the Marines pushed that bubble out further.⁸¹ Westmoreland approved, in principle, of the local, decentralized, population-centric approach to counterinsurgency, and of course he allowed the program to continue to expand (as COMUSMACV, he could have stopped it). But he expressed a number of concerns about the way it was implemented. Before 1968, American troops were relatively thin on the ground: the CAP hamlets disbursed troops further and made it more likely that they would be overrun (as, indeed, a few were), which could have a disastrous effect on political support for the war.⁸² Westmoreland (and senior American political leaders) also worried about building GVN capacity in the long-term. CAP platoons began because Vietnamese forces were falling apart on the ground, but (despite repeated attempts), the Marines were unable to allow ARVN troops to “in-fill” behind them if they moved to another village; the Viet Cong were able to quickly re-establish themselves.⁸³ In many instances, the Marines’ even acted as the first line of defense *against* the government, smoothing out relations between villagers and officials.⁸⁴ Both in the context of patron-client politics and American domestic politics, Westmoreland reasonably worried that the CAP contributed to GVN dependence.⁸⁵ In addition, the strength of the Viet Cong insurgency was in the South, where the vast majority of the

⁷⁹The CAP program itself is primarily an example of adaptive, environmentally-focused problem-solving. It is not at all clear that the Marines’ highly confused and ambiguous counterinsurgency doctrine (found in FMFM 8-2 – the Small Wars Manual having been largely forgotten at the time) was responsible for the CAPs or the Marines’ approach to operating in Vietnam; equally important was the personal service of most senior Marine leaders under veterans of Nicaragua and Haiti, as well as the Marines’ small, tribal nature (Nagl, *Learning to Eat Soup with a Knife*, p. 158). Lewis Walt, III Marine Amphibious Force (MAF) commander, for example, vividly recalled the lessons that his former captain Chesty Puller had given him about jungle warfare amongst the people (Larry E. Cable, *Conflict of Myths: The Development of Counter-Insurgency Doctrine and the Vietnam War*. New York, NY: NYU Press, 1988, pp. 161–2). CAP learned “counterinsurgency” primarily through trial and error and field experience, not through training or theory (). For an extended criticism of the Marines’ doctrine going into Vietnam, see *ibid.*, pp. 158–173.

⁸⁰Cameron, ‘The U.S. Military’s “Two-Front War,” 1963–1988’, p. 122; Nagl, *Learning to Eat Soup with a Knife*, p. 157.

⁸¹Johnson, *The Marines, Counterinsurgency, and Strategic Culture*, p. 151.

⁸²Moyar, *Phoenix and the Birds of Prey*, pp. 44–45.

⁸³Daddis, *Westmoreland’s War*, p. 80.

⁸⁴Johnson, *The Marines, Counterinsurgency, and Strategic Culture*, p. 194.

⁸⁵Moyar, *Phoenix and the Birds of Prey*, p. 45.

population lay - the CAP villages (outside of those near cities) were somewhat isolated from the broader conflict regardless of who controlled them. Westmoreland needed the Marines in ICTZ to disrupt VC/NVA infiltrations through the Central Highlands that affected the rest of the country, threatened the major population centers, and supported the insurgency in the south. In the grand scheme of things, protecting coastal villages against VC predations was less important than shielding the rest of the country against the formidable Main Force units. And so Westmoreland's insistence that the Marines focus significant resources on interdicting and deterring VC/NVA movements and logistics in the unpopulated Central Highlands of I CTZ reflected not a stubborn emphasis on conventional battle but a holistic, nationwide understanding of counterinsurgency strategy.⁸⁶

But not only did Westmoreland permit the expansion of the CAP program within limits (a policy his successor Creighton Abrams continued), but as more American troops flowed into the country, he initiated the Mobile Advisory Team (MAT) program *explicitly modeled* on the CAPs, which came to dwarf its inspiration in size.⁸⁷ Began in 1967, these teams embedded three specially-trained US soldiers, an American officer, an ARVN officer, and a translator with a platoon of RF/PF, with the goal of improving their capacity for protecting the population and advancing counterinsurgency at the lowest level. By 1968, over three hundred and fifty of these teams operated all over the country, instructing their units (as well as the village militia Popular Self-Defense Forces) on how to defend their hamlets, conduct intelligence operations, and patrol and ambush Viet Cong units operating in the vicinity. As these RF/PF units were themselves tied down to a village or hamlet area, MAT soldiers lived alongside and served villagers, gathered intelligence, and helped coordinate CORDS and other projects intended to "win hearts and minds".⁸⁸ In terms of local village counterinsurgency as with so many other things, MACV and the Army both did more than what they are usually credited with and, when they did engage in "conventional" (or enemy-centric) operations, did so with strategic purpose linked to a broader counterinsurgency campaign plan. Those American troops exposed to village-level counterinsurgency (especially through CAPs, MATs, CORDS advising, and the late war pacification emphasis) *did* adapt to it, while the fact that politics and counterinsurgency were less evident on the battlefield (especially 1965-

⁸⁶Martin Van Creveld has jocularly theorized that the Marines' emphasis on the CAP program was motivated by a discomfort from getting too far away from the beach (Van Creveld, *Command in War*, p. 243).

⁸⁷Westmoreland, *A Soldier Reports*, p. 216.

⁸⁸Terry T. Turner. 'Mobile Advisory Teams in Vietnam: A Legacy Remembered'. *On Point: The Journal of Army History* (Spr. 2011), pp. 34-41; Komer, *Bureaucracy At War*, pp. 113-4.

1968) for many soldiers reflects their strategic employment by MACV and not some greater philosophical divide.

Drawdown

After Vietnam, the 173rd was inactivated and the 1st Cav (Airmobile) became simply the 1st Cav again. But, as a mission-set, airmobility (rebranded as air assault) and Army aviation remained, with schools, qualifications, units, and equipment. There had been permanent airmobile units (like the 101st) that had deployed to Vietnam, and they returned in one piece. However, the utility and mobility of air cavalry on the European battlefield was strictly limited, and both doctrine and training reflected this from the mid 1970s on.⁸⁹ Moreover, the attack helicopter now had both a material existence and a bureaucratic constituency, and the Army identified the attack helicopter as a useful anti-armor platform for its pivot to Europe. The result was that the Army retained basic knowledge about airmobile operations and much of what it had learned about attack helicopters (not least, the platforms themselves) while jettisoning the more advanced airmobile tactics that fit the conflict in Vietnam. The operational techniques attack helicopter pilots had come up with over the skies of Vietnam (such as Pink Teams, coordination of fire from the air, etc.) form the basis of Army attack helicopter operations to this day.⁹⁰ As a result, the hard-won lessons of Vietnam endured, their origins lost to memory, but firmly embedded in the actual practices of the Army aviation community. In contrast, tactics like jitterbugging, checkerboarding, and Eagle Flights (not airmobile skills per se, but knowledge about how to use airmobility in one context) faded quickly.⁹¹

Those lessons did not extend to infantry tactics. The configuration of information asymmetry with the enemy, superior infantry firepower, and fire support to complement small-unit patrol tactics, did not appear to be on the horizon again, and so units which returned home stopped training for it (amplified by extreme turnover 1973-1976). Moreover, while the supporting elements (infantry, helicopter transport, artillery, and CAS) were anticipated on

⁸⁹Kevin Dougherty. 'The Evolution of Air Assault'. *Joint Forces Quarterly* (Sum. 1999), pp. 51-58. Dougherty notes another subtle shift. Air cavalry and airmobile operations were explicitly conceptualized as inheriting the comparative advantages of cavalry: "pursuit, screening, raiding, exploiting, and flexible response." These tasks (central to Vietnam-era operations) were at least partially abandoned for a focus on firepower and lethality with the move to "air assault."

⁹⁰Department of the Army. *FM 1-112 Attack Helicopter Operations*. Washington, D.C., 2nd Apr. 1997; Department of the Army. *FM 3-04 Army Aviation*. Washington, D.C., July 2015.

⁹¹Shelby L. Stanton. 'Lessons Learned or Lost: Air Cavalry and Airmobility'. *Military Review* LXIX.1 (Jan. 1989), pp. 74-86.

future battlefields, the anticipated command structures were quite different, befitting brigade or division-level operations against the Soviets. The long-term effects of Vietnam on infantry or ground operations are unclear. Certainly, at the technical level, the influence of Vietnam remained. Many of the weapons in the late 20th century infantryman's arsenal – the M-16, M-79 grenade launcher, M-14 modified sniper rifle, etc.– were derived from and perfected in Vietnam. At the tactical level, it was not clear what the 'lessons' of Vietnam were, exactly, for other kinds of wars. The Army's experiences had been incredibly diverse. In any case, high turnover after the war and the near-complete reorganization of combat arms units led to a rapid dispersal in knowledge.

While the demobilization of the Riverine Force was mostly due to lack of ongoing mission, it had an organizational component as well. The force was an oddly intimate, ad hoc Army/Navy affair; the Navy owned the boats and transport, the Army the operations. Because riverine operations was a mission-set neither relished nor saw use for, neither service adopted it. The soldiers who had participated in and run riverine operations dispersed into a variety of other combat arms units, and the Force became a footnote in history. On 25 August 1969, the Task Force was disbanded, and the 2nd Brigade, 9th Infantry Division was inactivated.⁹² Writing in the early 1970s, one former MRF commander expressed optimism about the "accumulation of a body of knowledge" in service publications and doctrine that would inform future operations.⁹³ History has not borne this notion out.

The war revolutionized Close Air Support, because ad hoc processes were permanentized as standard operating procedures for air-ground communications.⁹⁴ Moreover, Vietnam had a determinative effect on the future of close air support because it ushered in a new equilibrium in the Army/Air Force competition over CAS. In a competition for resources, autonomy, and prestige, both forces amplified their claim to the CAS mission through gunships (helicopter for the Army, fixed-wing for the Air Force). Because the Army could credibly threaten an alternative, and because Vietnam had resulted in the Air Force procuring hundreds of

⁹²Shelby L. Stanton. *The Rise and Fall of an American Army: U.S. Ground Forces in Vietnam, 1965-1973*. Novato, CA: Presidio, 1985, p. 347.

⁹³Fulton, *Riverine Operations, 1966-1969*, pp. 193–4.

⁹⁴Even then it was a close-run thing. By the mid-70s, fighter pilots were rapidly leaving the Air Force for lucrative commercial jobs, and average fighter pilot experience (combat or otherwise) plummeted along with Air Force budgets. If not for senior policy-maker entrepreneurship (especially by Larry Keith, a Vietnam veteran), it is likely that Air Force CAS capabilities would have greatly reduced in peacetime, though not as much as before the founding of Tactical Air Command (TAC) (Anderegg, *Sierra Hotel : Flying Air Force Fighters in the Decade after Vietnam*, pp. 53–56). Crucially, while Tactical Fighter Weapons Center (TFWC) figured out how to continue to improve training in peacetime, it also quickly pivoted its specific tactics to the looming Soviet threat (ibid., pp. 60–1).

gunships, the CAS mission finally stuck in the Air Force after being rejected for twenty years. It seems unlikely that this equilibrium would have been reached if not for the environmental pressure of the Vietnam battlefield (not to mention un-doctrinal, on-the-ground tinkering, like the conversion of transport helicopters into prototype gunships).

All of the techniques and practices that distinguish modern CAS were either invented or honed in Vietnam. Two factors led to their continuing adoption. The first was simply that they worked better than what the military had used before; as Air Force and Army permanent organizations continued after the war, they still benefited from these practices. The second is that the fire support mission demands a unique degree of formalization. There is little margin for error when the risk of friendly fire is so high and the task is so difficult. And so the standardization, frequent training and certifications prevalent in the aviation community meant that best practices were quickly incorporated into permanent routines. What is remarkable is that, even as the military still uses these practices developed in Vietnam, military members performing these tasks have no idea of their genealogy.⁹⁵

In contrast to CAS, the Army quickly jettisoned the lessons of Vietnam for artillery. Unlike the technical communications issues surrounding Close Air Support, most of the artillery problem-solving had to do with establishing and maintaining fire-bases providing supporting fire in a wide arc. In contrast, the pivot to the anti-Soviet mission required different concepts of operations, focusing more intensely on concealment and movement from the rear to forward locations and rapid setup/takedown to avoid counter-battery fire.⁹⁶ Even though knowledge of Vietnam techniques had made it into artillery schools, these were another loss to the focus on the skills needed to succeed on the European battlefield.⁹⁷ Without the particular environmental characteristics of Vietnam on the table, the skills and tactics used to set up fire-bases (including floating ones) were never handed down to the next generation of artillerymen or instantiated in doctrine.

The Army units or personnel that had specialized in counterinsurgency - Special Forces, Mobile Advisory Teams, CORDS, and those running intelligence, PSYOPs, and pacification programs had nearly all been organized on an ad hoc basis under the auspices of MACV. With the exception of the Special Forces (which endured in its way of practicing counterinsurgency), none of them survived demobilization intact.

⁹⁵Schlight, *Help from Above*, p. 362.

⁹⁶Donald Keith. 'Forward Observations'. *Field Artillery* (March-April 1977).

⁹⁷*Artillery Trends*. Ft Sill, OK: US Army Artillery and Missile School, Jan. 1967.

4.1.2 Formal Adaptation

Formal adaptation to the problems of survival and battlefield tactics in Vietnam took two primary forms. The first were efforts to support the warfighter or build capabilities that were impossible to come up with indigenously; these efforts included more specialized training programs, doctrinal shifts, and procurement operations. The second were attempts to spur, test, and spread indigenous battlefield adaptations, through lessons learned publications and testing activities. While the Army's permanent organizations supported these efforts (most obviously through procurement and basic training), the vast majority of this kind of support was conducted through ad hoc organizations or activities set up in response to the needs of Vietnam.

Doctrine and Training

By the time that America escalated its war efforts in Vietnam, counterinsurgency had been a major focus of doctrine development and training for several years, driven by Communist successes in revolutionary wars and the Army's role in aiding American allies in rolling back these movements.⁹⁸ With a single-minded focus rarely matched in the annals of US civil-military relations, President Kennedy had spurred the Army to restructure its doctrine, training, and force structure for the era of revolutionary warfare (such that a 1965 interagency review of counterinsurgency preparedness found that the Army was the only entity).⁹⁹ As a result, the primary challenges were implementing doctrine, making adjustments for actual battlefield conditions, and ensuring that soldiers were properly trained for what they would encounter in Vietnam.

Training The Army's normal initial training processes began focusing on conflict in Vietnam years before escalation for officers (as the most "active" theater in the world at the time) and shortly afterwards for enlisted infantry. North Vietnamese leaders and guerrilla theorists and histories of Malaya and Indochina started showing up on West Point required reading lists in the early 1960s.¹⁰⁰ Veterans and observers of the French and British counterinsurgency experience were popular speakers in Army schools (which studied these wars

⁹⁸Birtle, *Doctrine, 1942-1976*, p. 225.

⁹⁹Ibid., p. 277.

¹⁰⁰Ann Marlowe. *David Galula: His Life and Intellectual Context*. In collab. with Army War College (U.S.) Carlisle, PA: Strategic Studies Institute, U.S. Army War College, 2010, p. 14; Birtle, *Doctrine, 1942-1976*, p. 261.

in their curriculum), including David Galula, Bernard Fall, and Paul Aussaresses.¹⁰¹ The focus on counterinsurgency was even stronger in the Infantry branch school and career course, rising to 29 hours of pure and 195 hours of integrated counterinsurgency instruction for the former and 67 hours of pure counterinsurgency instruction for the latter by 1965. A review of curricular materials stresses the need to avoid sticking to conventional or formulaic methods, instead considering the “conflict’s unique political, military, and topographical facets.” Training assumed that small-unit, clear-and-hold pacification efforts would dominate, and spent only a few hours considering action at the brigade level or higher. “The majority of the day-by-day activity . . . will be small-unit action to locate guerrilla forces, secure the population, installations, and lines of communication, train and assist the indigenous paramilitary forces, and conduct military civic action”.¹⁰² As American involvement in Vietnam deepened, the Infantry School adjusted, bringing Vietnam experts and veterans to speak to the cohort, opening a forty hour optional course on Vietnam for those slated to deploy there in 1963, and operating two mock South Vietnamese villages by 1965. This emphasis on counterinsurgency (and especially on its complex and political nature) was mirrored at the Command and General Staff College (where nearly 20% of students wrote their theses on counterinsurgency in 1964) and at the Army War College (where by 1965, all students were required to produce papers on some aspect of low-intensity conflict).¹⁰³

While by 1965, the Army education system ensured familiarity with counterinsurgency throughout the officer corps, the Army was reluctant to displace conventional warfighting training with specialized counterinsurgency training amongst the rank-and-file, except for those specifically tasked for the mission, though there were some concessions made.¹⁰⁴ While Army doctrine envisioned counterinsurgency dominated by small-unit operations, little emphasis was placed on platoons or squads conducting independent operations. Some of these deficiencies were made up in routine training, and 20% of divisions or brigades had counterinsurgency leader academies by 1962, with numbers increasing thereafter.¹⁰⁵ With the Americanization of the war, these patterns quickly changed. Vietnam veterans played a heavy role as instructors and drill sergeants in boot camp and tried to pass on their experiences and convey a sense of urgency to the training; what you learned and skills you acquired might

¹⁰¹Daddis, *Westmoreland’s War*, p. 57; Birtle, *Doctrine, 1942-1976*, p. 230.

¹⁰²Report of the Infantry Instructors’ Conference cited in Birtle, *Doctrine, 1942-1976*, p. 263.

¹⁰³*Ibid.*, pp. 265–266.

¹⁰⁴*Ibid.*, p. 267.

¹⁰⁵*Ibid.*, p. 269.

save your life. Basic training and especially infantry training were increasingly dominated by the needs of conducting small unit operations in the Vietnam environs. Training included conducted civic action and patrols in a mock Vietnamese hamlet, conducting ambushes, detecting mines, and other such tactics. Hardly any attention was paid (at this level) to the psychological and political exigencies of the conflict.¹⁰⁶

For those directly slated for Vietnam duty, there were varying degrees of preparation. Units preparing to deploy together underwent training aimed at operating in Vietnam. In some instances, this proved vital for working out tactics ahead of time (especially for the new 1st Cav Airmobile); for others, lack of realism or ambiguity about the nature of the specific Vietnam mission made training less helpful (such as for the 2nd Brigade, 9th ID preparing for riverine operations).¹⁰⁷ MACV made a conscious decision to avoid centralized in-country training in replacement battalions, with the exception of a short overview course mandated for all in-coming personnel covering the counterinsurgency mission and basic survival skills; it was expected that replacement training would also occur at the divisional level or below, allowing for training better suited for specific missions. Following initial orientation in Saigon, new replacements would receive training in their new division covering tactics, operations, logistics, and civic action, as well as the rules of engagement, divisional code of conduct, and the Geneva Convention.¹⁰⁸ Because the rotation policy ensured a fresh stream of replacements, training (formal and informal) occurred routinely at all levels.¹⁰⁹ Moreover, there was additional special training for specific units or tasks. The 9th ID ran an in-country training program for riverine operations.¹¹⁰ The 101st ran the “Screaming Eagle Replacement Training” to familiarize green replacements with the threats the airmobile unit was encountering.¹¹¹ Every combat division, regardless of degree of formalization, maintained some kind of in-country training for new arrivals. Those slated for advisory duty might undertake the ten-week Counterinsurgency Operations Course at Ft. Bragg, the Pentagon’s Military Assistance Institute, or the Army’s six-week Military Assistance Training Adviser program

¹⁰⁶Christian G. Appy. *Working-Class War: American Combat Soldiers and Vietnam*. Chapel Hill: The University of North Carolina Press, 1993, p. 113.

¹⁰⁷John M. Carland. *Combat Operations: Stemming the Tide, May 1965 to October 1966 (Paperback)*. Washington, D.C: U.S. Army Center of Military History, 2000, p. 64; Stanton, *Anatomy of a Division*, pp. 23–45; Stephen Maxner. *The Vietnam Archive Oral History Project*. In collab. with Fred Pierce. 2nd Oct. 1999; Sherwood, *War in the Shallows*, p. 168.

¹⁰⁸Milam, *Not a Gentleman’s War*, pp. 82–3.

¹⁰⁹See, for example, Stewart, *The Vietnam Archive Oral History Project*.

¹¹⁰Sherwood, *War in the Shallows*, p. 200.

¹¹¹Stephen Maxner. *The Vietnam Archive Oral History Project*. In collab. with Ted Cook. 1999.

(exclusively aimed at Vietnam), learning counterinsurgency doctrine (with a special emphasis on civic action) and, later on, Vietnam-specific tactics and language skills.¹¹² Those slated for CORDS duty would attend one of the Bragg adviser programs, the eleven week program at the State Department's Vietnamese Training Center, or even longer extended courses; each of these included extensive language training. MACV ran special schools for Mobile Advisory Teams, training them for village-level counterinsurgency and advising RF/PF units.¹¹³

Doctrine The Army's training focus on counterinsurgency (at least for officers) in the early 1960s was mirrored in doctrine. The Army and MACV were not focused on deriving new doctrine in the short-term for Vietnam, because existing doctrine (which had nearly all been re-written by 1964 with counterinsurgency specifically in mind) was generally deemed adequate, addressing counterinsurgency issues from the technical to strategic in a connected family of work.¹¹⁴ Some of this doctrine was written with an eye specifically towards Vietnam, such as *FM 31-73, Advisor Handbook for Counterinsurgency*.¹¹⁵ The new doctrine laid out Army organization for the three main tasks of counterinsurgency (tied to the three stages of Maoist warfare): advice and assistance for nation-building, advising and building allied militaries, and direct combat action.¹¹⁶ If direct intervention was needed, doctrine called for US troops trained in the social, psychological, and cultural aspects of counterinsurgency.¹¹⁷ If this body of work had a major weakness, it was that it assumed American forces would be facing small bands of insurgents, best dealt with at the battalion level with semi-independent activity. Larger or more coordinated guerrilla forces, requiring American coordination at the divisional level, were unthought of or deemed to be (by definition) something other than counterinsurgency.¹¹⁸

The Army's doctrine development institutions paid close attention to the ongoing conflict, both in order to support the effort and out of the belief that Vietnam was a vital test-bed for future conflict. The Combat Developments Command (CDC), then the primary entity responsible for promulgating Army doctrine, set up a Saigon-based office, and continued to

¹¹²Birtle, *Doctrine, 1942-1976*, pp. 257-258.

¹¹³Robert D. Ramsey. *Advising Indigenous Forces: American Advisors in Korea, Vietnam, and El Salvador*. Fort Leavenworth, Kan: Combat Studies Institute Press, 2006, pp. 41-43.

¹¹⁴Birtle, *Doctrine, 1942-1976*, p. 249.

¹¹⁵*Ibid.*, p. 252.

¹¹⁶Department of the Army. *FM 31-16 Counterinsurgency Operations*. Washington, D.C.: Headquarters, Department of the Army, 1963.

¹¹⁷Birtle, *Doctrine, 1942-1976*, p. 237.

¹¹⁸*Ibid.*, p. 255.

expand it throughout the war.¹¹⁹

At the height of the war, Combat Developments Command (CDC) was reviewing an average of seventy Vietnam reports per month and identifying approximately forty ‘lessons’ requiring some action by the doctrinal and training systems. So great were the Army’s efforts at self-examination – arguably the most extensive in Army history – that critics charged that the service had gone too far, generating more information than it could ever use. While the Army may have gone overboard in trying to capture the lessons of Vietnam, the effort attested to its determination to learn and adapt.¹²⁰

This “lessons-mania” was part an parcel of a flurry of activity as the Army’s efforts to building counterinsurgency doctrine merged with the operational needs of operating in Vietnam. Organizational and conceptual shuffles mirrored and influenced each other, as groups like the Civil Affairs Agency were elevated in prominence (due in part to the Army’s recognition of its importance in Vietnam) and different entities wrestled over control of the Army’s keystone counterinsurgency doctrine statements. One key point of contention –never fully resolved– was over the extent to which counterinsurgency ought to be viewed as a special kind of warfare for doctrine purposes, or a mode of warfare that needed to be infused across functional branches.¹²¹

While the Army continued to wrestle with how to conceptualize counterinsurgency across the force, doctrine development entities focused on incorporating early Vietnam “lessons learned” into doctrine and practice. The Combat Developments Command (CDC) completed a major study on “Counter guerrilla Warfare Doctrine” in January 1966 (just months after the Americanization of the war). They warned that current doctrine left the impression that Phase III counterinsurgency operations against large guerrilla units was essentially a form of limited conventional war, and recommended that future doctrine and training emphasize the differences that still remained even when fighting against large, strong guerrilla units, especially when it came to population protection. The study also highlighted areas where doctrine development was needed: border security, riverine operations, clear-and-hold techniques, counterinsurgency intelligence, counter-mine operations (what today we would

¹¹⁹Vetock, *Lessons Learned*, p. 97.

¹²⁰Birtle, *Doctrine, 1942-1976*, pp. 419–420.

¹²¹*Ibid.*, p. 424.

call counter-IED), electronic warfare, and the use of chemical agents.¹²² Earlier doctrine and thinking that privileged defeating the grassroots sources of insurgency and ‘winning hearts and minds’ was increasingly tempered by a focus on the underlying insurgent networks (infrastructure, in the parlance of the day) and on the role coercion, control, and population security might play alongside positive inducements.¹²³ At the same time, doctrine emphasized the importance of non-combat tasks in counterinsurgency (especially civic action, intelligence, and psychological operations) and drew distinctions between three different kinds of counterinsurgency campaigns: “strike” (intended to dislodge large, entrenched guerilla units), “consolidation” (including clear-and-hold and oil-spot style pacification), and “remote area” operations (such as the Green Beret’s efforts amongst the Montagnards). Civil affairs in particular was elevated to a primary weapons system, and FM 31-16 (1967) emphasized that civil affairs and psychological operations planning needed to be incorporated at all levels of command and was not something left to specialized personnel.¹²⁴

The Combat Developments Command also worked with MACV to approve “nondoctrinal” unit organizations or local adaptations. Based on the recommendations of the Army Combat Operations Vietnam study, the CDC approved “squaring” infantry and armor battalions headed to Vietnam (by adding a fourth company), enabling them to act in a more decentralized manner against stronger opposition. The CDC also enthusiastically adopted the concepts of Tactical Areas of Responsibility and Area of Operations as a doctrinal concept for organizing the battlefield and division of duties between Army units.¹²⁵ These efforts were aided by a permanent forward presence from the CDC from 1962 (when it observed Special Forces units in the field) onwards, in addition to the testing and study groups examined below which influenced its work.¹²⁶

By 1967, the Army had more or less completed the task begun in the early 1960s of building a hierarchically organized counterinsurgency doctrine which provided guidance at every level and in every branch. There remained tensions and ambiguities, especially about

¹²²Birtle, *Doctrine, 1942-1976*, pp. 424–426.

¹²³For a representative example, see Richard Shultz. ‘Breaking the Will of the Enemy during the Vietnam War: The Operationalization of the Cost-Benefit Model of Counterinsurgency Warfare’. *Journal of Peace Research* 15.2 (1978), pp. 109–129. One future line of inquiry might explore whether all counterinsurgents undertake this cycle of romantic, “hearts and minds” efforts transitioning to network targeting and coercive calculation.

¹²⁴Birtle, *Doctrine, 1942-1976*, pp. 428–430.

¹²⁵Vetock, *Lessons Learned*, p. 99. The concepts actually emerged in Vietnam as the Marines’ attempt to coordinate with ARVN, but they were taken up and expanded by the ARCOV study before being adopted by the CDC (Kinnard, *The War Managers*, p. 57; Shrader, *Operations Research, Vol. II*, p. 307).

¹²⁶Vetock, *Lessons Learned*, p. 100.

the proper balance between persuasion and coercion. But the body of work as a whole clearly emphasized the primary role that civil action and psychological operations played in counterinsurgency. One issue remained unresolved: even though Army doctrine emphasized those activities as vital to success in counterinsurgency, many of the primary organizations responsible for them (including with the ability to oversee Army activities in Vietnam), like the US Information Agency or USAID, remained outside of Army control.¹²⁷ In any case, while the Army's doctrinal development organizations tried to incorporate Vietnam lessons learned in doctrine, MACV and the units under its command showed themselves to be flexible in modifying doctrine to meet the demands of the environment.

Publications and Lessons Learned Diffusion

The conventional wisdom has held that, whatever tactical adaptations the Army made in Vietnam, it remained institutionally committed to conventional war and the primacy of military force.¹²⁸ The evidence does not support this claim. Besides a variety of informal dynamics, publications, communications, and ad hoc memory processes, MACV ran a formal lessons learned process, even publishing and distributing (to a massive list) almost a hundred "Counterinsurgency Lessons Learned" pamphlets on a nearly monthly basis between 1962 and 1970, with subjects ranging from "Eagle Flight Operations [an early 101st Airborne innovation]" to "US Combat Forces in Support of Pacification", with periodic reviews and summaries of previous "salient lessons learned".¹²⁹ Vetock, in his authoritative history of the Army's Lessons Learning systems, describes a "Lessons-Mania" affecting the Army in Vietnam.¹³⁰

Because of the varied nature of the battlefield and the mission-sets, MACV's desire to standardize and push top-down adaptation was intentionally limited. Instead MACV focused on knowledge diffusion, publishing reports, manuals, briefings, and lessons learned for commanders to take up.¹³¹ Quarterly "Operations Report-Lessons Learned" were mandated

¹²⁷Birtle, *Doctrine, 1942-1976*, p. 437. For a practical examination of the kinds of problems this raised, see Kodosky, *Psychological Operations American Style*; Nighswonger, *Rural Pacification*; Scoville, *Reorganizing for Pacification Support*.

¹²⁸Williamson Murray. *Military Adaptation in War: With Fear of Change*. New York: Cambridge University Press, 2011, p. 70.

¹²⁹MACV. *US Combat Forces in Support of Pacification*. Vietnam Lessons Learned 80. 29th June 1970.

¹³⁰Vetock, *Lessons Learned*, p. 104.

¹³¹Of course, US forces were not only ones with a lessons learned process. COSVN HQ gathered Viet Cong military experiences and published lessons learned memoranda (Wilkins, *Grab Their Belts to Fight Them*, p. 126).

at the brigade level and above (an attempt to force battalions to do them was deemed too arduous), though many important and potentially useful adaptations were discussed and diffused throughout the community sooner than that.¹³² Frequent “Lessons Learned Bulletins” were pushed out, covering topics ranging from specific battle postmortems to conducting tunnel warfare and winning civilian support.¹³³ MACV also published a variety of manuals and guides, including an introductory guide to Vietnam made available to new arrivals.¹³⁴ Beginning with background on the conflict and American goals, the manual took the reader through basic counterinsurgency principles and into the exigencies of operating in Vietnam, including personal hygiene. In Vietnam, what Bickel calls “formal and informal doctrine” maintained a somewhat fluid relationship, with “informal” soldier-led adaptation fueling new field-level TTPs and lessons learned, which were then collected and distributed via formal and informal methods.¹³⁵

Experimentation, Testing and Rapid Procurement

In order to support rapid adaptation to the environment in Vietnam, to produce or discover new ways of fighting, and to diffuse useful new tools and concepts throughout MACV, a number of experimentation and testing units were set up in Vietnam. While some of their work was intended to use Vietnam as a testing ground for new ideas and technologies, their work was mostly in support of the war effort. These units did everything: testing new products and concepts, coming up with new doctrine and manuals, conducting rapid design and procurement for urgent operational needs, and aiding in knowledge diffusion. Besides the units listed below, Navy and Air Force had testing and evaluation programs, and there may have been other efforts which have been, so far, lost to history.

Army Concept Team in Vietnam (ACTIV) ACTIV was the Army’s main evaluation and testing unit in Vietnam. It tested informal adaptations for possible diffusion, tested new technologies and concepts in ‘realistic’ conditions, and coordinated for other entities, including the Army’s rapid procurement programs. In order to ensure independence, ACTIV reports could not be modified by higher headquarters, an independence ACTIV zealously guarded. It operated with a ‘blank check’: US Army Pacific Command (USARPAC) was

¹³²Department of the Army. *ACTIV Organizational History File*. Apr. 1972.

¹³³MACV, *Collected Lessons Learned Bulletins*.

¹³⁴MACV, *Handbook For US Forces in Vietnam*.

¹³⁵Bickel, *Mars Learning*, pp. 4–7.

instructed to approve any requests from ACTIV it received.¹³⁶

ACTIV conducted hundreds of tests throughout the war, all under realistic operational conditions (this often entailed working with field units and sending ACTIV members to the field). ACTIV's goal was to ensure the selection and rapid diffusion of tools useful on the Vietnam battlefield, and its standards were high. Reports on Sniper Operations (which influenced training and doctrine), body armor for helicopter pilots, laser-target designators, and Tear Gas (CS) grenades made the cut, but ACTIV disapproved substantially more items than it approved. Rejects included an exotic shotgun round, a special pedometer for jungle navigation, and a non-electric hair trimmer.¹³⁷

Throughout the war ACTIV grew in importance. By 1970, the ACTIV commander was responsible for coordinating Army testing visitors (including the CDC teams responsible for refining doctrine), managing VLAPA and LWL efforts, and otherwise overseeing the all of the Army's testing and evaluation activities in Vietnam.

The Limited Warfare Laboratory (LWL), the VLAPA, Expedited Nonstandard Urgent Requirements for Equipment (ENSURE), and PROVOST Where ACTIV primarily focused on rapid testing, evaluation, and diffusion in realistic conditions, it oversaw a number of other programs, including the Army's own internal rapid procurement programs, the LWL and VLAPA. These activities focused on translating battlefield needs into new equipment to solve problems as quickly as possible. LWL and VLAPA were in turn both supported by programs spun up to provide emergency funding for rapid procurement: (provided by the Department of Defense's Research and Evaluation Department) and (provided by the Department of the Army (DA)). Throughout the war the LWL received over \$100 Million (\$552 Million in 2017 Dollars) in funding.¹³⁸ LWL and ACTIV naturally complemented each other. Prototypes produced by LWL would end up with ACTIV units in the field, who would suggest changes or tweaks. Since both activities were forward-deployed, the iterative learning cycle was rapid. LWL would send teams on deployment to Vietnam. At home, it required contractors to locate within 130km of Aberdeen Proving Grounds, to speed up the development process.¹³⁹ LWL's projects included aerial camera systems, sniper modification

¹³⁶Department of the Army, *ACTIV Organizational History File*.

¹³⁷Department of the Army, *ACTIV Organizational History File*; Department of the Army. *ACTIV Final Reports*. Apr. 1972.

¹³⁸J. E. Mortland, M Cutler and E. K. Kaprelian. *Final Project Report- US Army Land Warfare Laboratory*. 1974.

¹³⁹Kollars, 'Organising Adaptation in War'.

kits, and a handheld grenade launcher kit.¹⁴⁰

Drawdown

Vietnam-era training and doctrine for counterinsurgency were rapidly neglected due to two related trends: the total reorganization of the Army's training system as part of the move to the All-Volunteer Army and the shift in focus to the challenging (and neglected) mission of deterring the Soviet Union in Europe. In neither case was the decision the Army's, but the Army was forced to adapt to a massive change in the environment.¹⁴¹

Commentators from the 1970s through the present day have excoriated the military for its supposed eagerness to put Vietnam behind it and get back to the business of conventional warfare.¹⁴² By this view, the shift to Europe and the "purging" of counterinsurgency was an inexorable reflection of the Army's strategic culture and preference for conventional warfare.¹⁴³ Army senior leaders' main "lesson learned" from Vietnam was to never fight a similar war again (where victory and political support were uncertain), leading to integrating the Reserves and National Guard such that going to war required the kind of mobilization that LBJ had refused.¹⁴⁴ The Army would also no longer prepare for a mission they wished to avoid at all costs, and so gutted training for counterinsurgency.¹⁴⁵ This perspective ignores the institutional forces driving Army policy-making at the time. Civilian authorities dictated both the epochal shift to a volunteer model and the pivot to Europe, and Army leaders were forced to adapt to a radically changed strategy and budgetary environment (See Figures 4.3 and 4.4). Each of these changes was effectively imposed on the military following civilian diplomatic and political logic, with dramatic consequences for the Army's organizational structure and memory. Only after the fact was a narrative constructed wherein the Army had "chosen" to forget.¹⁴⁶

¹⁴⁰Department of the Army, *ACTIV Final Reports*.

¹⁴¹For a good overview that synthesizes some of the argument below, see Suzanne C. Nielsen. 'Preparing for War: The Dynamics of Peacetime Military Reform'. Ph.D.. United States – Massachusetts: Harvard University, 2003, pp. 333–337.

¹⁴²Donald Vought. 'Preparing for the Wrong War?' *Military Review* 57.5 (May 1977), pp. 16–33; Lock-Pullan, *US Intervention Policy*, p. 94; Brian Burton and John Nagl. 'Learning as We Go: The US Army Adapts to Counterinsurgency in Iraq, July 2004–December 2006'. *Small Wars & Insurgencies* 19.3 (1st Sept. 2008), pp. 303–327; Fitzgerald, *Learning*, pp. 40–41.

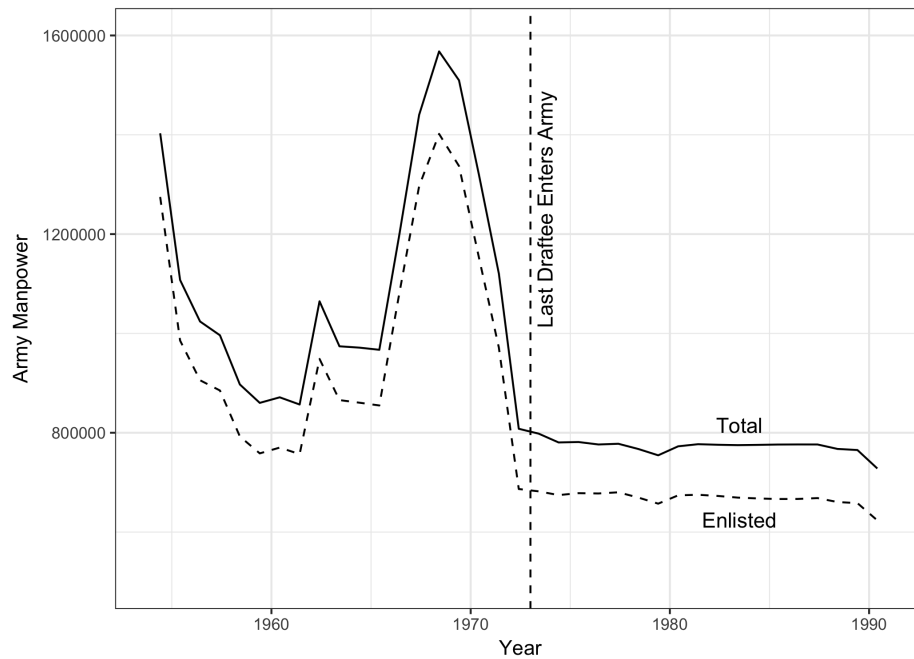
¹⁴³Krepinevich, *The Army and Vietnam*, pp. 4–5.

¹⁴⁴Fitzgerald, *Learning*, 40fn11. Fitzgerald is citing Sorley, but admits in the footnote that there is no archival evidence supporting the notion that Abrams was motivated (in a primary or secondary sense) by the desire to constrain civilian decision-making.

¹⁴⁵Conrad C. Crane. *Avoiding Vietnam: The U.S. Army's Response to Defeat in Southeast Asia*. Carlisle, PA: Strategic Studies Institute, U.S. Army War College, 2002.

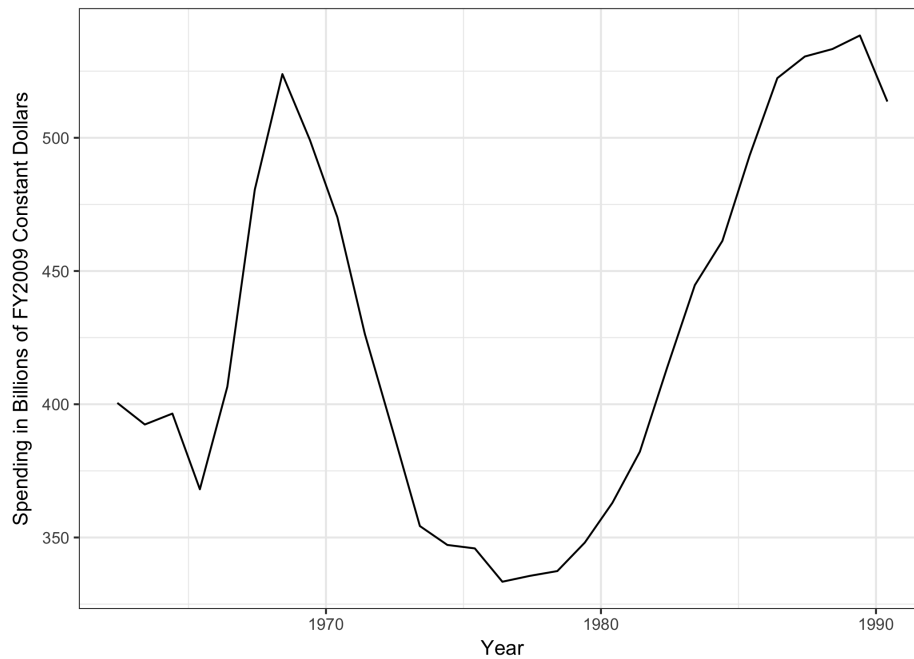
¹⁴⁶See Dwight E. Phillips. 'Reengineering Institutional Culture and the American Way of War in the Post-

Figure 4.3: US Army Active Duty Personnel, 1954-1990



Data from the Defense Manpower Data Center, Office of the Secretary of Defense, U.S. Department of Defense.

Figure 4.4: US Defense Spending, 1962-1990



Data from the Office of the Under Secretary of Defense (Comptroller). National Defense Budget Estimates for FY 2018. Aug. 2017.

Doctrine The post-Vietnam era inaugurated not only a wave of new military doctrine, but also a new way of making and thinking about doctrine. Since 1962, Army doctrine had been managed by the Combat Developments Command. While the CDC provided a centralization and management function (indeed, it was what made the Army's pivot to counterinsurgency organizationally possible), it was still relatively under-staffed and under-powered, and control of specific doctrine was generally devolved to the branches and their schools. The Operations manual (then 100-5), often regarded as the "keystone" of Army doctrine, did not influence or dictate other doctrine in a decisive way. Moreover, established only a few years before the Americanization of the war, the CDC was soon focused on rapidly learning from Vietnam and writing doctrine as part of the war effort.¹⁴⁷ Moreover, the CDC only handled doctrine (including the approval of doctrinal TO&Es): training and education was left to the lumbering Continental Army Command.

With the Volunteer Army came the recognition that better training and thinking would be the only way to "fight outnumbered and win". Training, education, and doctrine were centralized in a new command led by a four-star general: US Army Training and Doctrine Command (TRADOC), led by the energetic and visionary DePuy.¹⁴⁸ Convinced that the Army had historically relied too much on firepower and attrition in lieu of military art and that such an approach was operationally and politically impossible for the new volunteer army, DePuy set about to use TRADOC to reform the Army by building a culture of professionalism, oriented around a nesting and coordinated hierarchy of doctrine that, from an overarching theory of warfare, dictated the tasks soldiers needed to train for in order to fight and win, from four-star generals down to enlisted infantrymen. A new series of manuals would be published under the rubric of "How to Fight", focusing on elementary skills and centered on an operations manual (FM 100-5) appropriate for the Army's new mission. Just as importantly, TRADOC under DePuy and later Starry placed a strong emphasis on build-

Vietnam U.S. Army, 1968-1989'. Ph.D.. United States – Illinois: The University of Chicago, 2014; Conrad C. Crane. 'Post-Vietnam Drawdown: The Myth of the Abrams Doctrine'. *Drawdown*. Ed. by Jason W. Warren. The American Way of Postwar. NYU Press, 2016, pp. 241–252; Beth Bailey. *America's Army: Making the All-Volunteer Force*. Cambridge, Mass: Belknap Press, 2009; Creighton W. Abrams Jr. 'The Sixteen Division Force: Anatomy of a Decision'. MMAS Thesis. Fort Leavenworth, KS: US Army Command and General Staff College, 6th June 1975; Terry Terriff. *The Nixon Administration and the Making of U.S. Nuclear Strategy*. Ithaca, NY: Cornell University Press, 1995.

¹⁴⁷Hunzeker, 'Perfecting War: The Organizational Sources of Doctrinal Optimization'.

¹⁴⁸For the overall story, see Walter E. Kretchik. *U.S. Army Doctrine: From the American Revolution to the War on Terror*. Lawrence: University Press of Kansas, 2011, Ch. 4. For a first-person account, see "Presentation to the TRADOC Commanders' Vision '91 Conference (5 October 1988) in William E. Depuy. *Selected Papers of General William E. Depuy*. Ed. by Donald L. Gilmore and Carolyn D. Conway. In collab. with Richard M. Swain. Fort Leavenworth, KS: Combat Studies Institute, 1994, pp. 427–435.

ing consensus on doctrinal changes across the community, instead of just dictating doctrine, which improved understanding and buy-in across the Army.¹⁴⁹ DePuy's motivation was not a great mystery:

[FM 100-5 Operations] focuses principally upon the mission of the United States Army in Western Europe as a part of NATO. The manual has this focus because the defense of NATO Europe has been assigned to the Army by the Department of Defense as its principal mission....

It is written in recognition of the fact that the entire United States Army, from Private to General needs to focus on a form of combat in which the Army of today has had no battlefield experience. In a sense, this manual takes the Army out of the rice paddies of Vietnam and places it on the Western European battlefield against the Warsaw Pact.¹⁵⁰

A full examination of the emergence of Active Defense and AirLand Battle as the conceptual frameworks for FM 100-5 is beyond the scope of this present work.¹⁵¹ Suffice it to say that, while the manuals included a few of the tactical "lessons learned" from Vietnam, unconventional warfare or counterinsurgency took a backseat to solving the problems of deterring Soviet action with conventional forces in Europe.¹⁵²

Of course, the Army's lessons from Vietnam *were* encoded in doctrine in the years after the war, as part of the Army's normal doctrine revision process for its other manuals dealing with low-intensity conflict. Even during the height of the war, FM 100-5 had still focused mostly on conventional warfare – the Army still had that mission, after all.¹⁵³ Rather, the Army's "lessons learned" from Vietnam counterinsurgency could be found in FM 31-1

¹⁴⁹John L. Romjue. *From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982*. Fort Monroe, VA: TRADOC, June 1984.

¹⁵⁰DePuy, *Selected Papers of General William E. Depuy*, Talking Paper on FM 100-5, Operations (8 July 1976) in.

¹⁵¹For a good introduction, see Romjue, *From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982*; Suzanne C. Nielsen. *An Army Transformed: The U.S. Army's Post-Vietnam Recovery and the Dynamics of Change in Military Organizations*. In collab. with Army War College (U.S.) no. 43. Carlisle, PA: Strategic Studies Institute, U.S. Army War College, 2010.

¹⁵²Reading what future Army Chiefs of Staff, Vice Chiefs of Staff, and TRADOC commanders were writing in the immediate years after Vietnam makes clear that AirLand Battle owes more than a little to the fluid environment they had experienced as field commanders in Vietnam. As General DePuy later put it, "the generation of officers now in command, seasoned in airmobile environment of Vietnam, is especially well suited for such operations. Accustomed to open flanks, to operating on the basis of ambiguous intelligence, seeking the enemy and not the terrain, concentrating rapidly, and adapting constantly to the flow of events—these leaders have maneuver in their bones" ("FM 100-5 Revisited (1980)" in Depuy, *Selected Papers of General William E. Depuy*, p. 309).

¹⁵³Only two out of thirteen chapters in the 1962 and 1968 editions of FM 100-5 touched on anything like counterinsurgency.

(Counterinsurgency Operations) and the more expansive and holistic FM 100-20 (Low Intensity Conflict), which were updated in the late 1970s with Vietnam firmly in mind (after having been stripped to only fifteen pages in 1972).¹⁵⁴ The 1981 revision of FM 100-20 represents the most complete statement of the Army's understanding of how to do a war like Vietnam. It begins with detailed descriptions of the developing-world environment that can give rise to insurgencies, the organization and strategy of insurgencies (on the revolutionary model), and the many tasks of American counterinsurgency, beginning with foreign internal defense, intelligence, and civic action work and culminating in counterinsurgency operations, including against large guerrilla forces. In the latter half of the manual (dealing with direct US intervention), it details brigade-level organization, counterambush and encirclement tactics, tunnel, airmobile, and convoy security tactics, establishing firebases, consolidating gains, and measuring progress (with a list of almost 200 potential counterinsurgency metrics). The manual, which runs to almost 300 pages, includes an astounding number of specific lessons learned from Vietnam.¹⁵⁵

This doctrine was substantially revised not to “purge” the lessons of Vietnam but to reflect their inadequacy for the new era of counterinsurgency. In the mid-1980s, some Army reformers began to sound the alarm that the US Army was dangerously unprepared for low-intensity conflict or counterinsurgency environments.¹⁵⁶ As part of a series of structural reforms designed to improve the military's performance in an unconventional environment (which included the establishment of Special Operations Command (SOCOM) and the setting up of a Pentagon office of “Special Operations and Low Intensity Conflict (SO/LIC)”.¹⁵⁷ After the half-way house of Field Circular (FC) 100-20 1986, which discarded sections of large-scale counterinsurgency operations and Vietnam-era tactics but kept much of the rest of the Vietnam-era material, the 1990 revision of FM 100-20 was a near total re-write which completely excised the focus on large, mass-movement revolutionary communist movements for an focus on the problems the Army was facing in Latin America against narco-terrorism and left-wing movements.¹⁵⁸ The theory and practice of counterinsurgency operations against

¹⁵⁴Birtle, *Doctrine, 1942-1976*, p. 448.

¹⁵⁵US Army. *FM 100-20: Military Operations in Low-Intensity Conflict*. 1981.

¹⁵⁶Krepinevich's polemical *The Army in Vietnam* was published in this context in 1985.

¹⁵⁷Ty Seidule and Jacqueline E. Whitt, eds. *Stand up and Fight! The Creation of U.S. Security Organizations, 1942-2005*. Carlisle, PA: Strategic Studies Institute and U.S. Army War College Press, 2015, pp. 27–32.

¹⁵⁸US Army. *FM 100-20: Military Operations in Low-Intensity Conflict*. 1986; US Army. *FM 100-20: Military Operations in Low-Intensity Conflict*. 1990.

large-scale Maoist-model movements (including American organization for host nation support) which had occupied the majority of the old manual was relegated to twenty pages of appendix. Specific tactical and operational lessons from Vietnam (both for combat operations and for counterinsurgency) were entirely deleted.¹⁵⁹ These extensive changes reflect not a desire to forget Vietnam (which would have led to neglect) but the *resurgence of interest in counterinsurgency* in the late 1980s, which demanded new thinking as well as reflection on previous experience.¹⁶⁰ Prior to the war in Iraq, the US Army had already gone through an entire forgetting-relearning-forgetting cycle regarding counterinsurgency.¹⁶¹ In the years following the end of the Cold War, this focus on low-intensity conflict and counterinsurgency generally waned, replaced with the notion of “Military Operations Other Than War,” which included fighting transnational networks (terrorist and criminal) and conducting peacekeeping and stability operations.¹⁶² Nonetheless, the 2001 edition of FM 3-0 included the most emphasis on low-intensity conflict since the 1962 manual.¹⁶³

In both the flagship operations doctrine (in the immediate post-war period) and in more specific manuals (during the 1980s counterinsurgency revival), doctrine built for Vietnam and based on Vietnam lessons-learned was overwritten to meet the Army’s needs. “In this [post-war] environment the Army needed to regroup and then rebuild, *but did so in a context of immediate concerns*”.¹⁶⁴ Nonetheless a very close reading does reveal continuing conceptual imprints from Vietnam. The idea that “low-intensity conflict” or “stability operations” (CSA Johnson’s umbrella term for counter-insurgency) was a primary mission for the Army has endured in doctrine continuously to the present day, and the roots of present-day “foreign internal defense” doctrine (and that title) descend to the Vietnam-era MAAGs.¹⁶⁵ The concepts of Tactical Areas of Responsibility (TAOR) and Area of Operations (AO), adopted by the Army from the Marines based on the ARCOV study, are now a foundational aspect of Army Command and Control, especially for conflicts without firm front lines.¹⁶⁶ But because doctrine (and the doctrine-making process) has been substantially revised since

¹⁵⁹US Army, *FM 100-20: Military Operations in Low-Intensity Conflict*.

¹⁶⁰For examples of those reflecting at the time on this new interest, see Vought, ‘Preparing for the Wrong War?’; John D. Waghelstein. ‘Post-Vietnam Counterinsurgency Doctrine’. *Military Review* 65.5 (May 1985), pp. 42–49; Richard Duncan Downie. *Learning from Conflict: The U.S. Military in Vietnam, El Salvador, and the Drug War*. Westport, CT: Praeger, 1998.

¹⁶¹Waghelstein, ‘Post-Vietnam Counterinsurgency Doctrine’.

¹⁶²Long, *Doctrine of Eternal Recurrence*, p. 19; Fitzgerald, *Learning*, pp. 87–88.

¹⁶³Kretchik, *U.S. Army Doctrine*, pp. 248–256.

¹⁶⁴Lock-Pullan, *US Intervention Policy*, p. 46, emphasis added.

¹⁶⁵Birtle, *Doctrine, 1942-1976*, pp. 420–421.

¹⁶⁶Vetock, *Lessons Learned*, p. 99.

Vietnam, and since the lessons of Vietnam for warfare-as-such are unclear, the war's enduring impact on doctrine has been minimal. There was one regard in which the legacy of Vietnam was rejected. Some senior Army leaders felt that one source of operational and strategic failure in Vietnam was an over-focus on the particularities of low-intensity conflict or counterinsurgency, and a neglect of overall military professionalism and strategic thinking about the relationship between war and politics. Henceforth, the Army would devote more effort to reflecting and teaching on the nature of war as such, especially as found in Clausewitz.¹⁶⁷

Training Prior to the Volunteer Army, training had been managed by the labyrinthine Continental Army Command (CONARC) bureaucracy, responsible for every aspect of standing up the mobilization army. Continental Army Command (CONARC)'s leaders were primarily occupied with keeping the ship afloat; control over vital doctrine and training was generally delegated to the branches and schools. One of the remarkable aspects of this period is how much education was saved. To be sure, the massive administrative bureaucracy of Continental Army Command (responsible for training and equipment for the mobilization Army) was dismantled. But the Army education system was broadly shielded from cuts, and, if anything, was further emphasized as the key to building the "Army of Excellence".¹⁶⁸

The Army after Vietnam did not so much return to conventional warfare as return to the fundamentals of warfare, period. Army leaders worried that the emphasis on training for Vietnam had degraded conventional warfare capabilities.¹⁶⁹ Because the Army had focused so intently its doctrine, training, and force structure on Vietnam, the shift to the volunteer Army and to Europe demanded dramatic changes. The Army's senior leadership was determined to re-instill basic, practical soldierly tasks that were both essentially for defeating the Soviets and which had been neglected by the Army's early 1970s exhaustion and turmoil. Readiness had fallen to critical levels, especially for soldiers whose skills were ancillary in Vietnam but essential for a confrontation with the Soviets. By 1970, the vast majority of nuclear weapons maintainers (90%), Hawk surface-to-air missile crews (82%) and track vehicle mechanics

¹⁶⁷Lock-Pullan, *US Intervention Policy*, p. 59. Summers, *On Strategy*, widely pushed through commanders' reading lists at the time, reflects this belief. For the impact of the Clausewitzian Renaissance on US Army thinking, and its problems, see Antulio J Echevarria. *Clausewitz and Contemporary War*. Oxford, New York: Oxford University Press, 2007, pp. 84–85. This understanding, which ossified into the so-called Weinberger-Powell doctrine, essentially dictated that one mistake of Vietnam was going to war without "the full support of the American people"; this is one of the few lessons of Vietnam that remain uncontested in the Army(Fitzgerald, *Learning*, p. 91). How the military could have done differently within the constraints of civilian leadership is never quite made clear.

¹⁶⁸Lock-Pullan, *US Intervention Policy*, p. 58.

¹⁶⁹Kretchik, *U.S. Army Doctrine*, p. 193.

(89%) were failing their skills qualification tests; numbers were similarly dire across the force, especially where even a modicum of technical skill was required.¹⁷⁰ These changes especially took hold for the branches expected to be at the front lines of a future conflict with the Soviets, though it affected the whole force. Deterring the Soviet Union in Europe with a barebones volunteer force was an all-hands-on-deck mission. By 1976, the Armor and Artillery schools had eliminated instruction on counterinsurgency. Instruction on low intensity conflict at intelligence, infantry, and command schools, while still extent, was severely curtailed.¹⁷¹ Much of the Army's training budget (and, indeed, much of the training time for US-based Army units) was taken up by the REFORGER exercises, established in 1975, whereby, every year, up to 50,000 American troops practiced deploying to Europe in a crisis scenario and working with their North Atlantic Treaty Organization (NATO) colleagues.¹⁷²

From an institutional level, the Army's "Training Revolution" was matched by a total restructuring of the Army training apparatus. The training bureaucracy that had been designed for the mobilization Army was dismantled, and replaced by a system built for a volunteer force made up of a larger number of career soldiers.¹⁷³ While a full analysis of the Army's training reforms in the 1980s (including the establishment of the National Training Centers) is beyond the scope of the thesis, they were substantial, and form the backbone of the Army's training infrastructure to this day. Very little of the Vietnam-era infrastructure remained intact.¹⁷⁴ In any case, much of the Vietnam-specific training was run through special schools and by MACV or divisions in-country, both of which were instant victims of demobilization. Even where there were Vietnam-era "conventional" skills that might have proved useful - like speed-shifting artillery or cavalry-style airmobile operations - they were culled in favor of what would be specifically required for the confrontation with the Soviets. Between Vietnam demobilization, the pivot to Europe and the "Training Revolution", organizational forgetting of Vietnam training was over-determined.

¹⁷⁰Bailey, *America's Army*, p. 127. The Army band was an exception to the trend.

¹⁷¹Fitzgerald, *Learning*, p. 48.

¹⁷²Robert D. Blackwill and Jeffrey W. Legro. 'Constraining Ground Force Exercises of NATO and the Warsaw Pact'. *International Security* 14.3 (24-1989), p. 68. The REFORGER exercises were paired with similar (though smaller) exercises for the Middle East (BRIGHTSTAR) and South Korea (TEAM SPIRIT) (Richard W. Stewart. *American Military History, Volume II: The United States Army in a Global Era, 1917-2008*. Washington, D.C.: Center for Military History, 2010, pp. 391-392).

¹⁷³John L. Romjue. *The Army of Excellence: The Development of the 1980s Army*. Washington, D.C.: Center for Military History, 1997, pp. 2-4.

¹⁷⁴Anne W. Chapman. *The Army's Training Revolution, 1973-1990: An Overview*. Washington, D.C.: Center of Military History, U.S. Army, 1991, p. 47; Romjue, *The Army of Excellence: The Development of the 1980s Army*, p. 4.

Publications and Lessons Learned While many lessons learned processes in Vietnam were essentially ad hoc, MACV-based attempts to distribute knowledge gained on the battlefield (and thus necessarily had a limited shelf-life), it is the destruction of the Army's *overall* lessons learned process after Vietnam that is surprising. By 1974, the Army had completely dismantled and overhauled the training, doctrine, and lessons-learning apparatus, forming TRADOC.

The procedures and system for learning lessons developed during the long conflict were not specifically dismantled or demobilized; they simply faded away in disuse and disappeared in *the structural change and doctrinal realignment that followed the war*.

Lesson learning's supportive organizational infrastructure did not survive the Army reorganization that took place in 1972-1974. The sweeping restructuring eliminated the key elements of the wartime system. ACSFOR [Assistant Chief of Staff for Force Development], the system's apex, was completely abolished, while CDC, the operational workhorse, and CONARC, the trainer, were replaced by a realignment of responsibilities and functions....No authorized lesson-learning system, procedure or agency existed in the Army structure of the mid-70s, nor were there any contingency plans for one in the next war.¹⁷⁵

The lessons-learned system that TRADOC would later build had no organizational continuity with the "lessons-mania" apparatus of Vietnam.¹⁷⁶

Experimentation, Testing, and Rapid Procurement All of the Army's rapid procurement programs were shut down after the Vietnam War, in a paradigmatic case of a "Taking out the Garbage Can Model"; during large-scale demobilizations, the default to shut organizations down can override even relatively powerful arguments in favor of retention.¹⁷⁷ In 1971 and 1972, fewer and fewer new personnel were assigned to ACTIV, projects finished up, and in late 1972, ACTIV was axed alongside a dozen other rump organizations as MACV was wound down.¹⁷⁸ Despite the confidence of ACTIV's leaders that the Army would at least

¹⁷⁵Vetock, *Lessons Learned*, p. 119, emphasis added.

¹⁷⁶Lock-Pullan, *US Intervention Policy*, p. 92.

¹⁷⁷Michael D. Cohen, James G. March and Johan P. Olsen. 'A Garbage Can Model of Organizational Choice'. *Administrative Science Quarterly* 17.1 (Mar. 1972), p. 1.

¹⁷⁸MACV. 'General Orders Number 169: Discontinuance'. RG 472, A1 993, Box 1. NARA II, College Park, MD, 14th Mar. 1972.

remember the value of rapid testing activities in the future, the organization was effectively deleted from the Army's organizational memory.¹⁷⁹ It has not been studied since. ACTIV leaders also believed it was likely that a VLAPA-type organization would be set up with Army forces in Europe or Alaska; it was not.

The Limited Warfare Laboratory held on for an additional year, driven by project funding and the fact that it did not live, organizationally, within MACV. It tried to rebrand as the 'Land Warfare Laboratory', but nonetheless became a victim of demobilization. It had received substantial contracted and emergency funds, which expired, and the broader organization of which it was a component had its budget slashed by half. Without a clear and immediate mission, and with Army procurement processes focused on large-scale, conventional war in Europe, it was shut down. Without an organizational descendant, it, too, was forgotten.¹⁸⁰

An instructive contrasting case is the Navy's alternative example - the VLAP-Navy activity. Like VLAPA, ACTIV, and LWL, VLAP-N was decommissioned after the war. However, its successes in Vietnam had in 1970 led the Director of Naval Laboratories to create a program for quick reaction research services to deployed fleets and allied navies, the Navy Science Assistance Program. This program - in a permanent organization, with an ongoing mission - survives to this day.¹⁸¹

4.1.3 Discussion: Adaptation, Counterinsurgency and Politics on the Battlefield

Contrary to what some of the military adaptation literature has assumed, little of what MACV did in Vietnam related to the Army's conventional structures for fighting in Europe.¹⁸² From the start, the American military set about adapting itself to the exigencies of Vietnam and proved itself flexible, both in terms of bottom-up adaptation and in terms of changes to doctrine and structure within the broader military bureaucracy. Under MACV, the military built a set of capabilities it did not have before, to execute a unique and complex counterinsurgency and external-support-interdiction campaign. This adaptation showed results; between

¹⁷⁹Richard Clarkson. *VNIT 827*. 1971.

¹⁸⁰Mortland, Cutler and Kaprelian, *Final Project Report- US Army Land Warfare Laboratory*.

¹⁸¹James P. Rife and Rodney P. Carlisle. *The Sound of Freedom: Naval Weapons Technology at Dahlgren, Virginia, 1918-2006*. 06/46. Dahlgren, Va: Government Printing Office, 2006, pp. 133-4.

¹⁸²For characteristic views, see Cameron, 'The U.S. Military's "Two-Front War," 1963-1988', p. 122; Murray, *Military Adaptation in War*, p. 70.

1967 and 1972, American forces reversed the tactical initiative, from being on the receiving end of contact 85% of the time to being the initiators 60% of the time.¹⁸³ American forces reversed NLF population and territorial control gains, decimated and demoralized the VC and the NVA, and built a lethal and effective apparatuses for both good-governance/population-centric and network-targeting counterinsurgency.¹⁸⁴ After the war, precisely because of the divergence between what the Army had built for Vietnam and the post-war strategic and budgetary environment, nearly everything that was built in Vietnam was dismantled and restructured for the post-Vietnam mission.

Counterinsurgency Adaptation in Combat Arms Units

A critic might still suggest that the adaptations chronicled above elide the American military's main failure, which was a failure to adapt towards counterinsurgency. The Army, according to its operational code or what Krepinevich dubbed "the Army Concept", discovered new and creative ways to boost lethality and maneuverability, but ignored the alternative path of "counterinsurgency best practices".¹⁸⁵ As we have seen, this argument ignores the division of labor in Vietnam-era counterinsurgency, the standing-up of specialized sub-organizations, and adaptations within combat arms units.

But there is one way in which the Army's critics might be right that the US military did not adapt to counterinsurgency. Many American units, even those routinely engaged with pacification at the village level, were inconsistent in their focus on the population or on moderating the use of force. Why didn't they "adapt" to counterinsurgency? The key distinction is in how and where the political shows up on the Vietnam battlefield. Recent research has highlighted the extent to which successful counterinsurgency requires the co-option of or negotiation with local elites who control violence-generating organizations.¹⁸⁶ In contrast to what we will see later in Iraq, this presented a distinct problem for counterinsurgents in Vietnam. Just as the war was being "Americanized" after 1965, it had already been "North Vietnamized". While the NLF (the official title of the Viet Cong) had always been an indigenous movement with a strong base of popular support, it was increasingly folded into the

¹⁸³MACV J3. 'Analysis of Casualties'. RG 472, A1 130, Box 1. NARA II, College Park, MD, 13th Nov. 1969.

¹⁸⁴Clemis, *Control War*, p. 186; Nguyen, *Hanoi's War*, p. 130.

¹⁸⁵Krepinevich, *The Army and Vietnam*, p. 4; Boot, *Road*, p. xlv.

¹⁸⁶Jacqueline L. Hazelton. 'The "Hearts and Minds" Fallacy: Violence, Coercion, and Success in Counterinsurgency Warfare'. *International Security* 42.1 (1st July 2017), pp. 80–113.

North Vietnamese political and military structure, headquartered in Hanoi. Main Force VC units, increasingly augmented from the north after 1964, and political infrastructures/cadres faced strong organizational hedges against any kind of political negotiation with the United States or the “puppet government” at the local level. While the Viet Cong sometimes undertook tactical/operational respites and observed the occasional ceasefire, there was neither scope nor surface given to actual political negotiations with the other side; when these finally occurred, they did so at the highest levels in Paris. Certainly, political strategies that involved compromise with the Viet Cong were never seriously considered at the local or national level by the United States, nor was any attempt made to cleave the Viet Cong from the North Vietnamese.¹⁸⁷

In contrast to many insurgencies, violence was not generated and controlled at the local level, and so a major environmental motivation to engage in negotiated counterinsurgency was removed. To put it another way, insurgents in Vietnam were not motivated by political disagreements or local grievances but by an *entirely different and opposed nation-building project*.¹⁸⁸ Because this effort was highly organized and externally supported, local insurgency strength was only partially motivated by particular local grievances or sentiments.

Forgetting Vietnam

Ultimately, the reasons why the character of the war and its specific lessons were ultimately forgotten had far more to do with organizational dynamics during demobilization than with any intentional “purging”. The Army’s Chiefs of Staff between 1968-1976 were Westmoreland, Abrams, and Weyand, who had commanded MACV from 1964 on.¹⁸⁹ The key figures in the renaissance of the American Army were senior officers like Edward Meyer, Donn Starry and William DePuy, all of whom had commanded combat arms units in Vietnam. None of them were eager to forget the lessons of that war. And as the war wrapped up, Army officers from fresh lieutenants all the way up to the Chief of Staff expressed a desire to master and retain the lessons of Vietnam, and a confidence that the US Army would do so.¹⁹⁰ Starry would

¹⁸⁷A former senior VC leader suggests that such a strategy might have worked (Truong, Chanoff and Doan, *A Vietcong Memoir*, p. 213). It was raised at least a few times at the highest levels of government, but always dismissed out of hand (see for example McNamara, ‘Memorandum From McNamara to President Johnson’). In this regard, Vietnam was a textbook case of solution search stopping at Model 2 Jackson, ‘Defeat in Victory’.

¹⁸⁸Clemis, *Control War*, p. 64.

¹⁸⁹Lock-Pullan, *US Intervention Policy*, p. 45.

¹⁹⁰John B. Luke. *VNIT 924*. 10th Aug. 1971; James E. Harris. *VNIT 924-2*. 10th Aug. 1971.

later emphasize the *distinctiveness* of the Army's turning away from Vietnam. He pointed to the need to "fix the Army in Europe first" (and the resources to only focus on one mission) as the reason the Army in the post-Vietnam period departed from its "traditional practice after every war of getting ready to fight it over again, only better".¹⁹¹

In the literature on the Army after Vietnam, agential and cultural explanations of forgetting have dominated. The Army "desperately wanted to move beyond the Vietnam era", 'purged' the lessons of Vietnam, attempted to ensure that it *could* not fight "another Vietnam" by manipulating the mobilization process.¹⁹² The historical record does not support these claims: rather, it suggests that Army doctrine, training, force structure, and investments were shaped by practical problem-solving towards accomplishing a daunting task set for it by civilian leaders: deterring the Soviet Union with conventional forces in Europe with a smaller, volunteer army and a shoestring budget. In the pursuit of this objective, the Army sacrificed anything inessential, and reformed itself in ways that touched almost every element of the organization.¹⁹³ While organizational forgetting after Vietnam was over-determined, my theory predicts observed forgetting in non-counterinsurgency capabilities, even ones in principle useful for conventional warfare. Setting aside the counterinsurgency related skills, there is nothing 'soft' about riverine operations, artillery fire base operations, or the cavalry-inspired tactics of airmobile units, and each has important precedents in the Army's history, and yet they were set aside after Vietnam because they were not useful in Western Europe against the Soviet Union.

By the time the United States arrived in Iraq, the Army as an organization forgot much of what it had learned in Vietnam. It forgot the extent of its lessons learned process, its riverine experience, its small-unit counterinsurgency patrols, its village-level advisory teams, its convoy and counter-IED tactics, its rapid procurement and testing methods, its creative programs to subvert enemy insurgents, and more.¹⁹⁴ It even forgot its own flexibility and adaptability, settling instead on a narrative of rigidity as an explanation for defeat. In

¹⁹¹Donn Starry. 'Welcome to the Counterinsurgency Century'. *Armor* (September-October 2008). Fitzgerald, *Learning*, p. 42 quotes Starry in a way that implies that Abrams chose the pivot to Europe. In the paragraphs following, Starry makes clear that the shift to a focus on Europe was the result of strategic need and the constraints imposed by Congress.

¹⁹²Lock-Pullan, *US Intervention Policy*, p. 104; Crane, *Avoiding Vietnam*, p. 14.

¹⁹³Lock-Pullan, *US Intervention Policy*, p. 52; Romjue, *The Army of Excellence: The Development of the 1980s Army*, p. 15.

¹⁹⁴Daniel A. Sijursen. *Ghost Riders of Baghdad: Soldiers, Civilians, and the Myth of the Surge*. Lebanon, NH: ForeEdge, 2015, p. 134; Kollars, 'Military Innovation's Dialectic'; Kollars, 'Organising Adaptation in War'.

some instances, even if the *memory* of an adaptation was lost, the adaptation itself was not, becoming a part of the *habitus* of Army life.¹⁹⁵ Some of the practicalities of Vietnam, learned on the battlefield, were gradually incorporated into training, doctrine, and practice, usually within specific combat arms communities. Quick Reaction Forces, close air support operations, air assault (aka airmobile) operations, and distributed fire support command and control, to name a few, survived. Many of the techniques which later led to victory in the Gulf War and modern American military operations were born in Vietnam. In these communities, the origins of their practices are obscure to the members, but the lessons of Vietnam nonetheless live on.

4.2 Iraq

American adaptation to the Iraqi battlefield began immediately in the wake of a stunning and rapid conventional success, the culmination of twenty years of thinking and training for “full-spectrum warfare.” American forces in Iraq soon found themselves facing circumstances very different from what they expected and what they were prepared to face. However, the exact contours of that difference between American land force preparedness and the environment in the Iraq War bear explaining. Contrary to popular belief, it is not the case that American forces were unprepared, whole or in parts, for unconventional war. While, as detailed in Chapter 3, American units were not planning to conduct sustained security and stabilization operations, the Army as a whole had reasonably cultivated institutional knowledge about them, and a great number of combat arms officers and senior NCOs had experience in operations in Northern Iraq, Somalia, Haiti, Bosnia, and Kosovo, patrolling, engaging with locals, providing aid, mediating political tension, and attempting to support local institutions.

It is true that, in the years after Vietnam and then again in the years after El Salvador, institutional knowledge about counter-insurgency proper had waned, but this was hardly an unthinking reaction. Rather, compared to the heights of Cold War revolutionary movements, insurgencies proper had become rare and marginal events, supplanted in the military dis-

¹⁹⁵ *Habitus* is “the relatively durable principles of judgment and practice generated by an actor’s early life experiences and modified (to a greater or a lesser degree) later in life” (Mustafa Emirbayer and Victoria Johnson. ‘Bourdieu and Organizational Analysis’. *Theory and Society* 37.1 [Feb. 2008], pp. 1–44). Actors can be individuals, but they can also be organizations, institutions, etc. *Habitus* provides a way of linking micro-level practice changes to more macro-level characteristics (see also Pierre Bourdieu. *Outline of a Theory of Practice*. Trans. by Richard Nice. Cambridge: Cambridge University Press, 1977).

course, doctrine, and training by terrorism, failed states, transnational criminal networks, and other common post-Cold War phenomena. Nevertheless, despite doctrine and training for unconventional war, American forces deployed to Iraq without specific plans, training, and force structure designed for stabilization *in Iraq*, and with little preparation for the onset of an insurgency. They would have to adapt on the fly.

In contrast to Vietnam, these local adaptations would be far more shaped by social geography and insurgency network structures than by physical terrain. While learning to operate in the dusty plains and wadis of Iraq was critical and did lead to operational adaptations, much more important was learning to fight an elusive enemy and his weapons, including suicide bombings, IEDs, death squads, and propaganda campaigns. As in Vietnam, the disposition of American forces reflected the nature of the perceived threat, not Iraq's geography or population centers. While the British were responsible for pacifying intra-Shia violence in Southern Iraq, the Americans focused primarily on combating the Sunni insurgency and Sunni-Shia violence in the so-called "Sunni Triangle" and greater Baghdad, doing so from a mixture of combat outposts within cities and "Forward Operating Bases (FOBs)" outside of them, engaging in a cat-and-mouse game of adaptation and counter-adaptation with an elusive enemy.

4.2.1 Indigenous Adaptation

Adaptation to the realities of post-invasion Iraq began, in fits and starts, soon after the collapse of the regime. For the reasons outlined in Chapter 3.3, many units were "out of place" or without orders during the move into post-conflict, stability operations. What those units did in those circumstances depended heavily on those units' training, leadership and short-term expectations. Facing little immediate environmental pressure, many units' actions were dominated by the organizational pressures they faced, especially those which expected to re-deploy quickly. Others quickly shifted of their own accord into varieties of stabilization operations, distributing aid, patrolling streets, attempting to get infrastructure back on line, and meeting with local leaders.

Some units and leaders went into the invasion more prepared for the post-conflict environment than others, due to their leadership and training. The Army's Green Berets, though not numerous and tasked with overall support for the XTF and search for WMD, nonetheless quickly and naturally shifted into setting up new governance systems and meeting local

needs, recruiting new police forces, organizing elections, and working with local elites.¹⁹⁶ The 18,000-man 101st Airborne Division in Northern Iraq, led by then-Major General David Petraeus, was prepared to do nation-building and stabilization (it was only relabeled counterinsurgency after the fact) from the get-go.¹⁹⁷ More relevant to this effort than Petraeus' PhD research on Vietnam (which focused on civil-military relations) was his experience with American relief efforts in Haiti and as chief-of-staff for American forces in Bosnia. Enabled by the 101st's manpower-heavy, armor-light character (perfect for foot patrols) and its strong organic combat services support (including support from the 1st Signals Brigade), Major General Petraeus worked to provide security, rebuild infrastructure, and get the government working again, liberally using "money as a weapon" and taking matters into his own hands instead of waiting for civilian direction. The Marines in general leaned forward into "small wars" and post-conflict stabilization best practices. They prided themselves on their preparedness and lighter touch, conducting dismounted security patrols and checkpoints, setting up ad hoc local police forces, and meeting with local elites.¹⁹⁸ But in this early period, many units were unprepared to implement post-conflict stabilization or to combat the nascent insurgency, stymied by a lack of training or planning, the wrong equipment, and the lack of direction from higher headquarters. But, as Michael Howard has observed, militaries can rarely predict the specific wars they will need to fight; what matters is how quickly they adapt.¹⁹⁹

Despite the initial widespread (though by no means universal) lack of preparedness for counterinsurgency, the exigencies of battle pushed soldiers and officers to find solutions, beginning an iterative process of trial, error, success, and diffusion.²⁰⁰ As with Vietnam, these local adaptations went beyond tactical tinkering to generate organic new organizational forms tailored to Iraqi counterinsurgency and new standard operating procedures. While these adaptations were encouraged by both General Casey and General Petraeus, they emerged

¹⁹⁶Wright and Reese, *The United States Army in Operation Iraqi Freedom, May 2003-January 2005*, p. 400; James Gavrilis. 'The Mayor of Ar Rutbah'. *Foreign Policy* (November/December 2005).

¹⁹⁷Michael R. Gordon. 'The Struggle for Iraq: Reconstruction; 101st Airborne Scores Success in Northern Iraq'. *The New York Times. World* (4th Sept. 2003); Scott Wilson. 'A Mix of 'President . . . and Pope''. *Washington Post* (16th May 2003); Wright and Reese, *The United States Army in Operation Iraqi Freedom, May 2003-January 2005*, p. 31. For a detailed examination of the specific and unique resources which the 101st brought to bear, see Wright and Reese, *The United States Army in Operation Iraqi Freedom, May 2003-January 2005*, pp. 128–129.

¹⁹⁸Gordon and Trainor, *Cobra II*, pp. 511–513.

¹⁹⁹Michael Howard. 'The Use and Abuse of Military History'. *Royal United Services Institution. Journal* 107.625 (Feb. 1962), pp. 4–10.

²⁰⁰Russell, *Innovation*, p. 8.

from units in the field acting to solve their own problems; for better and for worse (but mostly for better), there were no “schoolhouse solutions” being foisted on deployed units, who generally had a free hand to modify their procedures as they wished.²⁰¹ Much of this was highly localized (due to the nature of the threat) and involved generating re-training programs on the fly outside of normal channels at the small-unit level, with little collective training above the platoon.²⁰²

Unit Rotation and Pre-Adaptation

One of the most powerful organizational factors shaping how, when, and to what extent the Army adapted to Iraq was the policy of unit rotation. With only a few exceptions, entire units deployed together and returned together, for 12 month tours.²⁰³ After a deployment, units would return for (in theory) an equal length of ‘dwell time’ to allow soldiers to rest and then retrain and prepare for another deployment. In practice, due to the volunteer Army’s difficulty recruiting and maintaining enough soldiers, many units were ‘topped up’ with soldiers who had recently returned from deployments. Though this, according to Army thinking, was a negative (reducing training time together and ‘unit cohesion’), it actually had the effect of cycling soldiers experienced in Iraq more quickly into inexperienced units.²⁰⁴

The Army’s force generation and unit rotation policy drove the pace of adaptation in Iraq. The US military in Iraq did not learn gradually; it learned quickly, in fits and starts, due to unit rotation, which generated different waves of deployments with very different characteristics.

The first wave of units to deploy after the invasion were follow-on forces designed to replace combat arms units that had participated in the invasion (in part so that those units could undergo “transformation”). In most cases, they had trained for the mission before April or May 2003, and conducted minimal training tailored to Iraq, or even to post-conflict stabilization (instead maintaining their standard, conventionally-focused training). While training aimed at Iraq was beginning to be incorporated by the end of 2003 into some units,

²⁰¹Russell, *Innovation*, p. 7.

²⁰²Chad C Serena. *A Revolution in Military Adaptation: The US Army in the Iraq War*. Washington, D.C.: Georgetown University Press, 2011, p. 108.

²⁰³Due to perceived strategic needs, there were some tour extensions to 15 or 16 months, especially in the lean years of 2004-6. These were highly controversial, and came to require the approval of the Secretary of Defense (Rumsfeld, ‘Troop Disposition in Iraq’).

²⁰⁴While the ARFORGEN model was most explicit about this process, in this regard it was continuous with prior practices.

due to training and deployment cycles, it was still not universal before early-to-mid 2004. So, for instance, the 4th Infantry Division, which was criticized for its heavy-handed, firepower intensive approach to counterinsurgency, had not trained for, prepared for, planned for, or structured itself for counterinsurgency, as it deployed to Iraq in April 2003 and was structured as a heavy armored division.²⁰⁵ Its commander, Ray Odierno, was praised for his approach to counterinsurgency in subsequent tours.²⁰⁶

The second wave of units to deploy to Iraq are those which replaced the first wave or the forces which had stayed behind from the initial invasion. Most of these units, arriving from February through roughly April 2004, had trained for Iraq in the several months before their deployment. However, because of the ongoing lack of mission clarity, what training, exactly, they engaged in depended on their commanding officer.²⁰⁷ However, due to the Army continuing to pursue its force transformation goals, many of these units were mobilized National Guard units with reduced training standards and little deployment experience. Moreover, in order to minimize unnecessary overhead, these units were task organized as part of massively bloated divisions, where a single divisional headquarters might support as many as 9 maneuver brigades and 39,000 soldiers (more than double the doctrinal standard).²⁰⁸ In many instances, units that deployed as field artillery or engineers ended up serving as light infantry, while infantrymen or tankers were tasked with detainee operations.²⁰⁹

By the time the third wave began to deploy, though, a number of critical tipping points had been reached. For many soldiers, this was their second deployment, having been deployed to either Iraq or Afghanistan before. Many of the units in the third wave (including, for example, the 3rd Infantry Division) were battle-hardened Regular Army units, which had begun incorporating lessons learned from their initial Iraq and Afghanistan deployments into their preparations.²¹⁰ Moreover, by the time third-wave units underwent training in mid-to-late 2004, realistic scenarios (including mock villages) were beginning to be used, and TTPs

²⁰⁵Daniel Marston and Carter Malkasian, eds. *Counterinsurgency in Modern Warfare*. Oxford ; New York: Osprey Publishing, 22nd Apr. 2008, p. 243; Thomas E. Ricks. *Fiasco: The American Military Adventure in Iraq*. New York: Penguin Press, 2006, p. 153; Thomas E. Ricks. 'It Looked Weird and Felt Wrong' - Washingtonpost.Com'. *Washington Post* (24th July 2006).

²⁰⁶Thomas E. Ricks. *The Gamble: General Petraeus and the American Military Adventure in Iraq*. Penguin Books, 2010, p. 32.

²⁰⁷The First Marine Division in Anbar, in particular, focused strongly on counterinsurgency (Hashim, *Insurgency and Counter-Insurgency in Iraq*, p. 327).

²⁰⁸Wright and Reese, *The United States Army in Operation Iraqi Freedom, May 2003-January 2005*, pp. 126–7.

²⁰⁹*ibid.*, p. 128.

²¹⁰For one example of this process at work, see Kevin J. Rants. 'Reconstitution of a Heavy Division: The 1st AD Prepares for War'. *Military Review* (January-February 2006), pp. 45–49.

and lessons learned from Iraq were being disseminated by the Army.²¹¹ While this was true of a substantial percentage of the units deploying in 2005, it was almost universally the case thereafter.

While the Army influenced pre-deployment training through doctrinal guidance, the National Training Center, and other elements discussed below, brigade commanders (the dominant level of unit deploying to Iraq) had broad latitude to shape their training and organization, and they used the time and fore-knowledge granted by the force generation process to ‘pre-adapt’ their units to Iraq – to attempt adaptive changes to TTPs, SOPs, and force structure inspired by knowledge of the specific missions and spaces to which the unit would deploy. So, for example, the 172nd Stryker BCT prepared to deploy to Mosul and Northern Iraq in late 2005. During its pre-deployment training, its leaders communicated constantly with the unit they would replace, read both military journals and reports from the Center for Army Lessons Learned (CALL), and generated training programs for everyone from field officers to cooks to give them the skills the 172nd’s leaders believed they needed for counterinsurgency. As part of this process, the BCT’s field artillery battalion transformed itself into effectively an infantry maneuver battalion and trained with an entirely different organization and set of TTPs, which it used successfully south of Mosul. This kind of pre-deployment training and pre-adaptation was the norm, not the exception, for American units.²¹²

In keeping with Theo Farrell’s observation that poor organizational memory and leadership turnover enable adaptation, this consistent turnover had mixed effects.²¹³ On the one hand, every twelve months or so, fresh eyes re-examined the opportunities available and could make policy changes which prior commanders had been unable or unwilling to - change rather than stasis was certainly the result. Moreover, unit rotation combined with the training cycle and relative ease of communications between the US and Iraq gave commanders preparing their units to deploy the ability to peer into the fight from far away and tailor their preparation accordingly. On the other hand, the lack of relational stability and time horizons longer than a year created advantages for the insurgency or for local elites attempting to manipulate American forces to their own ends, and militated against organizational memory.²¹⁴ Moreover, pre-deployment training might rely on lessons learned that were not

²¹¹Serena, *A Revolution in Military Adaptation: The US Army in the Iraq War*, p. 106.

²¹²Russell, *Innovation*, pp. 150–152.

²¹³Farrell, ‘Improving in War’.

²¹⁴Serena, *A Revolution in Military Adaptation: The US Army in the Iraq War*, p. 124.

applicable outside of their original geographic or temporal context: units that trained for Anbar might end up deployed to Kirkuk.²¹⁵ While the military in Vietnam had an individual rotation policy, the overall continuity of units improved relationship building and reduced information asymmetry over time; for example, the Marines in Iraq found that one factor preventing them from executing an updated CAP approach was the inability for discrete units to develop and maintain relationships over the years, something that individual rotation had permitted in Vietnam.²¹⁶ Reflecting on Iraq, Conrad Crane has argued that the United States ought to re-explore the utility of individual rotation for *longevity* in counterinsurgency.²¹⁷ At all levels, the military worked to minimize the negative effects of rotation through a few weeks of overlap between units, though the time was rarely enough given that both parties were distracted by the logistics of coming and going.²¹⁸ Because unit rotation effectively eliminated the possibility of organizational learning through gradual changes to TTPs embedded in particular units, other sources of continuity and knowledge management became more important, namely schools, pre-deployment training, networking between units and the overarching command organizations in Iraq.

Intelligence and Counterinsurgency

American soldiers used the resources at their disposal to protect themselves, find and destroy their enemies, and fulfill their missions. Unlike in Vietnam, American soldiers found the patrolling and urban warfare tactics in which they had trained to be more or less adequate, though there was of course all kinds of local knowledge to be gained and passed on (which streets were deadly at which time of day, how to shield turrets from snipers, etc.). Where initial doctrine, training, and unit organization were truly insufficient was in generating the kinds of intelligence needed to combat the insurgency. In the Army's organizational structure, the battalion is the lowest level unit to have even a minimal organic intelligence capability, with the real intelligence staffing occurring at the brigade and divisional levels (where organic staff might be augmented with intelligence personnel or with attached specialized units).

This caused two immediate issues. First, at no level within the conventional force were intelligence staffers trained and organized to conduct Human Intelligence (HUMINT) op-

²¹⁵Ibid., p. 108.

²¹⁶Johnson, *The Marines, Counterinsurgency, and Strategic Culture*, p. 204.

²¹⁷Crane, *Cassandra in Oz*, Ch. 12.

²¹⁸Casey, *Strategic Reflections*, p. 174.

erations, or to tease apart complex social dynamics; rather, intelligence organizations were primarily designed to generate the tactical and operational intelligence needed for conventional opponents. Second, in counterinsurgency, much valuable intelligence is highly specific to local environments and conflict dynamics, at the battalion-level or lower. And so, human intelligence and sharing needed to occur at the lowest levels of the force as well.²¹⁹ While official doctrine and training would eventually change, soldiers in the field led the way in building the intelligence infrastructure they needed to succeed. This process kicked off, in fits and starts, in the early years of the war, but especially in 2005 as the insurgency ramped up at the same time that it became clear that the failure of efforts to rebuild the Iraqi military (and, therefore, their utter unreliability for the "hold" part of "clear, hold, build") meant that the American military would be ultimately responsible for fighting the insurgency. American forces in the field did not rebuild and reform their intelligence capabilities on the fly because they were reading the latest provisional doctrine from TRADOC; they did so because they found themselves starved of relevant information and bewildered and overwhelmed by the intelligence they did have.

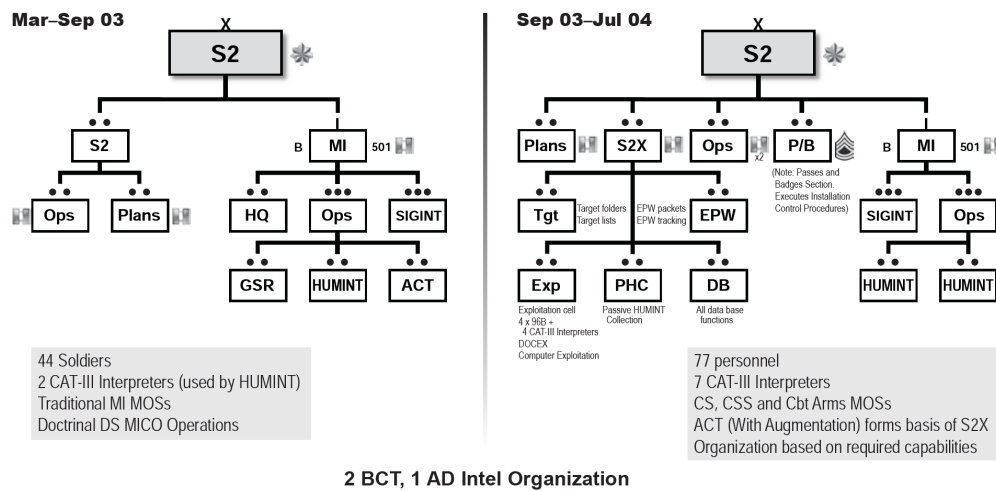
Gathering intelligence on the local "human terrain" was the first and, in some ways, the most vital task. Gathering tactical-level human intelligence is not a task regular combat units are equipped and trained for. While they early on had access to some intelligence prepared at the national level, units found it was often outdated or outpaced by events. Besides the mistaken WMD intelligence and a near total lack of information about weapons caches dispersed throughout the country, even intelligence about Iraqi social life was inadequate: the earliest Marine units in Anbar province in 2004 discovered that their information on major tribes and tribal leaders was deeply flawed, and did not account for either complex tribal relations in urban (as opposed to rural) areas or to changes late in the Saddam regime and after the invasion. It took months for them to figure out who the "right" people to meet with were.²²⁰ And so, units like the Marines in Anbar and the 172nd Airborne adapted in Iraq through a mixture of capacity-building (often quite amateurish to begin with) and working with other organizations that could both provide human intelligence and train the military, namely special operations units (especially the Green Berets) and the CIA.²²¹ Besides

²¹⁹Ralph O. Baker. 'HUMINT-Centric Operations: Developing Actionable Intelligence in the Urban Counterinsurgency Environment'. *Military Review* (March-April 2007), pp. 12-21.

²²⁰McWilliams and Wheeler, *Al-Anbar Awakening: Volume 1, American Perspectives*, pp. 121-122.

²²¹Russell, *Innovation*, p. 161.

Figure 4.5: One BCT's Intelligence Transformation



learning the rudiments of developing and managing sources, American soldiers and Marines experimented with a variety of other techniques for generating operational intelligence. Officers down to the platoon level routinely purchased cell phones in country and handed out their number to local leaders, in addition to setting up tip lines and pushing for increased cell phone coverage.²²² As more of the country gained cell coverage and these practices spread organically between military units, they became a gold mine of operational tips, estimated by one research team studying Basra in 2006 as leading to a 50% decline in indirect attacks (mortars) and a 15% decline in IEDs.²²³ The 1-7 Marines in western Anbar in 2005-6 and their supporting units (such as the Army's 1-37 Armor Regiment) organized a census and vehicle registration program. Working with local police, every vehicle in the area was registered and stickers issued with different colors for different towns (enabling troops manning checkpoints to assess vehicles at a glance and identify suspicious vehicles). Marines went from house to house conducting the census, which included taking pictures of the heads of household and identifying family members. Battalion leaders across the sector met weekly and handed over the data they had collated to the battalion S-2, who maintained the census database.²²⁴

Generating so much intelligence at the tactical level also demanded unit-level reorganizations (for example, see Figure 4.5).²²⁵ Units that deployed to Iraq which were organized and trained for conventional war (due to the force generation cycle) quickly worked to re-

²²²Ibid., p. 159.

²²³Berman, Shapiro and Felter, *Small Wars, Big Data*, pp. 95–96.

²²⁴Russell, *Innovation*, pp. 68–69.

²²⁵Baker, 'HUMINT-Centric Operations: Developing Actionable Intelligence in the Urban Counterinsurgency Environment'.

tool for counterinsurgency, augmenting and modifying their intelligence staff as quickly as possible (often by cannibalizing other functions) and emphasizing the tactical intelligence process with frequent coordination and explicit prioritization. After 2005, BCTs were far more likely to train and deploy with intelligence in mind, conducting pre-deployment intelligence preparation, training and manning, and many even included a forensic exploitation cell in their intelligence section.²²⁶ Besides simply adding personnel, units restructured for intelligence. As early as 2003, military officers in professional journals were discussing ways of reforming intelligence at the battalion level and below, and by 2004 some units in the field began experimenting with company-level intelligence cells, with the practice becoming widespread in the Marines specifically by 2005.²²⁷ After 2007, the Army's AWG worked to expand the company-level intelligence cell across the force.²²⁸ Army units, often beginning in pre-deployment training, expanded their intelligence capabilities for counterinsurgency. The 172nd added additional Tactical HUMINT (Human Intelligence) Teams at the battalion level before it deployed; though they lacked experience at first in building local networks and interrogating prisoners, they developed and augmented those skills as time went on, in part through cross-training with Special Forces and interagency partners.²²⁹

One of the most vital aspects of restructuring for intelligence was breaking down many of the traditional information silos and SOPs that constrained information-sharing across the military and between services. Thanks to task organization and task forces of various kinds (often interagency ones), these ad hoc organizational structures were also more able to transcend and shape behavior across unit rotations.²³⁰ In addition, the Pentagon arranged a variety of programs to provide tools to units on the ground to use as they wished. One of these, the Technical Support Working Group (a subset of the Combating Terrorism Technology Task Force), ended up supplying artificial intelligence analysis software (called COPLINK) developed by a police department in Arizona to the Marines in Anbar, which they used to great effect with their census data.²³¹ "Units such as the 172nd developed extraordinarily detailed and coherent understandings of their insurgent adversaries through the fusion of

²²⁶Baker, 'HUMINT-Centric Operations: Developing Actionable Intelligence in the Urban Counterinsurgency Environment'.

²²⁷Christopher McGarry. *Inverting the Army Intelligence Pyramid*. Fort Leavenworth, Kansas: School of Advanced Military Studies, USA Command and General Staff College, 2011, pp. 49–50.

²²⁸ibid., p. 21. See more in the section on AWG below.

²²⁹Russell, *Innovation*, p. 160.

²³⁰Ibid., p. 158.

²³¹Ibid., p. 70.

various national-level organizational capabilities with their own developing skills at tactical collection and analysis”.²³²

Knowledge Sharing

While informal knowledge-sharing networks operated through the usual personal connections, rumor mills and personnel turnover, they were substantially augmented by electronic communications capabilities available from essentially the start of the war. Email and VTCs enabled unprecedented information flows. Commanders on the ground could and did correspond with their peers both in Iraq and back in the United States and could contact subject-matter experts for advice on matters ranging from clan networks to technical support for hardware. Commanders of units preparing to deploy communicated with the units they were replacing and gathered information about the conditions on the ground, which they could use to train their units.²³³ Relaxed information controls (often in defiance of SOPs) facilitated horizontal, decentralized knowledge transfer; where technology or protocol got in the way, workarounds were found and protocols ignored.²³⁴ Another soldier described the informal network of intelligence analysts communicating over the classified SIPRnet using a (probably unauthorized) Internet Relay Chat (IRC) system, probably the first instant messaging service used in warfare.²³⁵ Driven by the urgent need to empower information-sharing at the tactical level, the services adopted a variety of new software and data tools, including “Green Force Tracker”, a higher-functionality instant messaging system.²³⁶ While the deluge of information could at times overwhelm normal command processes, in general it served to empower junior officers and those in the field, by improving horizontal transfer, driving analysis from headquarters and the US back to the tactical level (something the Army had struggled with in Vietnam) and even enabling junior officers to reach out to other parts of the command structure for information or support if their direct superiors were unsupportive.²³⁷ But email and informal video-conferences also augmented the capabilities of senior leaders, by allowing them to connect to stakeholders in other agencies, coordinate formal and informal expert support, and

²³²Ibid., p. 161.

²³³Ibid., p. 81.

²³⁴Serena, *A Revolution in Military Adaptation: The US Army in the Iraq War*, p. 77. Early in the war, one Marine officer recalled resorting to Yahoo email when the military’s own networks were reliable enough (Murray, *Military Adaptation in War*, pp. 314–5).

²³⁵Serena, *A Revolution in Military Adaptation: The US Army in the Iraq War*, p. 78.

²³⁶Ibid., p. 109.

²³⁷Ibid., p. 79.

receive information and intelligence outside of normal reporting channels. General Petraeus in particular loved to use email to gather information and shape opinion, spending hours a day maintaining conversations across his extensive network and answering emails from the lowest levels of the force on up.²³⁸

The informal knowledge-sharing networks consisted of more than just robust email traffic by field commanders. The Internet enabled stronger connectivity between *every* interested party working to help the military adapt to the insurgency. From the beginning of the war, an email list called Warlord Loop connected counterinsurgency-interested military officers, academics, political appointees, civil servants, and journalists.²³⁹ Informal or unofficial blogs and e-journals, usually run by soldiers, became important sites of public discussion about American strategy and tactics in Iraq, and served as an outlet to distribute reports from the field and to organize support for a counter-insurgency strategy and ventilate frustrations with DoD and other political or bureaucratic actors. Much of the consensus-building for the Surge strategy occurred (both within the military and in the broader national security community) on the Internet and via email.²⁴⁰ *Small Wars Journal* and a blog called *Abu Muquama* (run by Andrew Exum) were two particularly central unofficial clearing-houses, but they were amplified by sundry individual blogs and sites, including those sponsored by the Army, such as company-command.org and platoonleader.com, which operated as message boards for active-duty personnel (both were begun by soldiers and later adopted by the Army).²⁴¹ Soldiers and units also built their own websites and knowledge management tools, both on the open Internet and on the military's own networks. The net effect of informal knowledge sharing (both spontaneous and encouraged by the Army) was a rapid, self-directed, robust informal lessons learning process operating alongside and in conversation with the official one.

Countering IEDs

As early as mid-2003, use of IEDs by insurgents had become a leading cause of American casualties (see Figure 4.6).²⁴² While there were significant counter-IED efforts across DoD,

²³⁸Mansoor, *Surge*, p. 94.

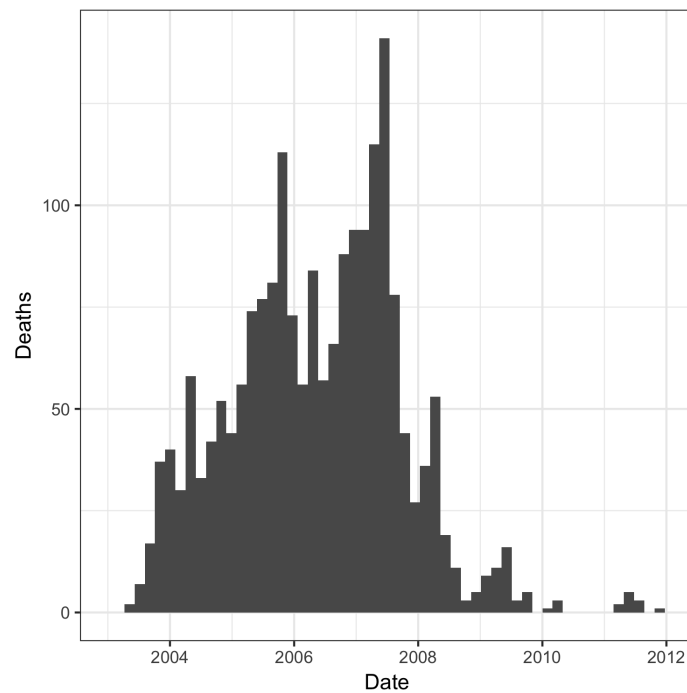
²³⁹Collins, 'Military Innovation in War', p. 130.

²⁴⁰Dave Dilegge. 'Thoughts on the New Media'. *Small Wars Journal* (Mar. 2009), Kilcullen comments.

²⁴¹Serena, *A Revolution in Military Adaptation: The US Army in the Iraq War*, p. 115; Janine Davidson. *Lifting the Fog of Peace: How Americans Learned to Fight Modern War*. University of Michigan Press, 2010, p. 124.

²⁴²Andrew F Krepinevich and Dakota L Wood. *Of IEDs and MRAPs: Force Protection in Complex Irregular Operations*. Washington, D.C.: Center for Strategic and Budgetary Assessments, 2007, p. 77.

Figure 4.6: Histogram of American IED Deaths in Iraq



Data from Defense Casualty Analysis Center.

those on the ground did not wait to begin improvising ways of protecting themselves.

As had occurred in Vietnam, the military in Iraq was relatively unprepared for the threat of IEDs and road-side ambushes.²⁴³ Moreover, with overall troop reductions, convoy operations were often the responsibility of transportation units operating without infantry support. Soldiers responded by scavenging and trading for materials on the battlefield, which they then used to welding metal plates to their vehicles and install turrets, independently re-creating Vietnam-type gun trucks.²⁴⁴ They set out improvising convoy operations TTPs, aided by in-country schools and machine shops which transportation and maintenance units set up to modify vehicles, train soldiers, and circulate knowledge.²⁴⁵ While transportation units were re-inventing convoy operations for Iraq, units of all sorts were, depending on the need, adding armor to their vehicles and figuring out how to best mitigate IEDs.

While up-armorizing and a plethora of other improvised tools did (together with rapidly-procured technologies) help reduce IED effectiveness, the cat-and-mouse game of measures

²⁴³Clay Wilson. *Improvised Explosive Devices (IEDs) in Iraq: Effects and Countermeasures*. Washington, D.C.: Congressional Research Service, 10th Feb. 2006, p. 7.

²⁴⁴These initial gun trucks were independent re-discoveries. However, once soldiers in Iraq had begun to figure out gun truck operations, they were aided by a fortuitous connection via Rep. Duncan Hunter to some Vietnam-era gun truck veterans (Kollars, 'Military Innovation's Dialectic').

²⁴⁵Kollars, 'War's Horizon'.

and counter-measures continued with a new technology which began with Iranian-backed Shia militias but quickly proliferating across insurgent groups: the Explosively Formed Penetrator (EFP).²⁴⁶ EFPs used explosives to turn a disc of metal (usually copper) into a liquid bullet that could punch through thick armor and anything else in its path. While most of the successful American countermeasures aimed to trigger them prematurely, there were some more exotic ground-level adaptation. A rumor went around that the laminated glass used for Humvees could stop EFPs by diffusing the kinetic energy along the cracks which formed in the window. While this countermeasure was expensive and limited in effectiveness, it was an accidental discovery that led to a temporary country-wide shortage on the glass as some units up-armored their vehicles with it.²⁴⁷

A more widely applicable countermeasure was the “Rhino,” a diesel engine glow plug installed in an ammunition can at the end of a pole, which would trip the heat sensors commonly used to trigger EFPs. Invented by an enterprising soldier, it quickly spread throughout Iraq. The insurgents responded by setting the triggers on a delay - American troops responded with even longer poles, and then variable-length ones. The equilibrium outcome was that the insurgents used random delays and the Americans used random pole-lengths. While the “Rhino” was no panacea, it did reduce American casualties, and was soon taken up by and developed further by JIEDDO.²⁴⁸

Population Protection

Even as they sought to protect themselves and destroy the insurgency, American soldiers focused on protecting the population, both as part of population-centric counterinsurgency and to dampen an emerging civil war. While those units who had not undergone pre-deployment training with insurgency or even stability operations in mind, and who were equipped with more armor or mechanization, were slower to make population protection a central mission, by 2005 or 2006, population-centric approaches to counterinsurgency were almost ubiquitous.²⁴⁹ The trend, over time, was towards smaller-unit patrols and towards less mechanization

²⁴⁶Jon R. Lindsay and Roger Peterson. *Varieties of Insurgency and Counterinsurgency in Iraq, 2003-2009*. Newport, RI: Center on Irregular Warfare and Armed Groups, Naval War College, 2012, p. 77.

²⁴⁷Sjursen, *Ghost Riders of Baghdad*, p. 134.

²⁴⁸Richard E. Killblane. *Convoy Ambush Case Studies, Volume II: Iraq and Afghanistan*. Fort Lee, VA: US Army Transportation School, 2015, p. 192.

²⁴⁹Jason Lyall and Isaiah Wilson. ‘Rage Against the Machines: Explaining Outcomes in Counterinsurgency Wars’. *International Organization* 63.1 (Jan. 2009), pp. 67–106; Schlosser, *The Surge*, p. 91. Units and commanders returning for their second tour had generally absorbed classical counterinsurgency doctrine (at least second-hand) and were attempting to implement “war amongst the people” (Gentile, *Wrong Turn*,

(associated with superior information-gathering).

As sectarian violence continued to spread, one powerful tool (not prescribed by any doctrine) was copious amounts of concrete.²⁵⁰ American soldiers became proficient in the imaginative use of concrete: to secure roads, to build and secure patrol bases in any environment, to establish checkpoints, and to control sectarian violence. As violence drove ethnic/sectarian un-mixing in urban areas, Army engineers began to place 20-ft high Alaska walls and other significant barriers to physically separate Sunni from Shia neighborhoods, with only a few checkpoints in and out. While still-mixed areas remained violent, even before the Surge physical separation had made neighborhoods easier to police and protect, and had begun to reduce sectarian violence.²⁵¹ Paradoxically, while the walls increased unemployment, they reduced propensity to support the insurgency (and, in Iraqi, high unemployment was not straightforwardly associated with insurgency support).²⁵² One of the chief limitations on both building urban patrol bases (for a population-centric approach) and building other protective barriers was the simple lack of resources, manpower, and budget.²⁵³ As these began to be alleviated from 2005 on, the concrete never stopped pouring.

Arriving in March 2004, then Maj. Gen. Peter Chiarelli believed that much support for sectarian militias was motivated by the dysfunction of government services, especially sanitation. Unable to obtain funding through USAID or the CPA, Chiarelli ended up directing his organic Engineer component (an entire brigade) to work directly on the projects, augmenting it with some of his limited discretionary funds and some funding he had obtained after meeting directly with CPA's Bremer.²⁵⁴ The winding-up of the CPA paradoxically gave the military greater freedom of action to take on or influence the kinds of development projects that were normally run by civilian agencies.

While the need to live amongst the people is often credited to General Petraeus' approach to counterinsurgency, these tactics actually began under General Casey, where it was feasible and especially after the uptick in sectarian violence.²⁵⁵ The Marines had always maintained

pp. 93–94). In fact, General Petraeus' command was associated by an uptick in lethality more than a change in approach towards population-centric counterinsurgency, with “the gloves coming off” towards insurgent networks (Schlosser, *The Surge*, p. 48).

²⁵⁰John Spencer. *The Most Effective Weapon on the Modern Battlefield Is Concrete*. 14th Nov. 2016. URL: <https://mwi.usma.edu/effective-weapon-modern-battlefield-concrete/>.

²⁵¹Sjursen, *Ghost Riders of Baghdad*, p. 122.

²⁵²Berman, Shapiro and Felter, *Small Wars, Big Data*, p. 233.

²⁵³McWilliams and Wheeler, *Al-Anbar Awakening: Volume 1, American Perspectives*, p. 178.

²⁵⁴Greg Jaffe and David Cloud. *The Fourth Star: Four Generals and the Epic Struggle for the Future of the United States Army*. New York: Broadway Books, 2010, pp. 147–160.

²⁵⁵See the previous chapter for the complicated political (both US and Iraqi) circumstances militating against

a small combat outpost system in the urban parts of their Area of Operations. For Army units, the basing strategy depended on local circumstances, but the eruption of sectarian violence after the February 2006 Samarra bombings led to a reversal of base consolidation, and units started to build new outposts (especially in Baghdad), both of their own initiative and as part of the Baghdad Security Plan. By the time Petraeus had arrived, the 1st Cavalry Division in Baghdad had already built thirty-five new outposts, and the move off of FOBs in Baghdad was well underway.²⁵⁶

The Anbar Awakening

Drawdown

Reflecting on his time commanding the Red Devils (1st Battalion, 508th Infantry Regiment, operating as part of the 173rd Airborne Brigade) in Western Iraq in 2003, Col. Harry Tunnell listed the capabilities and training he believed would have made his unit better prepared for the burgeoning counterinsurgency. They needed off-the-shelf intelligence equipment (like cell phone scanners), training in civilian law enforcement techniques and intelligence organization, a rudimentary knowledge of forensic data collection, the ability to gather forensic data (like fingerprints and chemical traces) and feed it into a central biometric database, and help coordinating distributed small unit patrol operations. They also needed to train better for convoy operations, response to ambush, MEDEVAC, and force protection. By 2006, each of these tactical elements was in place throughout American forces in Iraq, and feeding an operational emphasis on intelligence and counter-insurgency. While the impetus for these changes often emerged from the “bottom”, they were necessarily supported by policy entrepreneurs distributed throughout the organizational ecosystem. Despite their utility after Iraq in Afghanistan, many of these hard-won capabilities began to become defunct even before the end of the Afghan Surge.²⁵⁷

Most of the official and unofficial knowledge sharing sites have gone defunct. Around 2009, the Army stopped funding [companycommand.com](#) and [platoonleader.org](#), and indi-

a more consistent basing strategy.

²⁵⁶Gordon and Trainor, *The Endgame*, p. 335; Kagan, *The Surge*, pp. 33–36.

²⁵⁷Harry D. Tunnell. *Red Devils: Tactical Perspectives from Iraq*. Fort Leavenworth, Kansas: Combat Studies Institute Press, 2006, pp. 48–51. Tunnell’s leadership exemplifies problems of a lack of adaptability and of applying the “lessons learned” from one war to another. As commander of a Stryker Brigade in Afghanistan, he implemented a counter-guerrilla operation that led to a dramatic uptick in American casualties for no evident strategic gain, and he was relieved of command (Rajiv Chandrasekaran. *Little America: The War Within the War for Afghanistan*. New York: Knopf, 2012, p. 161).

vidual blogs or sites set up during and for Iraq inevitably expired as their authors moved on in life.²⁵⁸ Of course, even surviving software might carry forward the lessons of Iraq for ill as well as good; an ad hoc CIA communications system from the early years of the Iraq War, when used against state adversaries for whom it was not designed, led to catastrophic failure.²⁵⁹

Technologies and tools developed in the field to counter IEDs have almost entirely disappeared from the organic capabilities of units, though many were subsumed into the Army's formal counter-IED efforts. Counter-IED and forensic training is primarily conducted in advance of rotations to the Middle East or Eastern Europe. One element fueling the forgetting process: Iraq veterans deploying to Afghanistan found that little of what had worked in Iraq worked in Afghanistan, and counter-IED success rates remained stubbornly flat.²⁶⁰ Field-modified vehicles were largely scrapped or turned over to the Iraqis, and those that were not have generally been phased out of use.²⁶¹ To the extent that there may be a more permanent counter-IED capability, it is entirely due to the formal adaptations chronicled below.

Bottom-up or informal know-how for population protection and population-centric counterinsurgency floundered on massive differences between Iraqi and Afghan terrain and the overall combat environment. Afghanistan, with a population of approximately 30 million, is slightly smaller than Iraq, but substantially more rural, with lower population density and mountainous terrain. While American forces attempted to execute a population-centric approach to counterinsurgency, few of the techniques that had worked in Iraq were applicable throughout most of Afghanistan. Much of what was tried in Iraq, failed in Afghanistan. One commander in rural Kandahar decided based on his Iraq experience that the best way to secure a village of some fifty mud houses was to surround it with T-Walls, despite the fact that the population was homogeneous and the Taliban came from the village.²⁶² Because they aimed to protect groups of villages (rather than urban areas) and because of the high incidence of "green-on-blue" insider attacks, American forces tended to be isolated in "block-

²⁵⁸Crispin Burke. *Quick Post—The New Media in Peril?* 27th May 2009. URL: <http://wingsoveriraq.blogspot.com/2009/05/quick-post-new-media-in-peril.html>.

²⁵⁹Zach Dorfman. 'Botched CIA Communications System Helped Blow Cover of Chinese Agents'. *Foreign Policy* (15th Aug. 2018); Zach Dorfman and Jenna McLaughlin. 'The CIA's Communications Suffered a Catastrophic Compromise. It Started in Iran.' *Yahoo News* (2nd Nov. 2018).

²⁶⁰Kester and Winter, *Pentagon Report*; Shell, 'How the IED Won'.

²⁶¹Christian Davenport. 'Requiem for the Humvee, as the Army Readies for the next War'. *Washington Post* (23rd July 2015).

²⁶²When the T-walls proved too expensive, he used barbed-wire instead. His previous command? West Baghdad during the Surge (Sjursen, *Ghost Riders of Baghdad*, p. 191).

ing positions” over key navigation routes. Much of population-centric approaches in Iraq had been, at the root, aimed at controlling flows between Sunni and Shia populations and preventing militia activity. These were simply not the concerns of Afghanistan. Moreover, the Taliban drew support from rural hinterlands and safe havens in Pakistan, not the urban population. Moreover, the Taliban strategy was not aimed at terrorizing or controlling the population so much as at destroying its rivals for power, especially the nascent Afghan state. Even before the strategy at the top changed from population-centric counterinsurgency to a focus on counter-terrorism, it was increasingly abandoned on the ground.²⁶³

Though the Army has not experienced a demobilization on the scale of Vietnam, a high level of organizational churn still deconstructs even regular line units. Nearly every single Army unit which did a tour of Iraq has been through at least one substantial re-organization (battalions changing brigades, activation or inactivation, or a major change in capabilities), usually through the Army modernization process. The 172nd Stryker BCT, one of the first “transformed units” to meet battle and one which pioneered a number of intelligence generation and sharing techniques, was inactivated after returning from its tour.²⁶⁴ The 1-37, which had fought alongside the Marines in Ramadi, helped build the network of combat outposts, and set up the census-intelligence operation, was inactivated immediately after returning from Iraq.²⁶⁵ Since their first tour of Iraq, the Red Devils have been ‘reflagged’ once and changed parent brigades twice.²⁶⁶ In 2014, Gen. Petraeus’ 101st Airborne began to complete the transformation process with an organizational restructuring and the inactivation of the 4th BCT.²⁶⁷ Each component brigade of the 4th Infantry Division has been substantially reorganized (from infantry to armor, for instance) or reflagged, and its headquarters unit was broken up, deployed in parts, and moved several times.²⁶⁸ Ironically, the BCT structure

²⁶³Michael A. Cohen. ‘Tossing the Afghan COIN’ (16th Dec. 2010); Oleg Svet. ‘COIN’s Failure in Afghanistan’. *The National Interest* (31st Aug. 2012); Capt Brett Friedman. ‘Creeping Death: Clausewitz and Comprehensive Counterinsurgency’. *Military Review* (Jan-Feb 2014), p. 8; C. J. Chivers. ‘War Without End’. *The New York Times Magazine* (8th Aug. 2018).

²⁶⁴Steven Beardsley. ‘Final Flourish as 172nd Inactivates in Grafenwöhr’. *Stars and Stripes* (31st May 2013).

²⁶⁵1st Battalion, 37th Armored Regiment “Bandits!” URL: <https://www.bliss.army.mil/2HBCT1AR/1-37ar.html>.

²⁶⁶Drew Brooks. ‘With 4th Brigade Combat Team’s Inactivation, Troops Keep Its Legacy Alive’. *The Fayetteville Observer* (14th May 2014).

²⁶⁷Justin Moeller. *Currahees Case Colors but Legacy Lives On*. 30th Apr. 2014. URL: https://www.army.mil/article/125001/currahees_case_colors_but_legacy_lives_on; Joel Salgado. *101st Airborne Division Unit Completes Transformation as History Comes Full Circle*. 15th May 2014. URL: https://www.army.mil/article/126054/101st_airborne_division_unit_completes_transformation_as_history_comes_full_circle.

²⁶⁸US Army. *4th Infantry Division*. URL: <http://www.carson.army.mil/units/4ID.html>; U.S. Army Public Affairs. *Army Announces Conversion of Two Brigade Combat Teams*. 20th Sept. 2018. URL: <https://www.army.mil/2018/09/20/army-announces-conversion-of-two-brigade-combat-teams/>

itself contributes to organizational forgetting: units will deploy with far fewer organic combat support and combat services support than, for instance, David Petraeus' 101st Airborne Division did in 2003. They will have a narrower organic margin of error between whatever mission they train and task-organize for and what they actually find on the battlefield.²⁶⁹

4.2.2 Formal Adaptation

While many scholars have focused on American tactical, bottom-up, and informal adaptation in Iraq, some have also criticized the perceived comparatively slow pace of the institutional Army's adaptation to the conflict, with some arguing that real adaptation did not occur until General Petraeus took command of MNF-I.²⁷⁰ While there is some merit to this position, in that (as we will see) there were some political limitations or resource restrictions that slowed adaptation, critics overlook significant sources of agility in the Army. For the most part, the Army reacted, and quite quickly, to the challenges the Iraq War presented. As in Vietnam, these efforts took two forms: work to build capabilities that American soldiers needed and could not acquire on the battlefield, and attempts to spur, test, and spread indigenous battlefield adaptations. While political limitations and the official strategy for Iraq prevented some important changes in resources and rules until 2006, the military's relative autonomy for wartime decision-making, especially when it comes to doctrine, training, and force structure, permitted environmentally-driven adaptation from the start.²⁷¹

Doctrine and Training

The US military stumbled into Iraq with varying degrees of intellectual and training-based preparedness for what they would find there. The Army (outside of the Special Forces) community had not focused on counterinsurgency-per se for years, with stability or peace-building operations approaches dominating thinking on "operations other than war". While not even these were followed or trained for for the invasion itself (for reasons discussed earlier), the rise of the insurgency presented new challenges. The Marines, in contrast, had been preparing for a decade for the dirty, close-in, asymmetric urban warfare they thought would characterize their mission in the 21st century. But in both cases, there was a dire need for

[//www.army.mil/article/211368/army_announces_conversion_of_two_brigade_combat_teams](http://www.army.mil/article/211368/army_announces_conversion_of_two_brigade_combat_teams).

²⁶⁹Serena, *A Revolution in Military Adaptation: The US Army in the Iraq War*, p. 296.

²⁷⁰See, for instance, Collins, 'Military Innovation in War', Ch. 3.

²⁷¹Hunzeker, 'Perfecting War: The Organizational Sources of Doctrinal Optimization', pp. 121–127.

practical skill-building for the actual Iraqi battlefield, figuring out counterinsurgency in the era of cell phones and the internet, and recovering counterinsurgency best practices, including from Vietnam.

At first, the organizational pressures of the Army training cycle (especially as part of the transformation process) competed with the need to adapt to Iraq, but these gave way to the perceived needs of the force and the environmental pressures of Iraq.²⁷² By mid 2004, the need for realistic counterinsurgency training for Iraq was increasingly recognized by those responsible for modifying doctrine and training. Immediately after turning over control of CJTF-7 to Lt. Gen. Sanchez, Scott Wallace, a CORDS veteran assumed command of the Army organization responsible for doctrine and for running the national training centers, the Combined Arms Center (CAC). When he was promoted to lead TRADOC in October 2005, his replacement was then-Lt. Gen. David Petraeus, who arrived there only a few months after Lt. Gen. Jim Mattis assumed command of the Marines' equivalent doctrine-development organization, the Combat Development Center in February 2005. Beginning as early as late 2003, the Army and the Marines both began transitioning to counterinsurgency doctrine and incorporating lessons learned and realistic scenarios from Iraq into training. The constraints that existed on these adaptations had less to do with reticence or reluctance in modifying doctrine or training for the fight and more to do with the Pentagon's continuation of the unit transformation process.

Training The American unit rotation policy and the force generation cycle, which made pre-deployment training especially vital, together placed greater emphasis on training and preparation for the battlefield by the military's training institutions (as opposed to the semi-durable unit memories and training practices of Vietnam). Because training is a continually ongoing process, the military was able to make relatively quick adjustments to both individual and group training, especially for and within units during their preparation for deployment.²⁷³

The Army's "Training Revolution" enshrined the principle of "train how you fight", and the Army and Marines took it seriously. From late 2003 on, the Marines' Mojave Viper pre-deployment training mission and the Army's National Training Center (NTC), increasingly focused on counterinsurgency in Iraq, including civil affairs missions, intelligence challenges,

²⁷²Leonard Wong and Stephen J. Gerras. *Lying to Ourselves: Dishonesty in the Army Profession*. Fort Belvoir, VA: Defense Technical Information Center, 1st Feb. 2015. URL: <http://www.dtic.mil/docs/citations/ADA615274>.

²⁷³Rants, 'Reconstitution of a Heavy Division: The 1st AD Prepares for War'.

and mock ambushes with IEDs. Arabic speaking Iraqi-American émigrés were recruited to participate in a mock village scenario, complete with interpreters, insurgents, and weapons caches.²⁷⁴ These nearly ubiquitous programs, which culminated the pre-deployment training cycle, provided a valuable “reality check” and opportunity for last minute adjustments prior to deployment, though some who commanded units in 2005-2006 later stated that the live-fire exercises (calibrated based off of real field reports gathered by CAC representatives in Iraq) had not prepared them for how violent and “kinetic” parts of Anbar and Baghdad actually were.²⁷⁵ And yet, given even a couple of months to develop a new curriculum, deployment of an entirely new training rubric by the end of 2004 still meant that the first forces to deploy having been trained under that protocol did so in mid-2005. Furthermore, even as specialized training facilities and scenarios were being constructed, units preparing to deploy had little opportunity to train with the units and agencies that would support them in the field (as they were already spread thin). This problem went both ways; interagency and Coalition partners arrived in Iraq with little-to-no training on working with American units in counterinsurgency.²⁷⁶

Based on lessons learned and experiences from post-invasion Iraq, senior Army and Marines leaders came to believe that one barrier to effectively implementing counterinsurgency was a lack of cultural and language training at the ground level. Lacking the knowledge to interpret and navigate Iraqi culture or communicate (at a basic level) with Iraqis led soldiers and Marines to accidentally offend the population or, alternatively, to placing themselves in danger unawares. The Army created the Army Culture Center under TRADOC in 2004, and the Marines created the Center for Advanced Operational Culture Learning in 2005. These worked not only to directly provide training to deploying soldiers, but also to “train the trainers” and influence cultural education throughout the force. These changes were accompanied by region specific training in intelligence and civil affairs schools schools.²⁷⁷ The onus for these changes, including the creation of new, culture-focused institutions came from

²⁷⁴Paolo G Tripodi and Kelly Frushour. *Marines at War: Stories from Afghanistan and Iraq*. 2016, p. 121; Dexter Filkins and John F. Burns. ‘Mock Iraqi Villages in Mojave Prepare Troops for Battle’. *The New York Times. Americas* (1st May 2006); McWilliams and Wheeler, *Al-Anbar Awakening: Volume 1, American Perspectives*, p. 148; Johnson, *The Marines, Counterinsurgency, and Strategic Culture*, p. 236; Collins, ‘Military Innovation in War’, p. 133; Fitzgerald, *Learning*, pp. 152–153.

²⁷⁵William Knarr et al. *Al Sahawa—The Awakening Volume III-A: Al Anbar Province, Western Euphrates River Valley, Area of Operations Denver—Al Qaim*. Alexandria, VA: Institute for Defense Analysis, Nov. 2015, A4-A4; Collins, ‘Military Innovation in War’, p. 134.

²⁷⁶Serena, *A Revolution in Military Adaptation: The US Army in the Iraq War*, pp. 80–81.

²⁷⁷Ben Connable. ‘All Our Eggs in a Broken Basket: How the Human Terrain System Is Undermining Sustainable Military Cultural Competence’. *Military Review* (Apr. 2009), pp. 57–64.

top and from bottom, with (junior and field) officers and NCOs pushing for courses, language training, cultural awareness.²⁷⁸

In the Army's premier schools for future leaders, counterinsurgency made its way back onto the curriculum a bit more slowly.²⁷⁹ Despite the efforts of both Wallace and Petraeus, as late as 2006, Army majors going through the program spent only a thirty hours or so on direct counterinsurgency education.²⁸⁰ One complicating factor was that these schools are designed to prepare the Army's future leaders for the full range of potential scenarios (not just current operations) in which they may expected to lead the Army, and the Department of Defense had been expertly slow-rolling any attempts, from above and below, to officially modify national military strategy away from Rumsfeld's transformation vision.²⁸¹ One high-level Pentagon political appointee, for example, delayed issuing a mandated directive laying out that stability and non-lethal operations could be given the same priority as combat missions for training, doctrine, and resources *by almost a year*, from December 2004 to November 2005.²⁸² Between the Army's overarching need to produce officers prepared for every kind of war and contingency and the Pentagon's continued insistence on the transformation vision until as late as the 2006 Quadrennial Defense Review, incentives to substantially modify the curriculum towards the current war were mixed. As a result, until the official strategy was modified, adaptive changes were primarily incremental: in 2006, for example, the Command and General Staff College (CGSC) added a chair for counterinsurgency, but also one for "transformation".²⁸³ Thus, where the Army's training program was susceptible to strong organizational pressures but not strong environmental pressures, it was slow to change, un-

²⁷⁸Johnson, *The Marines, Counterinsurgency, and Strategic Culture*, p. 236.

²⁷⁹Collins, 'Military Innovation in War', pp. 135–136.

²⁸⁰Further research is needed on when exactly various curricular changes were made in Army higher education. Daniel S. Roper and Richard L. Kiper. 'The Rediscovery of Doctrine: The US Army and Counterinsurgency'. *Security Challenges* 6.1 (2010), pp. 23–42; Collins, 'Military Innovation in War' assert that changes were not made until 2006 or 2007, but are contradicted by more authoritative sources Andrew Feickert. *Does the Army Need a Full-Spectrum Force or Specialized Units? Background and Issues for Congress*. Congressional Research Service, 18th Jan. 2008, p. 22, which at least emphasize relative growth earlier on, even if counterinsurgency education did peak in 2008 or 2009. Petraeus' efforts appear to have been more successful, though it is difficult to say whether they were due to greater focus or to the groundwork laid by Wallace. At one point, he took the nearly unprecedented step (supported by frustrated course-participants who were veterans of Iraq) of closing the school for three weeks to redesign the curriculum. (Collins, 'Military Innovation in War', p. 166) In 2006, counterinsurgency apparently went from 5-10% of the curriculum to 40% (Kelvin D. Crow. *U.S. Army Combined Arms Center and Fort Leavenworth Annual Command History 2006*. Fort Leavenworth, KS: Combined Arms Center, 2007. URL: https://usacac.army.mil/cac2/cgsc/repository/CGSC_history.pdf).

²⁸¹Fitzgerald, *Learning*, pp. 151–153.

²⁸²Collins, 'Military Innovation in War', p. 138. This after the independent commission report on which the directive had been based had stressed acting with "greater than usual speed."

²⁸³Crow, *U.S. Army Combined Arms Center and Fort Leavenworth Annual Command History 2006*.

til environmentally-driven changes elsewhere in the ecosystem changed those organizational pressures.

During the war in Iraq, the military's force generation process led to a variety of pre-deployment training programs which blur the line between formal and informal innovation. Unit commanders were responsible for designing and overseeing the training work-up for their units, and in many instances, they provided resources, tools, or opportunities that relied on local initiative, not high-level command guidance, working primarily because field commanders were highly motivated to maximally prepare their units to adapt quickly to the fight. Commanders organized seminars with American law enforcement personnel on intelligence-gathering and operating in hostile areas against criminal organizations.²⁸⁴ Units scoured after-action reports and the writings of the Center for Army Lessons Learned for actionable information and TTPs that worked.²⁸⁵ They ran trainings so that their soldiers would not simply be weapons-qualified but also trained in close-quarter marksmanship and IED identification.²⁸⁶

While the Army's training apparatus began swinging into action by early 2004, General Casey was still concerned about the training and mindset of the officers serving under him. They may not have gone through proper training (for various administrative reasons), they might be augmentees or even activated reservists who needed training up, and, even if they had received training, they may not have been aware of our bought into General Casey's vision. And so, General Casey set up the "Phoenix Academy" at Taji, Iraq in early 2005 for those serving as advisors or on Military Transition Teams (MTTs). Recognizing the still-spotty nature of pre-deployment training for counterinsurgency, he set up the "COIN Center for Excellence" or "COIN Academy" in Taji, Iraq in November 2005, for almost every single officer deploying down to the Company level to receive several days of training on counterinsurgency and briefings about Iraq and about MNF-I's strategy.²⁸⁷ General Casey himself went to every single American division and brigade to brief their officers and staff on his vision and strategy.²⁸⁸ Population-centric approaches and the need for a light touch were

²⁸⁴Russell, *Innovation*, p. 70.

²⁸⁵*Ibid.*, p. 147.

²⁸⁶Serena, *A Revolution in Military Adaptation: The US Army in the Iraq War*, p. 81.

²⁸⁷Collins, 'Military Innovation in War', p. 153; Casey, *Strategic Reflections*, p. 164; David H. Ucko. *The New Counterinsurgency Era: Transforming the U.S. Military for Modern Wars*. Georgetown University Press, 2009, p. 76; Thomas E. Ricks. 'U.S. Counterinsurgency Academy Giving Officers a New Mind-Set' (21st Feb. 2006).

²⁸⁸Marston and Malkasian, *Counterinsurgency in Modern Warfare*, p. 253.

repeatedly emphasized, in the context of MNF-I's goals of building up the legitimacy of the Iraqi state and destroying the perceived political roots of the insurgency.

Though this section has focused on combat arms, the need to train for counterinsurgency in Iraq drove changes in training across a wide range of military specialties: a partial list includes military intelligence, civil affairs, engineering, military police, forensic analysis, information operations, public affairs, and more. Adapting to the Iraqi battlefield was not merely a matter of learning the principles of counterinsurgency: building Human Intelligence (HUMINT) sources on the ground, attacking the IED network, using cell phone networks to find insurgents, running prisons full of jihadis, controlling the strategic narrative in both the West and within Iraq, and countless other similar minutiae required changes to how the Army trained and what the Army trained for. It also led to the creation of new and idiosyncratic training programs. While many specifically counter-IED informal adaptations were focused on the immediate detection and mitigation of IEDs, some were focused further “left of boom”. In 2006, alarmed by increasing IED and sniper attacks in Anbar, the Marines in-theater began experimenting with and working with the Marine Warfighting Lab on what became the “Combat Hunter” program, designed to provide the same kinds of skills that hunters-turned-Marines had provided in previous eras. Working with big game hunters and trained scouts, the Marines developed a short training program to teach combat profiling and battlefield awareness, aimed at giving troops on the ground techniques and instincts to detect IEDs, ambushes, snipers, and insider attacks, and to better “read” the general tactical environment. Using the combat profiling techniques that the Marines developed, the Army in 2011 created the Advanced Situational Awareness Training program to accomplish the same objectives.²⁸⁹

Doctrine Coming into the war in Iraq, counterinsurgency doctrine had mostly lain dormant since the end of the Cold War. The overarching doctrine on Stability operations considered insurgency movements only in brief, and the work on Foreign Internal Defense and counter-guerrilla warfare that was more relevant to dealing directly with insurgencies was siloed in the Special Forces community. After a late 2003 pre-deployment training focused on the nascent insurgency overseen by TRADOC revealed a lack of relevant counterinsurgency doctrine, Scott Wallace directed Clint Ancker (an advocate for a return to counterinsurgency in the

²⁸⁹Brett A. Clark and John Dick. ‘Combat Hunter: The Vernacular of Future Conflicts or Lessons Forgotten?’ *Marine Corps Gazette* (Nov. 2014).

1990s) and Lt. Col. Jan Horvath to prepare a draft.²⁹⁰ Horvath solicited advice across the military community and circulated a draft manual with scholars and servicemen across the military (including those in Iraq), and incorporated their feedback into the interim manual, FM 3-07.22 *Counterinsurgency Operations*, published in October 2004.²⁹¹ One criticism some have made of the interim manual is that it assumes that civilian partners will have the capacity to support the overall strategy; this was, however, in keeping with official US policy at that point in the war.²⁹² A stronger criticism is that the interim manual drew too much on classical theory (ignoring important contextual changes) and was relatively short, failing to address the many complexities of counterinsurgency in a readable way.

The publication of an interim manual did not slow the push for a full-fledged doctrine, one that would make a difference in orienting the Army towards counterinsurgency. Petraeus and Mattis, now the heads of the Army's and the Marine's (respectively) doctrine development agreed to push for new doctrine together; unusually, the manual would be co-published as Marine Corps Warfighting Publication 3-33.5. The doctrine-writing working group, formed in late 2005, had far greater reach and access to experts than was normally the case for CAC's quiet doctrine writers. Petraeus also moved the manual from being just another subset of Stability Operation (FM 3-07.22) to being its own, independent line of effort (3-24). After the first draft was ready in January 2006, Petraeus hosted a "Counterinsurgency FM Workshop" to go over the draft, and invited not only interagency partners but also academics, think-tankers, and journalists, beginning a year of consensus-building and marketing as intense as the actual doctrine-writing.²⁹³

Although not as celebrated as the publication of FM 3-24, the Army continued to update its other manuals for the counterinsurgency era. The 2008 edition of FM 3-0 *Operations* (the first update since 2001) placed a strong emphasis on counterinsurgency and stability operations, especially highlighting their differences from conventional warfare. In October 2008, the Army published an interim draft FM 3-24.2 *Tactics in Counterinsurgency*, which provides principles and lessons learned in high detail for counterinsurgency at the company, battalion, and brigade level.²⁹⁴ In general, manuals updated after 2006 were modified with lessons learned from Iraq and a greater focus on counterinsurgency.

²⁹⁰Jensen, 'Escaping the Iron Cage'.

²⁹¹Collins, 'Military Innovation in War', pp. 130–132.

²⁹²Fitzgerald, *Learning*, pp. 154–155.

²⁹³Crane, *Cassandra in Oz*, Ch. 5.

²⁹⁴It was published as official in April 2009.

Publications and Lessons Learned Diffusion

Just as it had with Vietnam, the Army's extended presence and battlefield frustrations spurred the creation of informal and formal tools for sharing knowledge and spreading lessons learned. These took the form of an increasing emphasis on counterinsurgency in the military's internal discourse and of the founding and resourcing of a number of efforts designed to spread knowledge and bring lessons learned into other Army processes in an intentional way.

First, dissatisfaction with the doctrine, training, and concepts they had been able to employ in Iraq in 2003-2004 and a desire to improve increasingly drove conversations in the Army's junior officer corps, and this was encouraged by the Army's "thought leaders". In March 2004, Wallace brought in a new editor to revivify *Military Review*, with a focus on the war the Army was waging.²⁹⁵ From 2004-2006, references to and articles about counterinsurgency would more than double each year; this trend was mirrored in other military publications.²⁹⁶ This interest in counterinsurgency was accompanied by a similar resurgence in interest in and writing about Vietnam, not only as an outcome to be avoided at all costs but also as a source of inspiration and historical experience.²⁹⁷

A number of influential articles and papers published in late 2004 and 2005 served as a kind of informal alternative to an official counterinsurgency doctrine. Kalev Sepp's article "Best Practices in Counterinsurgency" (which from an MNF-I report that Casey insisted be published), Petraeus' "Learning Counterinsurgency: Observations from Soldiering in Iraq" (based on a briefing he also toured around Washington in fall 2005), Chiarelli and Michaelis' "Winning the Peace: The Requirement for Full-Spectrum Operations", British Brigadier Aylwin-Foster's "Changing the Army for Counterinsurgency Operations," Kilculen's "Countering Global Insurgency", and others circulated widely amongst Army officers preparing to deploy to Iraq and looking for guidance.²⁹⁸

Between the appetite from the field and the conviction by Army and Marine training leadership (and MNF-I) that it needed to equip deploying units for what they would find in Iraq, a diverse array of efforts were undertaken by various leaders and organizations to address perceived knowledge gaps. In November 2004, the Marines disseminated an "Iraq

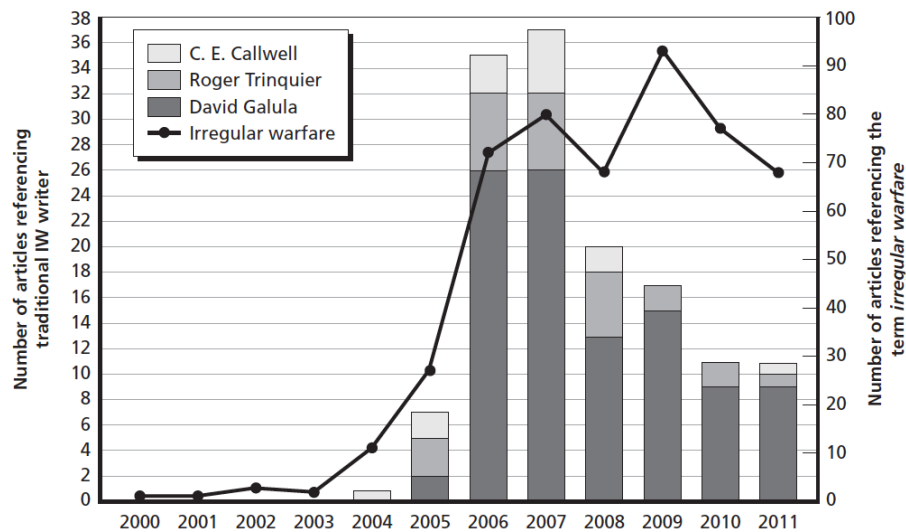
²⁹⁵Collins, 'Military Innovation in War', p. 135.

²⁹⁶See *Military Review* Annual Research Indices (2004-2006) and Connable, *Embracing*, p. 20. See also Figure 4.7.

²⁹⁷Fitzgerald, *Learning*, pp. 163-164.

²⁹⁸Burton and Nagl, 'Learning as We Go'; Ucko, *The New Counterinsurgency Era*, pp. 74-78; Jensen, 'Escaping the Iron Cage'.

Figure 4.7: References to counterinsurgency in Select Military Journals



Publications measured include: *Army*, *Army Times*, *Armed Forces Journal*, *Infantry*, *Joint Force Quarterly*, *Leatherneck*, *Marine Corps Gazette*, *Military Intelligence Professional Bulletin*, *Military Review* and *National Guard* (Ben Connable et al. *Modeling, Simulation, and Operations Analysis in Afghanistan and Iraq: Operational Vignettes, Lessons Learned, and a Survey of Selected Efforts*. In collab. with Rand Corporation, National Defense Research Institute (U.S.) and International Security and Defense Policy Center. Santa Monica, CA: RAND Corporation, 2014, p. 20).

Culture Smart Card”, a pocket-size pamphlet on basic information on Iraqi society.²⁹⁹ While it is difficult to state exactly how widespread they became, books on classical counterinsurgency from the era of Algeria, Malaya, and Vietnam were picked up by and disseminated to interested officers. The Chief of Staff of the Army, General Peter Schoomaker, (who wrote the foreword to a 2005 reprinting), handed out dozens copies of Nagl’s *Learning to Eat Soup with a Knife* to high-ranking officers and personally gave General Casey a copy as he prepared to deploy to command MNF-I in May 2004.³⁰⁰ Conferences on counterinsurgency irregular warfare held from 2004 on an ad hoc basis by the Army, the Marines and various think tanks served not only to disseminate information about counterinsurgency throughout the policy-making, think tank, and mid-to-senior military officer community, but also to forge connections amongst the nascent COINdinistas.³⁰¹ Alongside the resurgence in interest in the *Small Wars Manual*, in early 2005, Mattis mandated the publishing of a “Small-Unit Leaders’ Guide to Counterinsurgency”, with examples drawn from the British, French, and

²⁹⁹Headings include “Clothes/Gestures”, “Cultural Groups”, and “Cultural Customs” (Marine Corps Intelligence Activity. ‘Iraq Culture Smart Card’. GTA 24-01-003. Nov. 2004. URL: https://www.acq.osd.mil/dpap/ccap/cc/jcchb/Files/Topical/COR/guides/gta_24-01-003.pdf).

³⁰⁰Kaplan, *The Insurgents*, p. 94; Fitzgerald, *Learning*, pp. 150–151.

³⁰¹Jensen, *Forging the Sword*, pp. 126–127.

Australian experiences, as well as from the Marines' own history in the "Banana Wars" and the CAP in Vietnam.³⁰² As with Vietnam, military-sponsored research flourished. RAND, for example, hired a new chair for counterinsurgency in June 2005, and began publishing a flood of counterinsurgency-related work in early 2006.³⁰³

Besides the Army Culture Center at TRADOC and the Marines' Center for Advanced Operational Culture Learning, a number of research centers were founded to analyze and disseminate best practices for Iraq. The Phoenix and COIN Academies that Casey had set up in Taji, Iraq also served to gather and disseminate formal and informal lessons learned. In May 2006, the COIN Academy published a *Counterinsurgency Handbook*, giving a cultural and historical background to the insurgency, highlighting ways in which counterinsurgency and foreign internal defense/advising differed from conventional warfare (especially warning about the problems that overly "kinetic" operations can cause), and providing best practices on organizing intelligence for counterinsurgency at the tactical level.³⁰⁴ In 2006, the Army's Petraeus and the Marine's Mattis co-founded a Counterinsurgency Center co-located with the Command and General Staff College at Fort Leavenworth, which aimed to shape the writing of a permanent counterinsurgency doctrine, to integrate and spread lessons learned, and to otherwise advance counterinsurgency principles in military discourse.³⁰⁵

These centers and initiatives contributed to, amplified, and borrowed from the military's official "lessons learned" process. In 1985, as part of the overall TRADOC reforms, the Army established the Center for Army Lessons Learned (CALL), specifically to ensure that lessons from exercises at the National Training Center could be pushed across the force.³⁰⁶ CALL members entered Iraq with the initial invasion force and stayed their for the duration, publishing hundreds of detailed handbooks and newsletters based on interviews and reviews of After-Action Reports from units on a classified website on the Army's network, with aim of providing nearly real-time feedback on TTPs.³⁰⁷ As with Vietnam, a hunger for "lessons" quickly emerged, as those responsible for training units for Iraq (either their commanders or those running schools/training facilities) glommed on to whatever information sources they

³⁰² Johnson, *The Marines, Counterinsurgency, and Strategic Culture*, p. 234.

³⁰³ RAND Office of Media Relations. *Bruce Hoffman Appointed to RAND Corporation Chair in Counterterrorism and Counterinsurgency*. RAND, 9th June 2005. URL: <https://www.rand.org/news/press/2005/06/09.html>.

³⁰⁴ Long, *Doctrine of Eternal Recurrence*.

³⁰⁵ Crow, *U.S. Army Combined Arms Center and Fort Leavenworth Annual Command History 2006*.

³⁰⁶ Vetoek, *Lessons Learned*, p. 125. The Marine Corps Center for Lessons Learned did similar work.

³⁰⁷ Wright and Reese, *The United States Army in Operation Iraqi Freedom, May 2003-January 2005*, p. 570.

could acquire. While this could give "lessons learning" a piecemeal or patchwork character, that also reflected the complexity and diverse of the Iraqi environment, both in terms of geography and in terms of the missions and roles for which Army officers were preparing. The internet transformed Army lessons learned, allowing soldiers to search easily through past lessons learned, and (after 2006) to submit lessons learned to CALL at any time.³⁰⁸

In this, they were joined by one of the most innovative capabilities stood up in Iraq: the Asymmetric Warfare Group (AWG). Emerging as an independent organization as an Army Special Mission unit in 2006 out of a group that had operated since December 2003 within the Joint IED Task Force, AWG aimed to address the IED problem at the tactical level, by finding and disseminating "best practice" TTPss based on what had worked in Iraq; almost immediately, they broadened their focus from counter-IED tactics to anything and everything needed to fight and win on the ground. Early AWG teams consisted of ex-Special Forces soldiers (some of the Army's best) serving as contractors who would embed with regular Army units in the field and both observe what they did that worked and help them to improvise solutions to problems they encountered; later teams mixed ex-Special Forces contractors with soldiers selected from a special assessment course.³⁰⁹ They would then publish what they learned for inclusion in new TTPss and brief deploying units directly with Training Advisory Teams.³¹⁰

AWG's focus was relentlessly detailed. They aimed not to generate new strategy or solutions to the complex political problems of Iraq but to cycle through incremental adaptations as quickly as possible and to ensure that American soldiers never had to learn a costly lesson twice. They structured their tasks around the enemy and his activities, identifying how insurgent forces went about their business and how American forces might counter them. For example, in early 2004 they figured out that insurgents had used an electric doorbell as an IED triggering device; the coalition soon began intercepting loads of doorbells being imported from Syria, and looking for them in house searches as part of a list of potential IED component materials. They were some of the first to disseminate lessons learned about organizing for intelligence at the company level. They developed a methodology for rapidly

³⁰⁸Robert T. Foley, Stuart Griffin and Helen McCartney. "Transformation in Contact": Learning the Lessons of Modern War'. *International Affairs* 87.2 (1st Mar. 2011), pp. 253–270.

³⁰⁹As a Special Mission unit, the AWG has much greater control over its personnel, similar to the Army's Delta Force.

³¹⁰There is next to nothing unclassified published about the AWG. This section is based on Collins, 'Military Innovation in War' Chapter Four, and unpublished internal Army documents.

“exploiting” sites (like houses searched or caches found) for document collection and intelligence. The AWG also partnered with the Applied Physics Laboratory at Johns Hopkins to publish a number of workbooks on more complex vulnerabilities that brought together lessons learned, interagency conferences, and scenario exercises.

Because the AWG was so different from anything in the Army’s official repertoire (though, of course, it was similar to forgotten organizations like ACTIV), it faced organizational hurdles at every turn. These included everything from the obvious (obtaining funding) to the arcane (not having a Table of Organization and Equipment in conformance with doctrine). However, the active backing of the Chief of Staff of the Army (CSA) in the early years and the powerful vice-CSA (along with the Deputy Secretaries of Defense) until 2008 made a decisive difference in protecting the stand up of the organization.

Experimentation, Testing, and Rapid Procurement

As in Vietnam, the military found that its normal procurement processes were inadequate to adapt as quickly as necessary to the environment in Iraq, and so quickly spun up a number of ad hoc experimentation, testing, and rapid procurement agencies.

One early program emerged from legally unique position of the United States in Iraq: operating as the sovereign government of Iraq, with access to Iraqi bank accounts that had been frozen and legal authority over almost a billion dollars of foreign currency captured during the invasion.³¹¹ Thus, the military through the CPA was able to create the Commander’s Emergency Response Program (CERP) in May 2003 without Congressional budgetary approval. Initial usages included purchasing generators and air conditioners for Iraqi municipal buildings and hospitals, repairing jails and police stations, fixing sewage and water systems, and paying for Iraqis to clear up debris. By October, coalition forces had completed 11,000 projects and spent over \$75 Million Dollars. This program provided commanders at the tactical level with money to use to address whatever immediate problems they found in their environment. It proved crucial for Petraeus’ approach to counterinsurgency (he used the program as commander of the 101st in Mosul in 2003, and later advocated a “money as a weapons system” approach). The captured money was a critical stop-gap between the invasion and Bush’s late 2003 emergency supplemental request to Congress, which included

³¹¹James Dobbins, Coalition Provisional Authority and International Security and Defense Policy Center, eds. *Occupying Iraq: A History of the Coalition Provisional Authority*. Santa Monica, CA: RAND Corp, 2009.

several billion dollars in reconstruction expenses. By radically decentralizing and streamlining disbursements, and putting them under the control of military officers concerned with every day operations, the CERP helped to fund tens of thousands of small projects with tremendous flexibility, bypassing some of the flaws of normal programmed reconstruction or development projects (which also face incentives to fund a few, large programs).³¹²

The IED threat and the military's lack of preparedness for a network-structured enemy led to the creation of a number of initiatives to find, test, and field solutions. While much of the information is still classified, from at least mid-2003 ORSA and other analysis personnel affiliated with CJTF-7/MNF-I oversaw research activities related to rapidly understanding and adapting to the battlefield, usually working with reachback support organizations: early studies included testing Lightweight Counter-Mortar Radar, analyzing re-invented gun trucks, and calculating the number and type of available counter-IED devices were needed to protect convoys.³¹³ But most significantly, protean efforts in the intelligence community and the military coalesced into the ad hoc Joint IED Defeat Task Force (JIEDDTF)), which became the engine not only for defeating IEDs but also for a number of other rapid procurement efforts (including the AWG examined earlier). The IED Task Force provided three vital ingredients: money, expertise, and flexibility. With an urgent and difficult mission, the Task Force's leaders were empowered to take a "let a thousand flowers bloom" approach, and the seeds they planted not only transformed the fight against IEDs but also helped create the ad hoc organizations which boosted adaptability, development of new TTPs, and organization for intelligence across the American war effort.

Many of the initial experimentation, testing, procurement, and dissemination processes in Iraq were born out of counter-IED efforts, and were then adapted more broadly to drive learning and adaptation as part of the overall mission. While a full examination of American counter-IED efforts would be its own chapter-length case study, even a brief analysis reveals the breadth and depth of adaptation which the IED threat initially triggered and which the broader challenges of counterinsurgency sustained. Besides the AWG and REF (examined below), hundreds of task forces, research studies, and experimental systems were born out of the effort; a table of JIEDDO's formal programs alone runs to twenty pages.³¹⁴

³¹²Mark Martins. 'No Small Change of Soldiering: The Commander's Emergency Response Program (CERP) in Iraq and Afghanistan'. *Army Lawyer* 2004 (2004), p. 1.

³¹³Center for Army Analysis, *Deployed*, p32-2.

³¹⁴Martin et al., *Assessment of Joint Improvised Explosive Device Defeat Organization (JIEDDO) Training Activity*.

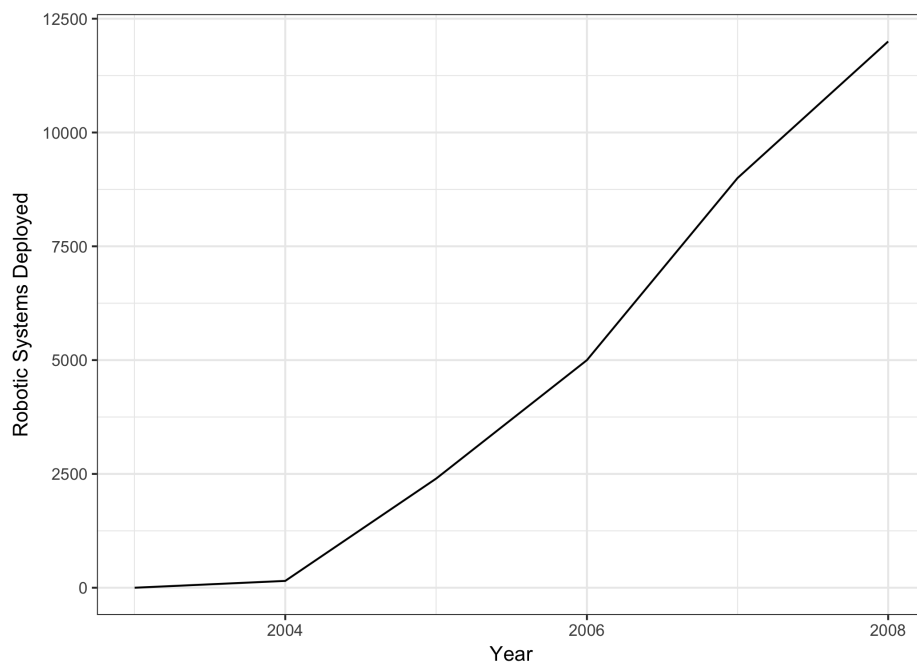
The earliest roots of the IED Task Force (transitioned to a full-fledged organization as the Joint IED Defeat Organization (JIEDDO) in 2006) lay in the rapid toll that IEDs took on American soldiers, and the near-complete lack of preparedness in the Army to deal with the attacks, from a lack of armor on military transports to a lack of forensic manpower and know-how to track bomb-builders. In Summer 2003, CENTCOM commander John Abizaid called for a “Manhattan Project-like effort” to rapidly come up with solutions to the new IED threat. The problem is often broken down in terms of distance from “boom” (a hypothetical IED detonation). Immediately “left-of-boom” efforts would be those designed to foil the actual detonation of a device (radio jammers, Rhino thermal triggers) and to help convoys spot and avoid devices. Further out “left of boom” efforts included ways to “attack the network” of financiers, bomb-makers, and IED emplacements through intelligence-gathering and counter-network operations. Immediately “right-of-boom” programs tried to improve survivability through improved vehicle and personal armor and to better train soldiers in how to react to an attack. Further “right-of-boom” were developments aimed at improving forensic exploitation and data-gathering on IED strikes. For its budgeting and organizing purposes, the Department of Defense organized its counter-IED efforts into three buckets: “train the force” (developing TTPs and training), “attack the network” (counter-network operations), and “defeat the device” (technical solutions to reduce IED effectiveness). It spent more than half of its budget on technical solutions to “defeat the device”, about a quarter on “attacking the network”, and the remainder on “training the force”.³¹⁵

JIEDDO’s primary initial focus was proliferating technical solutions to the IED threat (see Figure 4.8). They deployed well over 40,000 jammers to Iraq, distributed the Rhino system, provided up-armoring for Hummvees, built and deployed thousands of specialized route-clearance vehicles, and created and equipped tens of thousands of other gadgets useful against particular threats, like laser dazzlers used to force suicide car bombers off-target.³¹⁶ They substantially bolstered the Explosive Ordnance Disposal (EOD) community and developed new tools for remotely defusing devices (See Figure 4.8). But JIEDDO also trained most new units deploying to Iraq and equipped them with tools. One of the most popular items (produced in the tens of thousands) was the “Visual Language Translator for IED Detection”

³¹⁵*The Joint Improvised Explosive Device Defeat Organization: DOD’s Fight against IEDs Today and Tomorrow.* This is not to say that the impact was distributed in this way. Many of the “train the force” efforts were simple and low-tech, while many technical solutions were essentially moonshots.

³¹⁶Adam Higginbotham. ‘U.S. Military Learns to Fight Deadliest Weapons’. *Wired* 18.8 (28th July 2010).

Figure 4.8: Number of Robotic Systems in Use by U.S. Forces, 2003-2008



Data from P. W. Singer. *Wired for War: The Robotics Revolution and Conflict in the Twenty-First Century*. New York, NY: Penguin Books, 2010, p. 32. 2007 numbers based on an estimate.

for soldiers to use with local Iraqis. On a simple printout card were cartoon images of various popular IED emplacement sites (flowerpots, cars, animal carcasses), cartoon currency implying a reward, and a simple phrase transliteration: “Weh-nil kun-boo-leh” (Where is the bomb?).³¹⁷ While many of JIEDDO’s experiments necessarily failed (and some got mired in politics, such as a useless jamming system built in an influential congressman’s district), the overall result was an outpouring of support for the warfighter that saved lives on the battlefield.³¹⁸ Moreover, some initial experiments proved valuable later in the war. Programs that made little difference at first, like a biometric database for IED forensic data and a expensive persistent surveillance effort were later combined with other new techniques to finally enable “attack the network” to fulfill its promise.³¹⁹

The Joint IED Defeat Task Force (IED) needed to structure itself for rapid adaptation and flexibility not only to find solutions quickly for an urgent problem but to always be working to adapt to the highly dynamic IED environment. IED-makers proved as resourceful as the

³¹⁷Rick Atkinson. “There Was a Two-Year Learning Curve . . . and a Lot of People Died in Those Two Years”. *Washington Post* (1st Oct. 2007).

³¹⁸Martin et al., *Assessment of Joint Improvised Explosive Device Defeat Organization (JIEDDO) Training Activity*.

³¹⁹Shell, ‘How the IED Won’.

coalition, and had their own knowledge-sharing network and adaptive cycle. Thus, until the coalition improved its ability to “attack the network” (around 2006), progress against IEDs measured in terms of emplaced and exploded devices and American casualties was essentially flat (even if progress was made by some measures: the numbers of IEDs per casualty quadrupled by 2007). Continuous American improvement was matched by continuous insurgent innovation.³²⁰ IED attacks fell off most significantly in the wake of the Anbar Awakening and the Surge, as a number of insurgent groups (non-AQI Sunni militias and the Muqtada al-Sadr’s Shia militia forces) either switched sides or took an operational pause.³²¹

JIEDDO’s efforts were part of a massive push towards rapid acquisitions to equip the American military for the environment it found in Iraq. While both the Defense Department and the Army had existing rapid procurement processes whereby commanders could submit urgent operational needs, they did not have any agency or group specially equipped to handle these requests or to proactively work with troops in the field to rapidly solve operational problems; in addition, even the “rapid” process was paper-work intensive.³²²

Due to the environmental pressures of Afghanistan and Iraq, the Defense Department rapidly upgraded and streamlined its rapid procurements systems.³²³ In particular, the Joint Rapid Acquisitions Cell (founded in 2004) focused on speeding up the Urgent Operational Needs process and field-oriented procurement. This was aided by the creation in 2005 of the Joint Urgent Operational Needs process, which served to cut the services out and allow Defense Departments acquisitions bureaucrats to work directly with Combatant Commanders.³²⁴ The most famous program managed by the cell was the Mine-Resistant Ambush Protected (MRAP), a heavy-duty alternative to the Hummvee requested with increasing urgency since 2005. Due to its size and high risk levels, it was managed as an accelerated procurement program which, on the one hand, frustrated field commanders not used to the vagaries of a major technology program and, on the other hand, raised concerns about cost, risk, and value

³²⁰Francesco Trebbi et al. *Insurgent Learning*. Working Paper 23475. National Bureau of Economic Research, June 2017. URL: <http://www.nber.org/papers/w23475>.

³²¹Shell, ‘How the IED Won’.

³²²This dissertation is far too short to get into the specific details of defense acquisitions policies and processes. See Harvey M. Sapolsky, Eugene Gholz and Caitlin Talmadge. *US Defense Politics: The Origins of Security Policy*. New York, NY: Routledge, 2017; Lawrence R. Jones et al. *Arming America at War: A Model for Rapid Defense Acquisition in Time of War*. IAP, 2010; Steve Stark and Susan L Follett. *Army Acquisition: A Brief History*. 7th Oct. 2014. URL: <https://asc.army.mil/web/access-army-acquisition-a-brief-history/> for an introduction.

³²³Eileen P. Whaley and Dana Stewart. *Path from Urgent Operational Need to Program of Record*. Defense Acquisition University, Apr. 2014.

³²⁴Kollars, ‘Military Innovation’s Dialectic’; Michael W Middleton. ‘Assessing the Value of the Joint Rapid Acquisition Cell’. MA Thesis. Monterey, CA: Naval Postgraduate School, Dec. 2006.

in the defense acquisitions community (in the end, political pressure had the final say).³²⁵

The Army, for its part, began the Rapid Equipping Force (REF) and the Rapid Fielding Initiative (RFI) even before the invasion of Iraq, as soldiers arriving in Afghanistan found themselves materially unprepared for many challenges, especially clearing IEDs and booby traps out of Taliban-occupied caves. Col. Bruce Jette, a high-ranking staffer with an MIT physics PhD working in the Pentagon on future development and acquisitions, took a bet from the Vice-CSA (with whom he met weekly for his work) that he could develop a robot using off-the-shelf technology that improved on the state of the art at the time: a soldier throwing a grappling hook into a cave mouth to catch trip wires. With a shoestring budget and contacts from his work on the future-oriented Land Warrior system, Jette put together a prototype, field-deployable robot and flew over to Afghanistan with it; within a week, they had reduced American risk and tripled the number of caves the infantrymen they worked with could clear in a patrol. When he got back to brief the Vice-CSA, he was ordered to stand up an organization to do this kind of work on an Army-wide scale, and in November 2002, the REF was born. Its mission (later sketched out by the CSA on a napkin), was to “equip, insert, and assess”: equip soldiers with solutions, insert and evaluate new technologies, and assess what was and wasn’t working. Speed was paramount; the goal was to provide “51%” solutions as quickly as possible, and then to evaluate them for future improvement. The most promising programs with wider applicability could then be rolled into conventional acquisitions. REF’s successes include the PackBot (first IED robot), the first mass-produced counter-IED up-armor kits, an acoustic sniper-location system, and the Raven (first man-portable military drone).³²⁶

Drawdown

In sharp contrast to Vietnam, the Iraq War drawdown was most shaped by two factors: 1) the increasing importance of the war in Afghanistan and the continuation of efforts against terrorism worldwide and 2) the relatively small degree of postwar resource demobilization.

Apparent successes in Iraq made continuing setbacks in Afghanistan increasingly difficult to ignore for military leaders and politicians. Moreover, incoming President Barack Obama had repeatedly made clear that, in contrast to Iraq, Afghanistan was a necessary war for

³²⁵Krepinevich and Wood, *Of IEDs and MRAPs: Force Protection in Complex Irregular Operations*.

³²⁶Alicia B Baldauf and Jason Rehman. *Increasing Responsiveness of the Army Rapid Acquisition Process: The Army Rapid Equipping Force*. Monterey, Calif: Naval Postgraduate School, Nov. 2016, p. 125.

the United States, and one he intended to wage in an intelligence fashion. And so, after a 2009 policy review, the White House set population-centric counterinsurgency as the official strategy for American efforts in Afghanistan. As a result, many units and organizations drawing down from Iraq prepared to deploy to Afghanistan, where they would face deceptively similar problems. The important thing for our purposes is the strategic environment during the immediate aftermath drawdown was seen as essentially the same as that of Iraq, with many of the same organizational needs.³²⁷ While this assumption has begun to change in the last few years (addressed in the Conclusion), at the time of Iraq drawdown, selection based on strategic match with Afghanistan was essentially nil.

Due to ongoing contingency operations, including the war in Afghanistan, the US military after Iraq faced perhaps the smallest drawdown in US military history, with budgets and manpower allocations declining marginally; about 20% between 2010 and 2015.³²⁸ But the post-Iraq selection filter was also affected by a fluke of historical circumstance. For reasons of convoluted fiscal politics, the Congress passed a poison-pill measure (called sequestration) that automatically slashing discretionary spending (including for defense) beginning in 2013 unless a major deal was reached to deal with the national debt. When no deal was reached, sequestration took effect. However, as no politician wanted to be seen as harming the troops, the Congress used special appropriations through the contingency fund (which was exempted from sequestration) to keep the military functioning. In a direct reversal of the normal situation, Congressional politics after 2012 resulted in a drawdown that affected *the base budget* and *not* the contingency budget. Between 2011 and the sequester, contingency funding had halved, but it leveled off after it became an emergency budgetary relief valve (See Figures 4.9 and 4.10). It was during this period that many of the agencies profiled below made the jump to permanency.³²⁹

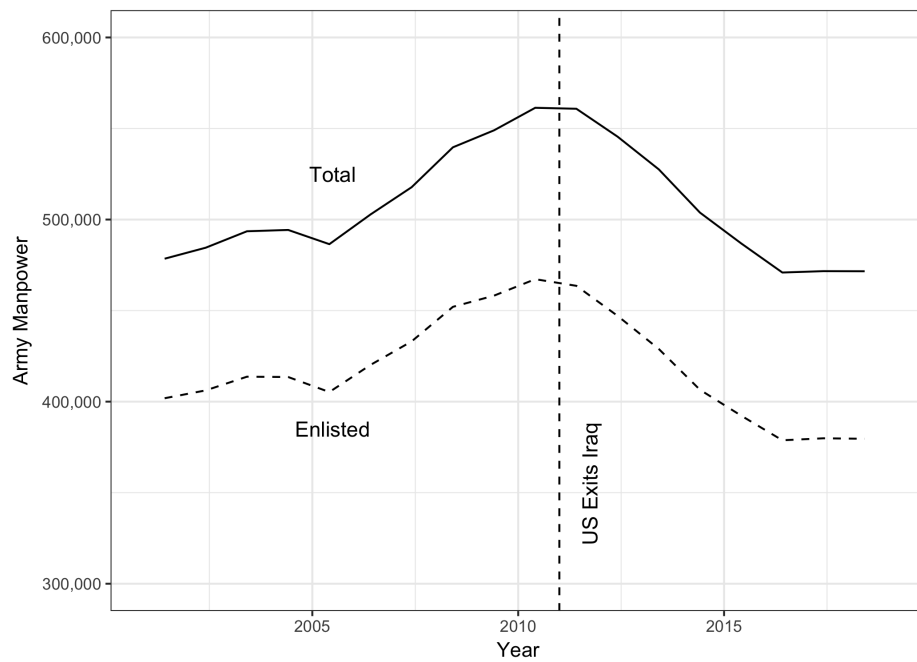
The various counter-IED efforts provide a strong example of the Army learning the way it is “supposed” to, including institutionalization. As the Army prepared to come home from Iraq and ramp up activity in Afghanistan, ad hoc capabilities (especially those affiliated with MNF-I) were increasingly able to establish themselves (and make the case to Army leader-

³²⁷Karl W. Eikenberry. ‘The Limits of Counterinsurgency Doctrine in Afghanistan’. *Foreign Affairs* (September/October 2013).

³²⁸See Figure 4.9 and 4.10.

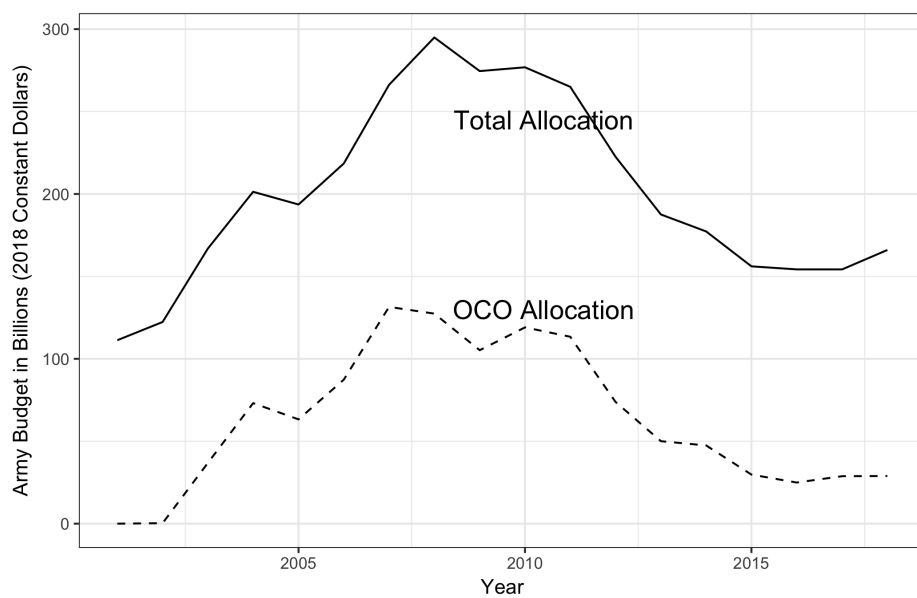
³²⁹Dylan Matthews. *The Sequester: Absolutely Everything You Could Possibly Need to Know, in One FAQ - The Washington Post*. 20th Feb. 2013. URL: https://www.washingtonpost.com/news/wonk/wp/2013/02/20/the-sequester-absolutely-everything-you-could-possibly-need-to-know-in-one-faq/?utm_term=.67dea6227bbd.

Figure 4.9: US Army Active Duty Personnel, 2001-2018



Data from the Defense Manpower Data Center, Office of the Secretary of Defense, U.S. Department of Defense.

Figure 4.10: US Military Budget, 2001-2018



Data from the Office of the Under Secretary of Defense (Comptroller). National Defense Budget Estimates for FY 2018. Aug. 2017.

ship and to Congress) as permanent lines of efforts in “the Long War.” Whereas counter-IED efforts in Vietnam had targeted crude and idiosyncratic devices, those in Iraq engaged with sophisticated devices that emerged as part of global criminal and terrorist knowledge networks and supply chains that were not likely to go anywhere any time soon.³³⁰ Moreover, unlike Iraq, Afghanistan was a NATO mission, with a rotating cast of partners who needed training. New joint doctrine was written about managing the IED threat which encapsulated many lessons learned (FM 3-15.1). Between the clear short-term need (for Afghanistan and the broader Global War on Terror) and the introduction of new agency partners, institutionalization processes kicked in in a big way (aided by Defense Department agencies and contractors hoping to re-tool for the era of asymmetric conflict). Between the threat of terrorism and emerging Russian tactics in Ukraine, the counter-IED mission seems to have broadly made it through the first demobilization filter. Some elements of institutionalization are fragile (home station IED training) and subject to disruption with strategic change; others (especially training centers, centers of excellence, and similar organizations) are likely to be more difficult to uproot.

But, as we will see below, examples of this institutionalization process occurring as “expected” by many theories of military learning are scarce: organizational forgetting processes are already well at work.

Doctrine and Training In Iraq, the US military’s adaptability benefited from the well-run and stable doctrine and training system that had emerged out of the wreckage of the Vietnam War. That system, while it ensures some continuity, also ensures that the US military will continue to proactively change its doctrine and training to fit the strategic environment it finds itself in, as understood not only by senior military leaders but also by civilian policymakers. Since 2017, the American defense community has been increasingly focused on “near-peer competitors”. The latest National Defense Strategy included no references to counterinsurgency, and the only reference in the Army’s response document was the unsupported assertion that the Army would continue to prepare for counterinsurgency, even as the rest of the Army’s strategy focused on modernizing and training to meet the threat of near-peer competitors.³³¹

³³⁰Fatima Bhojani. ‘How ISIS Makes IEDs’. *Foreign Affairs* (2nd Mar. 2016).

³³¹Department of Defense. *Summary of the 2018 National Defense Strategy of the United States*. Washington, DC: Department of Defense, 2018. URL: <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>; Mark A. Milley and Mark T. Esper. *The Army Strategy*.

The current CSA, General Milley, has repeatedly expressed concern that the focus on counterinsurgency has damaged the Army's ability to fight and win conventional wars, and has made numerous adjustments to refocus the Army towards "lethality".³³² The National Training Center has substantially reverted to training units for the "high end fight", and that has returned as the training emphasis throughout Army education (except for units slotted to deploy to Iraq and Afghanistan) and in procurement decisions. The aim is to pivot from a generation of officers that *only* knows counterinsurgency to one prepared for a conventional war.³³³ As had been the case after Vietnam, the lack of readiness in armor and artillery units was seen as emblematic of a need to re-focus on soldierly skills.³³⁴

One possible exception to this trend lies in the creation of Security Force Assistance Brigades (SFABs). At the height of counterinsurgency, John Nagl had called for the creation of an "Advisor Command", in part to institutionalize counterinsurgency.³³⁵ While at first blush, the SFABs (under a new one-star Security Force Assistance Command) could perform a similar function, there are reasons to doubt their longevity. The units were created not out of a commitment to counterinsurgency, but for the opposite reason: to end the practice of deploying combat arms units in advisory or counterinsurgency roles. General Milley explained his motivations this way: "I want to stop ripping apart conventional brigade combat teams, which is what we have been doing for 16 years. We only have X amount of these brigade combat teams and if we take a whole bunch of them and we shred them, take their leadership apart, and they go through an exercise and we call them 'advisers,' then you're essentially reducing your ground combat capability by whatever amount you commit to that task"(Jared Keller. 'The 1st SFAB's Afghan Deployment Is A Moment Of Truth For The Global War On Terror'. *Task and Purpose* (22nd Jan. 2018)). The SFABs, while an independent command and career structure, (they sit awkwardly within the so-called "Big Army" conventional forces), and they have had difficulty recruiting (their main selling point, after all, is a tour of Afghanistan).³³⁶ If Afghanistan winds down without a similarly-sized advisory mission in

Washington, DC: Department of the Army, 2018.

³³²Helene Cooper. 'Long Emphasis on Terror May Hurt U.S. in Conventional War, Army Chief Says'. *The New York Times. World* (15th May 2016).

³³³Meghann Myers. 'Chief: The Army Has to Start Preparing for 'the Big War''. *Army Times* (23rd Jan. 2018); Meghann Myers. 'In His Fourth Year, Army Chief Expands Focus from Readiness to Modernization'. *Army Times* (8th Oct. 2018).

³³⁴Gina Cavallaro. 'Pivoting for the Future Fight: Milley Prepares Army to Face Evolving Threats'. *Army Magazine* (24th Sept. 2018).

³³⁵John A. Nagl. 'Institutionalizing Adaptation: It's Time for an Army Advisor Command'. *Military Review* (September-October 2008), pp. 21–26.

³³⁶Meghann Myers. 'Tough Sell: Why Aren't More Soldiers Rushing to Join the Army's New Adviser

progress or on the immediate horizon, my theory predicts that they have a chance of being disbanded, though as a permanent budgeted organization, they represent the moving of at least some expeditionary advisory capacity past the first selection filter.

Many counterinsurgency focused training and doctrine activities have disappeared. The Army/Marines Counterinsurgency Center established in 2006 by Petraeus and Mattis (renamed the Army Irregular Warfare Center) was quietly shuttered in October 2014.³³⁷ The Army and Marines' cultural centers have also experienced significant budget cuts as their funding (from the contingency pot) dries up.³³⁸ Combat Hunter program has been greatly scaled back, though it remains in existence, as does the Army's Advanced Situational Awareness program, due largely to the continuation of the Afghanistan mission (with its focus on counterinsurgency and policing). It remains to be seen how long the program will survive in a different strategic environment.³³⁹

Of course, the Army did institutionalize counterinsurgency in doctrine, as many theories call for as the apotheosis of military learning.³⁴⁰ Under Petraeus' leadership, FM 3-24 was set up as a body of knowledge independent from stability operations (FM 3-07). But the failure of population-centric counterinsurgency in Afghanistan has lent additional weight to criticisms of the manual, especially its focus on classical counterinsurgency principles drawn from the Cold War.³⁴¹ The tactical manual, FM 3-24.2 (2009), reads as highly specific to the wars in Iraq and Afghanistan, with questionable broader applicability. Both manuals lay the groundwork for a similar cycle to earlier counterinsurgency doctrine: neglect, followed by whole-cloth revision in the next era of counterinsurgency popularity (as the earlier manuals are rejected as out of date). More importantly, doctrine has no independent causal authority to shape training or procurement in general. While FM 3-24 may continue to shape training for stability operations in communities and units that will continue to perform that work, it is already being substantially de-emphasized in the rest of the force.

One criticism COINdinitas made of the Army's unpreparedness for counterinsurgency

Brigades?' *Army Times* (26th June 2018).

³³⁷ 'Irregular Warfare Center to Close Oct. 1'. *Army Times* (1st Sept. 2014).

³³⁸ War on the Rocks Staff, *Save the U.S. Army's Peacekeeping and Stability Operations Institute*.

³³⁹ Clark and Dick, 'Combat Hunter: The Vernacular of Future Conflicts or Lessons Forgotten?'; Clinton R. Irvin, William R. Bickley and John T. Miller. *Evaluation of the Advanced Situational Awareness Training Pilot Program*. Fort Belvoir, VA: United States Army Research Institute for the Behavioral and Social Sciences, Feb. 2017.

³⁴⁰ Kollars, 'Military Innovation's Dialectic'.

³⁴¹ Matthew Cancian. *FM 3-24-2.0? Why US Counterinsurgency Doctrine Needs an Update*. 21st Feb. 2017. URL: <https://mwi.usma.edu/fm-3-24-2-0-us-counterinsurgency-doctrine-needs-update/>.

was the lack of space given to it in FM 3-0 *Operations*, and FM 3-0 (2008) was ostentatiously revised to include an emphasis on counterinsurgency. But, as the Army's primary statement on how it intends to fight, FM 3-0 is quite responsive to the changing strategic environment. As a result of these changes in strategic context symbolized in the National Defense Strategy, FM 3-0 Operations (2017) has the least on low-intensity conflict since FM 100-5 (1976), the first edition published after Vietnam.³⁴²

Publications and Lessons Learned The Army lessons learned process was revised only incrementally and, based on permanent, budgeted organizations, has continued its work. Some of the "lessons of Iraq" may be incorporated into training materials, but most will sit in a database until they are dusted off after the next insurgency into which the Army stumbles. The Taji academies in Iraq were shuttered as MNF-I disbanded.

As the Iraq War wound down, the AWG was nearly killed in 2011 by the new Army Vice Chief of Staff (Peter Chiarelli). However, ongoing demands from Afghanistan, along with the direct intervention of a few other senior leaders (including the new TRADOC commanding general, Robert Cone) were able to move the program from its ad hoc, unorthodox roots in the Pentagon's operations staff to becoming a program of record under TRADOC (which had sought to develop an expeditionary capacity as part of bureaucratic politics), where it remains, continuing to develop and distribute new concepts at TTPss, including for defense against small, weaponized off-the-shelf drones.³⁴³

Experimentation, Testing and Rapid Procurement Before the invasion of Afghanistan, only the Special Operations community had a normal rapid acquisitions process in place. The services (especially the Army) created rapid acquisitions processes using contingency funding almost immediately, and the needs of the war spurred Congress to authorize a broader, Defense-wide rapid acquisitions process in the 2003 and 2005 defense appropriations bills. As a process-based equilibrium, it is likely to endure (at some level of funding) until a major reform effort is undertaken; historically, these have resulted from major instances of waste, fraud, or abuse. This new equilibrium is also partly due to dual-use technology changes; in the years between Vietnam and Iraq, rapid prototyping technologies (including

³⁴²US Army. *FM 3-0: Operations*. 2017; Joe Lacdan. *Revised Doctrine Prepares Soldiers for Changing Global Threats*. 6th Oct. 2017. URL: https://www.army.mil/article/195034/revised_doctrine_prepares_soldiers_for_changing_global_threats.

³⁴³Collins, 'Military Innovation in War', p. 291; Robert Bruce. 'Behind the Razor Wire: U.S. Army's Asymmetric Warfare Training Center'. *Small Arms Review* 21.10 (Dec. 2017).

CNC-milling and 3D-printing) improved dramatically, driving down substantially the costs of developing working prototypes and small-run production.³⁴⁴ In this way, the War on Terror created a new and enduring equilibrium for rapid acquisitions, one that has been furthered by the relatively high survival rates of rapid acquisitions organizations.³⁴⁵ If anything, with Ash Carter-era innovation initiatives and a number of additional rapid development organizations that proliferated in other parts of the defense community, it is possible that the institutional selection filter lies in the future, when a budget slowdown or a change in command emphasis results in a shuttering of many of these efforts.

Like AWG, JIEDDO was nearly shuttered in the years following the drawdown in Iraq. In most other circumstances, JIEDDO would have been a victim of the demobilization process, but since the Afghanistan Surge was accompanied by a surge in IED casualties, it remained immediately relevant to the military's short-term needs. Still, it was almost closed between 2012-2015, as Congressional skepticism mounted, especially as the agency's high risk-tolerance, free-wheeling spending, and unusual budgetary authorities (which it had stretched to the maximum) were deemed inappropriate for the current environment. Attempts by directors in the late 2000s to make it a permanent organization went nowhere, and at least one director told Congress that it was not intended to be a permanent organization (it was funded exclusively through contingency funding).³⁴⁶

Instead, it has managed to find its footing in the midst of the drawdown from Iraq and Afghanistan within the rhythms of America's ongoing wars. From a \$4 Billion budget at its peak in 2008, its budget dropped to under half a billion dollars in 2015, but its leaders managed to address major Congressional concerns.³⁴⁷ No politicians wanted to be accused of defunding counter-IED efforts, and the organization still managed to fill an institutional niche in providing training and address new kinds of IEDs that American soldiers continued to find in Afghanistan, Iraq (after the rise of ISIS), and around the world (through special operations). But it was the pivot under Ash Carter to continue to broaden its mission towards "improvised threats" that ensured its future. Renamed Joint Improvised-Threat Defeat

³⁴⁴See Paul Kenneth Wright. *21st Century Manufacturing*. Upper Saddle River, NJ: Pearson, 2000.

³⁴⁵Baldauf and Rehman, *Increasing Responsiveness of the Army Rapid Acquisition Process: The Army Rapid Equipping Force*.

³⁴⁶Peter Cary and Nancy Youssef. 'JIEDDO: The Manhattan Project That Bombed'. *Center for Public Integrity* (27th Mar. 2011); Government Accountability Office. *Counter-Improvised Explosive Devices: Multiple DOD Organizations Are Developing Numerous Initiatives*. GAO-12-861R. Washington, D.C.: Government Accountability Office, 1st Aug. 2012. URL: <https://www.gao.gov/assets/600/593242.pdf>.

³⁴⁷Jen Judson. 'Rapid Fielding Initiative — Putting Soldiers at the Center'. *Defense News* (25th Oct. 2016).

Agency (JIDA) and then, finally Joint Improvised-Threat Defense Organization (JIDO), the agency is one of the Pentagon's leading experts in rapidly developing robots and electronic warfare tools, which has both remained relevant in contingency operations and re-emerged at the heart of NATO-Russian military contestation.³⁴⁸ JIDO's mission and story fit with Carter's push to embrace Silicon Valley, first as Deputy Secretary of Defense (where he decided JIEDDO would continue to exist, a policy continued by his like-minded successor Robert O. Work) and as Secretary of Defense. It fills a niche of entrepreneurial, industry-connected, rapid prototyping initiatives that Carter pioneered and which are *au courant* in the Army, alongside the Defense Innovation Unit Experimental, the Army's Rapid Capabilities Office and now Army Futures Command.³⁴⁹ Some of JIDO's recent programs include a threat analysis software and a counter-droneborne IED system. With its move (directed by Congress and overseen by Carter) to reside within Defense Threat Reduction Agency (DTRA) (a well-established agency looking for a 21st century mission), JIDO finally gained a slice of the base budget, after more than a decade of contingency funding.³⁵⁰ An end to major contingency operations or a significant budget drawdown (or a case of procurement waste, fraud, or abuse) could yet kill the agency, but it has successfully transitioned from an ad hoc task force to a permanent Pentagon outfit.

As with JIEDDO, the REF came under increasing scrutiny for "waste", and was in danger of being axed at any point by the Army Staff, where it lived organizationally, and there were rumors that it would shut down after Operation Enduring Freedom. Until 2014, all REF funding came from contingency appropriations - it had no base budget. But its continuing utility for warfighters and increasing interest in Silicon Valley-style rapid prototyping, led to the Army declaring it an "enduring capability". As with AWG, it came to rest within TRADOC as a way of connecting the training command to the front lines.³⁵¹

³⁴⁸Jen Judson. 'JIDA To Become JIDO Under Defense Threat Reduction Agency'. *Defense News* (8th Aug. 2017). In this way, JIDO's new motto encapsulates not only its mission but also its organizational practices: "*Apto Aut Morior*" — "I must adapt or I will die"(William M. Arkin. *From JIEDDO to JIDA to JIDO: Playing America's National Security Name-Changing Game*. 24th Mar. 2016. URL: <https://news.vice.com/article/united-states-national-security-pentagon-name-changing-game>).

³⁴⁹Fred Kaplan. 'The Pentagon's Innovation Experiment'. *MIT Technology Review* (19th Dec. 2016); 'An Interview with Robert O. Work'. *Joint Forces Quarterly* 84 (Spr. 2017).

³⁵⁰Government Accountability Office. *Improvised Threats: Warfighter Support Maintained, but Clearer Responsibilities and Improved Information Sharing Needed*. GAO-18-509. Washington, D.C.: Government Accountability Office, July 2018. URL: <https://www.gao.gov/assets/700/693356.pdf>.

³⁵¹Kara Ewell. *Army Confirms Rapid Equipping Force as 'Enduring'*. US Army, 31st Jan. 2014. URL: https://www.army.mil/article/119292/army_confirms_rapid_equipping_force_as_enduring; David Vergun. *Rapid Equipping Force to Fall under TRADOC*. US Army, 2nd Oct. 2014. URL: https://www.army.mil/article/135185/rapid_equipping_force_to_fall_under_tradoc.

4.2.3 Discussion: Adaptation, Counterinsurgency and Politics on the Battlefield

Given that there has been substantial attention to American operational changes in Iraq after 2007, this account has been weighted towards highlighting the extent to which battlefield adaptation preceded the Surge. We did not find a sclerotic force stuck in its ways until given the true gospel of counterinsurgency. Rather, almost as soon as the Iraqi insurgency began to take on a distinctive form, American Army and Marines units began adapting to it through a remarkably decentralized process. Between 2004 and 2006, the TTPs and SOPs used to fight in Iraq, and the way units were task organized, dramatically changed, driven by training, education, and knowledge networks throughout the force and supported by ad hoc organizations designed to drive horizontal knowledge transfer.

Regardless of one's position on when the *strategy* changed to population-centric and (more importantly) American-led counterinsurgency, those changes were made at the level of policy direction, involving important stakeholders in Washington.³⁵² To the extent that a change of approach was possible at the operational level or below, it occurred organically as highly professional Army and Marines units responded both conceptually and practically to the realities of the war in Iraq. Throughout, the environmental pressures were modulated by the unit rotation system, which in 2004 had the effect of replacing units that were starting to adapt to Iraq with ones un-prepared for what they would find but which, in 2005 and after, began to “pre-adapt” units through training oriented towards the environment they would find. Unit rotation also had the effect of emphasizing the importance of adaptation of those organizations more continuously in Iraq: command structures, other organizations, and task forces.

Counterinsurgency Adaptation in Combat Arms Units

While the literature on whether and to what extent combat arms units in Vietnam adapted to a counterinsurgency strategy is contested, there is near universal agreement that American units in Iraq adopted the tenets of classical, population-centric counterinsurgency.³⁵³ What

³⁵²The main arguments being whether this occurred in 2006 under Casey or 2007 under Petraeus, and whether the earlier transformation strategy had been the wrong one or simply superseded by events.

³⁵³Russell, *Innovation*, p. 191; Theo Farrell. ‘Introduction: Military Adaptation in War’. *Military Adaptation in Afghanistan*. Ed. by Theo Farrell, Frans P. B. Osinga and James A. Russell. Stanford, California: Stanford University Press, 2013; Burton and Nagl, ‘Learning as We Go’; Collins, ‘Military Innovation in War’, pp. 97–100; Kollars, ‘War’s Horizon’.

explains this difference?

Simply put, politics could be found on the battlefield in Iraq in a more immediate way than in Vietnam. Violence-generating organizations and the elites that controlled them were organized at the tactical and operational level in Iraq; American soldiers could work not only to remove individual insurgent from the battlefield or damage their recruiting but also to achieve negotiated settlements with militias and the tribal and religious leaders that controlled them. Even though senior civilian leaders initially opposed settlements or negotiations that left powerful alternatives to the Iraqi government in place, military officers repeatedly showed their willingness to reach agreements that reduced the risk to troops under their command, beginning with the Marines working with Shia militias in Basra in 2003 (one important adaptive process was gaining local knowledge about who actually had influence).³⁵⁴

As a result, population-centric counterinsurgency practices had a stronger environmental effect and, through reporting and metrics, organizational effect than in Vietnam. Engaging with local political leaders, building local intelligence networks, providing security, and avoiding angering the locals could be immediately rewarded by a drop in violence or an improvement in intelligence (environmental effect), and these changes could be sold as impactful measures of positive performance to higher-ups (organizational effect).³⁵⁵ In Iraq, one of the reasons counterinsurgency was adopted at the tactical level was in part because it had real effects at the tactical level.

Strategy and The Surge

If the US military proved adaptable in Iraq, and there were environmental pressures to adopt a counterinsurgency strategy, what explains the purported slowness of the US military in adaptation? Previous explanations have focused on doctrine and training, and not enough on resource levels, something out of the hands of military decision-makers. Bringing resourcing and strategy back in reveals something important about the limits of adaptability.

An unacknowledged problem with the narrative that the US military turned late to counterinsurgency is the specific people involved. Certainly, many units, especially those deployed without training and at short notice, were unprepared for the environment they found themselves in; the 4th ID, led by General Odierno, is the paradigmatic example of a unit coming

³⁵⁴McWilliams and Wheeler, *Al-Anbar Awakening: Volume 1, American Perspectives*, pp. 3–4.

³⁵⁵See, for example, how H.R. McMaster and Sean MacFarlane discussed their work in Tal Afar (Packer, ‘The Lesson of Tal Afar’).

in with the wrong ideas.³⁵⁶ But, from the beginning, insurgency dynamics in Iraq centered on the Sunni Triangle, and, from the beginning, the Sunni Triangle was the responsibility of the Marines, who prided themselves at their small- wars prowess, armor-light touch, and counter-insurgency tactics.³⁵⁷ Similarly, throughout 2003-2004, Baghdad and Mosul (two other vital hubs of the insurgency) were under the control of the 1st Cav under Chiarelli and the 101st Airborne under Petraeus, respectively; both instituted a counterinsurgency strategy from the very start.³⁵⁸ Though each of these actors worked hard to meet local political demands and act with a light touch, in no case did they succeed in preventing or mitigating the insurgency in an enduring way. One major issue was simply resources: when the 101st Airborne Division pulled out of Mosul, it was replaced by a couple of battalions. The Marines were similarly stretched thin. In Baghdad, American forces acted essentially without an operational reserve - a flare-up in one part of the city necessitated pulling forces away from another.³⁵⁹ By 2006, American forces were more or less doing the most they could do with the resources available to them and the rules and strategy they were operating under.

This suggests a third way between those who emphasize the triumph of the COINdinistas in providing a revolutionary new approach to Iraq and the skeptics who argue that the major changes to American operations in Iraq predated Petraeus' leadership, and that the COINdinistas merely succeeded in taking credit for it. To the extent that the publication of FM 3-24 and Petraeus' command made a difference in "operational praxis", it was in providing additional resources and organizational emphasis on what was by then regular practice in Iraq. Some have put the Petraeus-era changes forward as an example of successful "innovation", this is an abuse of the term.³⁶⁰ As we have already seen, the change in command did not "change the manner in which military formations function in the field".³⁶¹ The Surge represents a true change in strategy, much more, in many ways, than it marked a change in operations or tactics.

On the other hand, the skeptics are wrong that there was no change. The Surge represents a change in strategy (properly understood) and not in operations. The elevation of Petraeus and the increase in resources were only two outcomes of a decision made by President Bush to

³⁵⁶Ricks, *Fiasco*, pp. 142-143.

³⁵⁷McWilliams and Wheeler, *Al-Anbar Awakening: Volume 1, American Perspectives*, p. 43.

³⁵⁸Nigel Alywin-Foster. 'Changing the Army for Counterinsurgency Operations'. *Military Review* (November-December 2005), pp. 2-15.

³⁵⁹Sjursen, *Ghost Riders of Baghdad*.

³⁶⁰C.f. Collins, 'Military Innovation in War'.

³⁶¹Grissom, 'Future'.

go “all in” in Iraq, instead of abandoning it ignominiously (as the rest of Washington preferred at that point).³⁶² This political decision led Bush to publicly commit American resources in a way that changed the strategic calculus of actors in Iraq (contributing, for example, to the Mahdi Army’s unilateral ceasefire and to the Anbar Awakening). President Bush put significant pressure on Iraqi President Maliki to remove restrictions on American forces and to cut off Iranian support of Iraqi militias, and gave political cover to a dramatic increase in lethality and operational tempo by American forces (which MNF-I had previously restricted in order to avoid causing political situations with the Iraqi government). Michael Abramowitz and Robin Wright. ‘Bush to Add 21,500 Troops In an Effort to Stabilize Iraq’. *Washington Post* (11th Jan. 2007)

An examination reveals that it was the growth in resources in general and the loosening of rules of engagement that had as dramatic effect as the modest increase in troop levels. Though Petraeus sold counterinsurgency as a softer alternative to the American approach, this only extended to emphasizing relations with the Iraqi people. When it came to insurgents, Petraeus worked to take the gloves off. There was a dramatic spike in the number of bombs dropped from 176 in 2005 to 3,030 in 2007 (Figure 4.11).³⁶³ Generous new funding for the CERP undergirded Petraeus’ “Money as a weapons system” approach. The program peaked at a billion dollars spent in 2008; the fastest-growing category (from almost nothing to the largest one) was “Protective Services”, essentially putting tens of thousands of militia members on the American payroll.³⁶⁴ The best evidence suggests that only the interaction of increased resources and strategic realignment allowed the strategy to succeed.³⁶⁵

This new strategy made a difference, but it also highlights a significant limitation of the military adaptation literature. So long as it focuses on military organizations, it must be willing to identify and concede important causal factors that lay outside of or above those organizations. The Army’s degree of learning or adaptation was not a determinative factor in the Surge (though it resulted in a “managing up” - influencing the eventual decision made). No degree of organizational learning can make up for factors out of the military’s control,

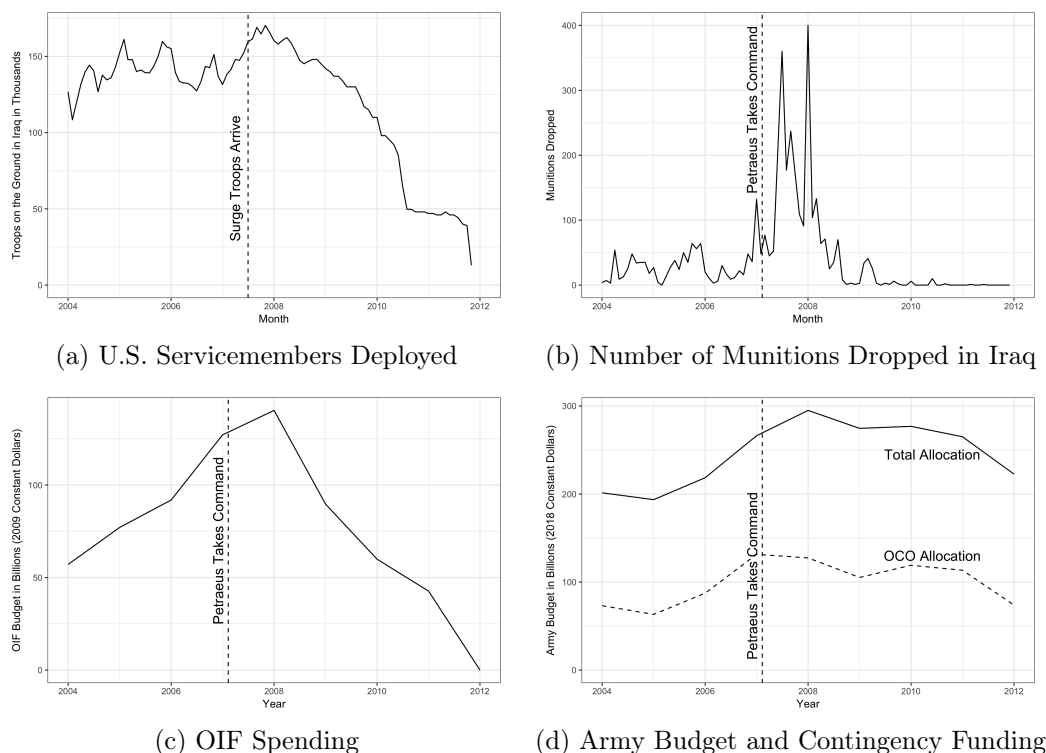
³⁶²Feaver, ‘The Right to Be Right’.

³⁶³Catherine Dale. *Operation Iraqi Freedom: Strategies, Approaches, Results, and Issues for Congress*. RL34387. Washington, D.C.: Congressional Research Service, 28th Mar. 2008, pp. 59–60.

³⁶⁴Special Inspector General for Iraq Reconstruction. *Quarterly Report and Semiannual Report*. Washington, DC: Government Printing Office, 30th Jan. 2011; Dana Hedgpeth and Sarah Cohen. ‘Money as a Weapon’ (11th Aug. 2008).

³⁶⁵Stephen Biddle, Jeffrey A. Friedman and Jacob N. Shapiro. ‘Testing the Surge: Why Did Violence Decline in Iraq in 2007?’ *International Security* 37.1 (1st July 2012), pp. 7–40.

Figure 4.11: The Surge



Deployed Servicemembers Data from Catherine Dale. Operation Iraqi Freedom: Strategies, Approaches, Results, and Issues for Congress. RL34387. Washington, D.C.: Congressional Research Service, 28th Mar. 2008 through September 2008, from Michael E. O'Hanlon and Ian Livingston. Iraq Index. Washington, D.C.: The Brookings Institution, Feb. 2012 through November 2011. Bombing Data from US Air Forces Central Command - Public Affairs. 2004-2011 Combined Forces Air Component Commander Airpower Statistics. MacDill Air Force Base, FL: Central Command, Dec. 2011. Budget information from Office of the Under Secretary of Defense (Comptroller). National Defense Budget Estimates for FY 2018. Aug. 2017.

including a change of policy, strategy, and resources available.

4.3 Conclusion

In both Vietnam and Iraq, the US military in general and the Army in particular adapted steadily to the conflict, in accordance with the environmental and organizational pressures which different parts of the organization were exposed to. Where those pressures were one-sided, change was swift: rapid procurement programs, counter-IED efforts, task organization of units, changes in practices in the field, pre-deployment or field training, creation of publications and lessons learned, and informal knowledge sharing began to develop essentially as soon as American units arrived.

Where there were opposing pressures and additional organizational stakeholders, adaptation was slow. In both wars, the Army attempted to make the advisory mission attractive to career officers – in both wars, it failed.³⁶⁶ The overall force generation processes, with their political significance, many bureaucratic stakeholders, and Congressional involvement proved the hardest to change. Despite serious and specific flaws, in neither war did the military modify its rotation policy once it had been set, and certain political red lines, once set, were never crossed (mobilization of the reserves for Vietnam, conscription or a call-up of the Individual Ready Reserve for Iraq). This increasingly pushed existing models to their limits as they were torn between environmental and organizational imperatives: In Vietnam, this meant expanding the range of draft eligibility (to include high school dropouts and married men without children). In Iraq, it meant the relentless use of Reserves and National Guard units, stop-loss orders forbidding serving soldiers from leaving the military, and lowering recruiting standards to include felons and high school dropouts. The relationship between various interagency partners was also characterized by these dynamics. These started from opposite points: In Vietnam, the State Department and USAID were reluctant to relinquish their role at the forefront of development and diplomacy; in Iraq, Rumsfeld's Defense Department was hostile to adopting it. The ending equilibrium, driven by the environment, was the same, with the military command (MNC-I/MNF-I) becoming the most powerful American development and political actor in the country.

³⁶⁶Dawkins, 'The United States Army and the "Other" War in Vietnam'; Jason Dempsey. *Our Generals Failed in Afghanistan*. 18th Oct. 2016. URL: <https://foreignpolicy.com/2016/10/18/our-generals-failed-in-afghanistan/>. Fitzgerald lists this as a "lesson learned" in Iraq, but he both ignored the example of Vietnam and spoke too soon (2013, p. 152).

4.3.1 Tactical Adaptation and Counterinsurgency

Our discussion of adaptation to counterinsurgency at the tactical level revealed several important distinctions often lost in comparisons of Vietnam and Iraq. There are important technical distinctions that have gone uncommented on, such as changes in technology. Counterinsurgency techniques pioneered in Vietnam, like the first insurgent targeting database), when they matured and miniaturized, allowed intelligence collection, collation, and analysis to be decentralized in Iraq. But not only did strategy and force employment vary dramatically: so did the relationship between politics and violence at the local level. In Vietnam, this may have created an Adaptation Trap – if an organization has reached a Local Maximum (a behavior or strategy that cannot be *incrementally* improved), it will not attempt to continue improving, even if there exists some other strategy that might prove superior, because the pathway between the two strategies would involve moving off of the local maximum (i.e. would entail a reduction in performance). Moreover, in both wars, learning in some parts of the organization (improving tactical performance, creation of specialized counterinsurgency organizations) may have substituted for and taken pressure off of learning at others (improved understanding of American strategic limitations, improvement in normal combat arms units).³⁶⁷

Whether or not an individual, unit, or military organization adopts something like “counterinsurgency principles” seems to be at least in part determined by whether and where politics shows up on the battlefield. By this I mean the tactical utility of withholding force, dialoging with the enemy or third parties, or otherwise reaching some state of negotiation or compromise. In Vietnam, there was no real pathway to adopt what Jackson calls Model 3 counterinsurgency - armed political negotiation - on the battlefield. In Iraq there was, but adopting armed negotiation at the tactical/operational level did not lead to adopting it at the strategic level, and the United States left with significant political issues unresolved at the level of the national government, contributing to that nation’s descent into violence once again.³⁶⁸

³⁶⁷Levinthal and March, ‘The Myopia of Learning’.

³⁶⁸Jackson, ‘Defeat in Victory’, p. 116.

4.3.2 The View from the Enemy

While the American military was adaptive from the stand point of adopting new organizational structures and practices that improved its performance and fitted it for the environment, was it successful relative to the enemy? And how did the enemy adapt to American adaptation? In both wars, the enemy adapted under the pressure of increasing American effectiveness, both by adopting new practices and by changing his strategy. In some cases, this looked like learning - in other cases, selection processes were at work.

Communist forces in Vietnam proved to be adaptable in multiple ways. At the tactical and operational level, they would attempt to take advantage of American practices. When they could, they figured out where dividing lines between American units were, allowing them to slip between gaps. They figured out how American artillery fire control procedures worked, allowing them to sometimes guess where they needed to move to avoid being destroyed. The VC/NVA developed an elaborate Signals Intelligence (SIGINT) radio intercept operations with specialized units, handbooks, and equipment (captured, imported, and manufactured).³⁶⁹ American advantages, real though they were, tended to be local and short-lived, unless built upon. VC/NVA units were beaten back, creating space for pacification progress, but they were often able to avoid encounters with American forces when they chose and replenish their stocks from infiltrated goods or taxation of local villages.³⁷⁰

Still, when the VC/NVA operated in the vicinity of American troops, they were increasingly likely to be discovered and destroyed by US forces as the war went on. American forces reversed the tactical initiative; they went from initiating fewer than 40% of firefights in 1966 to over 60% in 1972.³⁷¹ American forces continued to experiment with methods for finding and destroying VC/NVA units, as morale and unit quality dropped steadily during the years of Americanization.³⁷² But the enemy never lost the ability to choose his battles, and he became increasingly savvy about doing so. As American forces began to withdraw, the Viet Cong shifted emphasis to areas where American presence was weak and began to erode GVN support and legitimacy before it became effective.³⁷³

³⁶⁹Myer, *Division-Level Communications, 1962-1973*, pp. 65-66.

³⁷⁰See, for instance, the four province studies mentioned earlier, or the story of pacification progress in 1967 in Long An and Binh Dinh (Villard, *Combat Operations: Staying the Course, October 1967 to September 1968*, p. 118).

³⁷¹Department of the Army, *Southeast Asia Analysis Report, Vol 4*.

³⁷²Nguyen, *Hanoi's War*, p. 148.

³⁷³For an example, see Robert Thompson. 'More Sieve Than Shield: The U.S. Army and CORDS in the Pacification of Phu Yen Province, Republic of Vietnam, 1965-1972'. Ph.D.. University of Southern Mississippi, 1st Dec. 2016.

But the most dramatic adaptations might have been at the strategic level. In his memoirs, Westmoreland wonders why General Giap did not continue his “protracted struggle” strategy, which Westmoreland predicts would have worn out American patience at minimal cost to the North Vietnamese.³⁷⁴ Unbeknown to him, this is exactly what Giap had advocated for, only to be overturned by Le Duan.³⁷⁵ The General Offense General Uprising strategy which Le Duan pursued had the effect of devastating VC/NVA forces, not to mention North Vietnam itself. In the end, American military pressure, rather than strategic choice by the Politburo, forced the VC/NVA back into the “protracted struggle” strategy, which in the end did exactly what Westmoreland had predicted.³⁷⁶ The return to the “Control War” took the emphasis off of the military struggle at which the American military had become increasingly proficient and and put it onto the political struggle. While American capabilities had improved in this regard as well, the American people did not have the patience for it, and it also highlighted the continuing weaknesses of the GVN. American operational adaptability essentially forced the North Vietnamese, eventually, to revert to a superior strategy.

Although lacking the sophistication of the Communist effort in Vietnam, insurgents in Iraq also adapted to American tactics and operations, spurred on by knowledge-sharing networks and the Internet. This was especially characteristic of the IED adaptation cycle. To the great frustration of American commanders, defensive measures that might take weeks or months to develop might be gotten past in days or weeks by inventive IED-makers. After a significant initial drop in IED effectiveness in 2003 (after American units adapted to their reality), levels of success against IED remained persistently flat.³⁷⁷ The threat was ultimately defeated not at the level of the device, but through the construction of an unrivaled and persistent surveillance apparatus (which could “backtrace” vehicle movements for days and link single slip-ups in operational security) matched with America’s most lethal counterterrorism forces and a changing strategic environment (after 2007), where many IED emplacers switched sides, turned on their compatriots, or quit planting them. Even still, the United States spent tens of billions fighting IED networks that cost tens of millions to run. IED statistics have remained steady in Afghanistan.

³⁷⁴Westmoreland, *A Soldier Reports*, p. 406.

³⁷⁵Nguyen, *Hanoi’s War*, pp. 128–132.

³⁷⁶Clemis, *Control War*, p. 242.

³⁷⁷Anthony H. Cordesman, Charles Loi and Vivek Kocharalakota. *IED Metrics for Iraq: June 2003 – September 2010*. Washington, DC: Center for Strategic and International Studies, 11th Nov. 2010; Trebbi et al., *Insurgent Learning*.

Counter-adaptation was also characteristic of AQI under pressure from JSOC. Jihadists became increasingly skilled at counteracting various electronic surveillance techniques to evade detection and capture. Once JSOC began to own the night, they took to operating primarily during the day, which also served to eliminate many of JSOC's tactical advantages.³⁷⁸ As the depth of JSOC's signals intelligence became clear, many jihadists resorted to couriers.³⁷⁹ While JSOC's efforts significantly degraded AQI, the organization survived to form the basis of the Islamic State. One of the reasons it took root in Western Syria in 2008, an environment in which it would flourish, was precisely because of the pressure from JSOC.³⁸⁰

4.3.3 Building an Environment for Failure

Our evolutionary model provides an explanation for why American military adaptation might lead not towards victory but towards failure. In our cases, we found evidence of all three mechanisms Dominic Johnson posits could lead the weaker side to, paradoxically, prove more adaptive. Improvements in American tactics placed tremendous selection pressure on the enemy. Like a bacteria persistently exposed to an antibiotic, the persistent violence of counter-insurgents can actually generate better insurgent groups, by removing bad, ineffective, or unpopular insurgents from the battlefield.³⁸¹ Variation amongst insurgents led American forces to destroy disproportionately those that they were effective at destroying, breeding a force less susceptible to American pressure. By exactly the same process by which antibiotic resistance is built, a half-measure counterinsurgency is the worst of both worlds: it creates enough selection pressure to eliminate individuals or groups, but not the 'species', inadvertently driving adaptation.

Even before MACV's first dramatic tactical success at the Battle of Ia Drang, Westmoreland had postulated that NVA units, if decisively confronted on the battlefield, would realize the futility of large engagements and resort to guerrilla tactics and small unit war-

³⁷⁸Sean Naylor. *Relentless Strike: The Secret History of Joint Special Operations Command*. St. Martin's Griffin, 2016, p. 274.

³⁷⁹*Ibid.*, p. 345.

³⁸⁰Craig Whiteside. *Nine Bullets for the Traitors, One for the Enemy: The Slogans and Strategy behind the Islamic State's Campaign to Defeat the Sunni Awakening (2006 - 2017)*. The International Centre for Counter-Terrorism – The Hague, 7th Sept. 2018. URL: <https://icct.nl/publication/nine-bullets-for-the-traitors-one-for-the-enemy-the-slogans-and-strategy-behind-the-islamic-states-campaign-to-defeat-the-sunni-awakening-2006-2017/>.

³⁸¹Ingram and Whiteside, 'Don't Kill the Caliph! The Islamic State and the Pitfalls of Leadership Decapitation'.

fare.³⁸² This certainly occurred; by one tally 95% of enemy-initiated encounters thereafter involved battalion-sized units or smaller.³⁸³ Efforts were highly successful at attacking the Main Force VC population. But they were also inevitably successful at selecting for traits within the VC population. VC were not killed or co-opted at random - MACV, CORDS, and SVN programs selected heavily against VC who were not heavily committed to the cause; who had family members in the South that they felt strong loyalty to; who were relatively 'out' with their political sympathies if not VC membership; who were worse at tradecraft or concealment; or who were less competent. This produced a VC that leaned heavily towards the opposite traits. As a result, as early as 1970, senior leaders in the counter-insurgency noted that most of the VC who remained operational were 'hard-core VC'. They said this as if this was a success. In Iraq, a similar pattern emerged, as increasing American pressure drove some insurgent groups (like the Mahdi Army) to change tactics and drove hard-core groups like AQI to adopt superior tradecraft; it is possible it even led to better organizational leadership, as American forces killed off senior AQI leaders who had succeeded in standing up the organization but which were now limiting its growth.³⁸⁴

4.3.4 Organizational Forgetting

The cases examined here provided strong empirical support for and explication of the overall model. Overall post-war forgetting was strongly conditioned by the immediate short-terms strategic environment (and degree of change from the war which the military had adapted to) and the degree of demobilization. Skills, capabilities, and knowledge that were not more or less continuously preserved (usually by a specialized organization) were lost. Critically, while this mechanism explains why counterinsurgency knowledge was lost, it also highlighted non-counterinsurgency related, even "conventional" knowledge that was lost, including convoy operations, rapid procurement, artillery firebase techniques, and riverine operations.

³⁸²Daddis, *No Sure Victory*, p. 82.

³⁸³This statistic, from Thayer, quoted in Milam, *Not a Gentleman's War*, p. 100 must be noted with a few caveats. The sheer number of incidents does not bespeak the overall North Vietnamese strategy, which used large attacks for strategic effects, such as in Tet and Minitet, though more judiciously than before the American intervention (this is a common misleading problem with statistical averages that follow power law distributions). Moreover, even a company or battalion-sized assault could, under the right conditions, overrun American platoons or companies.

³⁸⁴Ingram and Whiteside, 'Don't Kill the Caliph! The Islamic State and the Pitfalls of Leadership Decapitation'.

Chapter 5

Conclusion

Of all the disasters of Vietnam,
the worst may be the “lessons”
that we’ll draw from it.

—Albert Wohlstetter, “On
Vietnam and Bureaucracy”

The claim of this research is simple: whether a military ‘learns lessons’ from a war that it incorporates into its postwar practices is almost a completely separate question from whether that military successfully adapts to its wartime environment. The US military forgets what it learns in war because most of the individuals, units, and organizations experience substantial disorientation or even destruction during demobilization, regardless of whether they succeeded in battle, how they adapted to challenging environments or what they learned. In fact, the same organizational structures that allowed the US military to effectively and rapidly re-organize itself to meet battlefield challenges also allowed it to re-organize itself during post-war demobilization to meet the next strategic challenge, forgetting what it had learned (the Adaptation Paradox). Because the conventional wisdom has failed to grapple with how militaries mobilize for, fight, and demobilize from wars, it has been searching in vain for the sources of military amnesia.

At the same time, this disconnect between the desire for organizational memory and the actual limitations that memory and remembering place on organizations has led political scientists and military commentators heretofore to dramatically overestimate the relative value of a strong organizational memory, at least when it comes to militaries. Simply put, the world is too complex, battlefield environments too specific, and practices of war too

rapidly evolving to make most of what was learned in a particular war valuable in the next, especially when adaptations relate to solving operational problems generated by a battlefield environment or by the enemy (as opposed to learning how to employ weapons and tactics within one's own organization). Moreover, because organizational memory rests in continuing processes (like training, procurement and force organization), maintaining memory is costly.

This thesis advances beyond the simple claim that knowledge is lost during drawdown or peacetime by theorizing and providing evidence for the specific organizational mechanics that will shape post-war knowledge, thus providing a testable hypothesis that makes novel, falsifiable predictions. Shifted organizational equilibria accounted for Army-Air Force close air support practices; the endurance of attack helicopters, gunships, and the A-10; and the growth of the US special operations community. Organizational survival accounted for air assault, new Army aviation practices, and communications-network-building capacity after Vietnam and rapid procurement and counter-IED efforts after Iraq. Moreover, where specific practices retained their utility in the immediate post-war environment, they might also be retained by military units and incorporated into their *habitus*, even if their origins were forgotten. The thesis predicted and validated knowledge loss due to selection not only of counterinsurgency-related knowledge but also of techniques in principle useful for conventional warfare, but not needed in the immediate aftermath of the war: artillery fire-base tactics, cavalry-style airmobile operations, jungle warfare tactics, etc. Based on an evolutionary approach, the thesis has drawn attention to the disproportionate effect that short-term needs and demobilization-based discontinuities can have on military organizations.

5.1 Broad Determinants of Adaptation and Forgetting in Vietnam and Iraq

These cases allow us to observe in additional detail how evolutionary pressures and processes of learning and selection shape both wartime adaptation and postwar forgetting.

5.1.1 Adaptation

If change and divergence from the pre-war state is the standard of adaptation, it seems likely that the US military actually adapted more to the war in Vietnam than the war in Iraq: efforts at learning, adaptation, and development were more resourced and intentional; new

organizational forms were more exotic; and units altered their practices for a wider array of environments. As Daddis put it:

Claims that the army in Vietnam failed to adapt to changing circumstances ring false when one examines how MACV approached the daily tasks of combating both a conventional and unconventional and a political and military threat inside South Vietnam. In reality, all division commanders made tactical revisions to support Westmoreland's broad strategic concepts. US Army officers not only learned about their dynamic environment but adjusted their behavior in hopes of being more effective against a tough, resourceful enemy. This learning process occurred across the spectrum of US operations in Vietnam.¹

Adaptation occurred with its own rhythms, and the things that take time did. Some of the events of Iraq illustrate this nicely. As Collins points out, there was a three-year development interval between the Army's decision to expand the Special Forces in 2004 and the standing-up of the first new operational unit (and eight years before the expansion was complete).² Even with the Vice-CSA's support, it took two years to go from a dedicated push for the organization's formalization to final approval. The writing of FM 3-24 *Counterinsurgency* is rule-proving exception - it took essentially eighteen months from conceptualization to final publication despite an energetic, resourceful, focused commander (Petraeus), the direct support of the CSA, and increasing political pressure. Normal large-scale acquisitions take three to five years; programs with battlefield need (like the MRAP) that still had to go (for legal reasons) through that process, still took that long.³ Even if the President and the Congress had gotten together in mid-2003 at the first signs of trouble in Iraq and agreed that they wanted to establish and fund powerful independent organizations to directly conduct a counterinsurgency strategy, it is not clear that things would have gone much faster: much of the work being done in ad hoc organizations or task forces in 2003-2004 was coming to understand and define the problem, cultivate a strategy, and bring on-board the right people to solve it.

This thesis provided some evidence that the US military is actually becoming more adaptable over time, and that there are divergences in adaptability between military organizations

¹Daddis, *Westmoreland's War*, p. 114.

²Collins, 'Military Innovation in War', p. 216.

³Whaley and Stewart, *Path from Urgent Operational Need to Program of Record*.

and sub-organizations.⁴ As a result of the Vietnam War, the Army built a doctrine and training structure that mixes realistic training, lessons-learned processes, knowledge-transfer mechanisms, reasonably strong autonomy from political interference, and openness to field experience and bottom-up pressures. As a result, re-tooling in terms of doctrine and training in Iraq was rapid. Moreover, the war in Iraq altered the institutional equilibrium for rapid procurement, experimentation, and lessons learned in the military, leading to ad hoc organizations performing these functions (along with ad hoc acquisitions processes) to be made permanent. The result is to make the Army a more flexible institution, at least at the tactical and operational level.

Lastly, this is the first research to study the dialectical relationship between peacetime and wartime learning (other studies have focused on one or the other). Peacetime innovation and change will become the starting place for wartime adaptation; wartime adaptations have the capacity to alter institutional equilibria in ways that can prove durable. Moreover, the kinds of substantial institutional changes which are more likely to occur in peacetime have dramatic effects on what is remembered after wars.

5.1.2 Forgetting

During demobilization, the organizational effects of military drawdown shaped what was forgotten, chiefly through organizational survival. Inactivation was the default for ad hoc or temporary organizations, as well as those whose survival had de facto depended on wartime funding sources. Degree of strategic match and the degree of demobilization (in terms of manpower and funding) determined the strength of the selection filter.

Of course, the US military after Iraq has not yet experienced the two great threshing events of military organizational memory illuminated in this thesis: a major change of mission and a substantial budget cut. The first has recently begun as the military increasingly focuses on threats from great power competitors, with concomitant complaints about forgetting counterinsurgency and unconventional warfare.⁵ The second has not yet occurred, the current administration having *boosted* the peacetime military budget to unprecedented heights. If and when the budget deflates (as national debt calculations suggest it must), it will present an opportunity for hypothesis testing; our theory predicts that the inactivation

⁴This accords with the findings of Hunzeker, ‘Perfecting War: The Organizational Sources of Doctrinal Optimization’, p. 602.

⁵Zach Abels. ‘Will the COINdinstas Rise Again?’ *The National Interest* (3rd May 2017).

of activities, units, and programs will result in organizational forgetting.

In some instances, of course, the ‘lessons’ of these wars *were* in fact retained, not as ‘lessons’ but as *practices*, their origins rapidly becoming obscure and forgotten. Counter-intuitively, practices that are retained are almost by definition those that do *not* pertain to the specifics of the war that has just been fought, but those that are useful for the military tasks of units and sub-organizations continuously and in *any* context. The reason is that these practices must be continuously trained for and maintained, and so those which survive over time are those which contribute to and become a part of the incremental, *habitus* of a permanent military organization.

5.2 If Not Adaptation, Then What?

One of the empirical contributions this research makes is to highlight in detail the nature, speed, depth, and breadth of American operational adaptation in both Vietnam and Iraq. While this study highlights the *post hoc ergo propter hoc* error afflicting military innovation studies and thus disclaims “success” as the benchmark for adaptation, the reader may be forgiven if she fails to find convincing a military study refusing to deal with victory or defeat. And so, if a lack of or slowness of military adaptation does not explain the failure of the American military to reach its goals in Vietnam and Iraq, what does?

5.2.1 What Shaped Vietnam Outcomes

The fundamental problem of American involvement in Vietnam is that the war could not “have been ‘won’ in any meaningful sense at a moral or material cost most Americans deemed acceptable”.⁶ A more adaptable military would not have changed that calculus. The narrative that Americans fought with “foolish strategy and brutish tactics” exists in part because scholars of many persuasions have reasons to want it to be true.⁷ The narrative of Vietnam becomes much more daunting if we accept that this wasn’t the case. As Daddis later put it: “In spite of these realities [of GVN weakness], Americans held faith that military power, applied in a holistic manner, would overcome the intrinsic weaknesses of South Vietnamese

⁶George C Herring. *America’s Longest War: The United States and Vietnam, 1950-1975*. Philadelphia: Temple University Press, 1986, p. ix.

⁷Charles Hill. ‘Fighting Stories’. *Triumph Revisited: Historians Battle for the Vietnam War*. Ed. by Andrew A. Wiest. New York: Routledge, 2010, pp. 79–80.

society”.⁸ At the same time this was proving not to be true, North Vietnam kept adapting its strategy (under American pressure) until it found one that was going to work; a retreat from General Offensive General Uprising, a return to gradual erosion and disruption of the South Vietnamese state, and patience to wait for US withdrawal. In the parlance of rationalistic models of war, it turned out that the "bargaining range" was such that under certain circumstances the US could more or less accept the fall of Saigon.

In November 1967, the intelligence community produced a Special National Intelligence Estimate on the likely effects of American defeat in Vietnam.⁹ The scenario envisioned would not be the utter collapse of the GVN or a rout of the US military, but an unsatisfying ceasefire leading to North Vietnamese victory after American forces had withdrawn. The consequences the intelligence community foresaw are illuminating. Outside of Vietnam's neighbors, spillover revolutions were unlikely. Soviet foreign policy was unlikely to shift dramatically, though it might be temporarily emboldened. While there would be a worldwide “reappraisal” of American foreign policy, analysts believed it would be highly contextual (to the states doing the reappraising) and time-limited. The fall of South Vietnam might lead to a more assertive Chinese foreign policy, but that would depend on how important domestic conflicts in Chinese politics played out, and the unification of Vietnam might lead to rivalry between the two (in reality, rapprochement between China and the United States obviated even this). As Andrew Krepinevich later said, Vietnam began as a war of (seeming) necessity and ended as a war of choice.¹⁰

5.2.2 What Shaped Iraq Outcomes

Perhaps to an even greater extent than the conventional wisdom has it, the initial failures of American policy in Iraq are a very organizational story. Multiple pre-war plans were discarded. There was an obvious mismatch between the goals and resources envisioned by the White House, by the Defense Department, and by the Military, made worse once the CPA (with the expansionistic Bremer at the helm) was added to the mix after the conflict had begun. One solution to the Army's manpower crunch would have been to recruit more soldiers

⁸Daddis, *Westmoreland's War*, p. 90.

⁹David F. Gordon and National Intelligence Council (U.S.), eds. *Estimative Products on Vietnam 1948-1975*. Washington, D.C.: National Intelligence Council, 2005, pp. 392-426.

¹⁰Andrew F. Krepinevich. ‘Vietnam and Iraq: Why Everything Old Isn't New Again’. *Security Assistance: U.S. and International Historical Perspectives*. 2006 Military History Symposium. Fort Leavenworth, KS: Combat Studies Institute Press, 8th-10th Aug. 2006.

from America's allies, and this too had been a pre-war planning assumption. But the political unpopularity of the war amongst America's allies led them (with the exception of the British) to make mostly token contributions to the "Coalition of the Willing".¹¹ These problems were furthered by confusion in the NSC and a lack of functioning Deputy's committee.¹² The mismatch of resources and practical problems of setting up ad hoc organizations on the fly explain much of the chaos of early days and mark quite a different source of blunder from Vietnam.¹³

The implicit theory of the case found in the memoirs of some COINdinistas implies that an initial invasion and war effort informed by 'the precepts of classical counterinsurgency' would have prevented or stifled the emergence of the insurgency and the civil war that it fed, leading to reduced levels of violence and a stable and prospering Iraq.¹⁴ This theory is fundamentally implausible. It can be interpreted as saying one of two things. One is that a counterinsurgency focus would have led to additional resource investment. But the stabilization force left in Iraq after 2003 was substantially under-resourced by *any* US military doctrine for - stabilization operations. Even though CSA Shinseki did not have a French counterinsurgency theory in mind, he still did everything short of insubordination or resignation to ask for more troops for the occupation. Sometimes, proponents of this theory seem to be suggesting that the doctrines of counterinsurgency, a population-centric approach, battle amongst the people, intelligence-driven operations, etc. would have made the difference by themselves. This claim is exactly what David Martin Jones called the problem of 'grammar but no logic': the "convenient intellectual comfort blanket" that would displace thorny political questions or whether a mission was achievable in the first place with a set of 'how-to' guides and principles guaranteed to work every time.¹⁵ In reality, the sheer absence of American troops between 2004-5 seems to be the best explanation for why Sunni and Shia insurgents were able to act in an increasingly aggressive manner.¹⁶

In Iraq, the switch to a counterinsurgency strategy helped to cover up the fundamentally

¹¹David C. Hendrickson and Robert W. Tucker. 'Revisions in Need of Revising: What Went Wrong in the Iraq War'. *Survival* 47.2 (June 2005), pp. 7-32.

¹²Dyson, 'What Really Happened in Planning for Postwar Iraq?'

¹³Stuster, *Ends and Means [Transcript]*, Paul Pillar Commentary.

¹⁴Mansoor, *Surge*, Ch. 1.

¹⁵David Martin Jones and M.L.R. Smith. 'Grammar but No Logic: Technique Is Not Enough – A Response to Nagl and Burton'. *Journal of Strategic Studies* 33.3 (June 2010), pp. 437-446.

¹⁶For example, the best explanation for why Tal Afar became an insurgent stronghold in 2004-2006 is not that counterinsurgency principles were not applied but that there were simply few American troops stationed there (Packer, 'The Lesson of Tal Afar').

political questions in play. In reality, American “strategy” before 2007 was based on explicit policy direction from the White House, especially regarding sovereignty turnover, standup, and elections; commitment to democratic transformation; and the implicit ‘Sunni-phobia’ and ‘Shi’aphilia’ of an emphasis on the Iraqi central government.¹⁷ After 2006, reversing those policies had the effect of reducing violence, at the cost of distorting Iraqi politics in unsustainable ways.

The original American strategy (as articulated by Abiziad and Casey) rested on the assumption that an overly active American presence would create an unsustainable political structure, but that, left to their own devices, the Iraqis would be forced to find a *modus vivendi*. While the onset of an AQI-triggered sectarian war cast doubt on the wisdom of this strategy, the American response also had the effect of resting more of the security and development of Iraq on American shoulders. As British political advisor Emma Sky later observed, it was the mismatch between the power of the heavily American-backed, Shia-controlled central government and the realities of the distribution of power after the American withdrawal that primed Iraq for an explosion of violence.¹⁸ Of course, there remains the possibility that the real advantage of the Surge was to create the temporary illusion of victory.¹⁹

It is worth revisiting the parade of horrors President Bush told the American people the Surge was needed to deter:

Radical Islamic extremists would grow in strength and gain new recruits. They would be in a better position to topple moderate governments, create chaos in the region, and use oil revenues to fund their ambitions. Iran would be emboldened in its pursuit of nuclear weapons. Our enemies would have a safe haven from which to plan and launch attacks on the American people.²⁰

It may be the case that American withdrawal from Iraq in 2007 would have precipitated this dreadful outcome. But it is also the case that it occurred nonetheless, driven by the Arab Spring, Syrian Civil War, Saudi-Iranian rivalry, and President Trump’s withdrawal from the Iran nuclear deal. As time goes on, the Surge looks increasingly like an operational success, but a strategic failure.

¹⁷Hashim, *Insurgency and Counter-Insurgency in Iraq*, p. 274.

¹⁸Filkins, ‘What We Left Behind’.

¹⁹Brennan, ‘Withdrawal Symptoms’.

²⁰Bush, *President’s Address to the Nation*.

5.2.3 Alternative explanations for repeated failure

As we have seen, it is not the case that the US military did not have or does not have the ability to become a learning organization or an underlying and overriding strategic culture that prevents it from adapting to counterinsurgency. So if a failure to adapt to counterinsurgency cannot explain repeated American defeats, what does? Partially, there are structural, organizational and political processes producing and reproducing the same kinds of behaviors as part of wartime adaptation.²¹ Confirming Colin Jackson's theory, we found no relationship between an organization's prior experience with counterinsurgency and success.²² Even though the Marines and the British Army believed they had already mastered counterinsurgency, and many British and American commentators have highlighted the problems the British had adapting to counterinsurgency in Basra, relative to the speed at which the American military (including the Army) adapted.²³ But there is also an overriding grand strategic consideration.

Another repeated pathology lies not within military organizations but with their relationship with their civilian counterparts. American military doctrine, in line with Congressional diktats, holds that civilian agencies will be responsible for political activities, strategic intelligence, economic development, foreign relations, and the like. This shapes both the military's identity and training and Congressionally-approved budgets. And yet, the orthodoxy of military doctrine cannot make civilian agencies perform that role. Historically, the State Department and USAID have been reluctant to develop an expeditionary capacity, and this has been furthered by repeated Congressional budget cuts of these organizations. In wartime, civilian agencies were slow to mobilize, and their budgets were not supplemented to the extent the military's was.²⁴ In both Vietnam and Iraq, part of the initial hold up on implementing the military's own doctrine was organizational issues with civilian organizations. A focus on the military's ability to build "governance-in-a-box" type capabilities distracts from the atrophy of civilian agencies (including those that might actually be involved in a developing state for the long term) in an increasingly militarized US foreign policy.²⁵

²¹Caverley, 'Explaining U.S. Military Strategy in Vietnam'; Jonathan D. Caverley. *Democratic Militarism: Voting, Wealth, and War*. Cambridge ; New York: Cambridge University Press, 2014, pp. 270–2.

²²Jackson, 'Defeat in Victory', pp. 555–558.

²³Emma Sky. *The Unravelling: High Hopes and Missed Opportunities in Iraq*. 2015, p. 281.

²⁴Birtle, *Doctrine, 1942-1976*, p. 278.

²⁵Colin F. Jackson. 'Government in a Box? Counter-Insurgency, State Building, and the Technocratic Conceit'. *The New Counter-Insurgency Era in Critical Perspective*. Rethinking Political Violence Series. Palgrave Macmillan, London, 2014, pp. 82–110. URL: https://link.springer.com/chapter/10.1057/9781137336941_5.

The actual explanation for American defeat in both Vietnam and Iraq is simple. America is a large, secure superpower far away from the places in which it has, from time to time, engaged in counterinsurgency. Its preferred mode of imperialism (if one wishes to call it that) is of the maritime/commercial variety: it does not benefit from resource exploitation in its host countries. In the grand scheme of things, victory in counterinsurgency simply does not matter that much to American grand strategy, while the political and material costs of continuing to engage in it can be high. Certainly, the risk of defeat can be hedged more cheaply than victory could be obtained. While this dynamic affects many strong states engaged in expeditionary counterinsurgency (and partially explains why weak states are paradoxically more likely to emerge victorious in counterinsurgency), it has particularly affected the United States.²⁶ In neither Vietnam nor Iraq did the United States intend to engage in expeditionary counterinsurgency (quite apart from, say, the French in Indochina); it was backed into the policy when escalation dynamics and surprise left policymakers were only bad options, for a time at least. It quickly became the case that additional factors such as concerns about credibility and the political costs of defeat came to predominate policymaking. But as soon as these were allayed in one way or another, accepting “defeat” (ideally by calling it a victory) was the only rational course of action.

One reason the Army did not learn the “lessons” of Vietnam and of Iraq is that those lessons are primarily about the political nature of warfare and the absolute limits of military force (however it is applied), and these are simply not the everyday concerns of even the Chief of Staff of the Army. And to the extent that the Army has internalized caution towards counterinsurgency, it remains the case that it can little influence what policymakers decide. In 2003, the Army told the White House what it believed it needed to properly prepare for post-war Iraq, and the White House simply said no.

5.3 Beyond Adaptation to Strategy

While the thesis’ primary subject matter is learning and forgetting in war, it has also drawn attention to the limitations of adaptation and the enduring need for strategy. Nothing about the picture painted here ought to provide any comfort. Rather, it suggests that “increased military adaptation”, “a more innovative force,” or “a better lessons learned process” will

²⁶Patricia L. Sullivan. *Who Wins?: Predicting Strategic Success and Failure in Armed Conflict*. New York: Oxford University Press, 2012, p. 97; Harkness and Hunzeker, ‘Military Maladaptation’.

not produce victory or even alter the deeper roots of military amnesia. Rather, repeated failures emerged from pathologies in American civil-military relations and breakdowns in ‘the strategy bridge’, Colin Gray’s notion of the connection between politics, military strategy, and operations.²⁷ Viewed in this light, seeming self-criticisms within the military of poor doctrine, lack of adaptability, or operational myopia appear as totemic invocations designed to ward off a more malignant conclusion; that the decisions that cost so much blood and treasure were ultimately out of the military’s hands, and that good political strategy can significantly hamper military operations. The American military’s own discourse of failure allows for “illegitimate” political restrictions on the military and for a-political failings on the military’s part, but not for political hindrances that are fundamentally legitimate and strategic even if they produce damaging effects on the battlefield.²⁸

Conrad Crane, one of the authors of FM 3-24 and a widely respected military historian, has said that one of his “observations on the Long War” is that “in counterinsurgency, the most important decisions are made by politicians, not generals,” as they will define the scope of the mission, the nature of the political regime, and the resources available.²⁹ In both instances Vietnam and Iraq, adaptation generally conformed to the limits set by politics, only excepted when there was strong organizational or environmental pressure specifically pushing against a political limit (as in MACV’s repeated requests to escalate along the Ho Chi Minh trail, or the Marines’ cooperation with Anbari tribes and the military’s insistence on taking over host nation troop training in Iraq). Even supposedly flawed operational plans, such as Casey’s transition strategy or MACV’s caution towards disbursed, population-centric counterinsurgency (1965-1967) revealed themselves as deeply attuned to underlying political realities. Daddis puts it thus: “Perhaps it is worth considering the possibility that a flawed grand strategy cannot always be rescued by a well-conceived military strategy”.³⁰

5.3.1 Adaptation and the Strategy Bridge

Thus unmasked, the literature on military adaptation (especially as it emerges in the American context) reflects the intersection of complicated civil-military relationships in democra-

²⁷Ironically, the focus on military innovation and “organizational learning” has actually masked those deeper failures which seem to be stable enough over time that something could be learned about them.

²⁸This discourse was especially stark regarding Vietnam, where Johnson’s refusal to mobilize the reserves or to permit deeper incursions into Laos are seen as illegitimate, but can be seen in Iraq regarding the strategy of transitioning sovereignty to the Iraqis.

²⁹Crane, *Cassandra in Oz*, p. 210.

³⁰Daddis, *Westmoreland’s War*, p. 183.

cies, technophilic military cultures, and the development of what Hew Strachan has called a 'politics-free zone'.³¹ Firm civilian control of the military means, in principle, that there are limitations on what kinds of strategies the military is able to pursue. But civilian interference also might go deeper into the operational and tactical level. To confront these limitations head on would require reckoning with the supremacy of the political and the status of the military as a political actor, which threatens the institution's democratic and republican identity. So, instead, the military constructs for itself (and attempts to convince other actors of) an artificial divide between the setting of policy and the choice of a strategy to accomplish the policy (where the military would enjoy autonomy). "[modern military generals] have sought to purge war of politics, reconstituting the conception of war as the exclusive province of military professionals".³² But, of course, the military does *not* have autonomy to choose its strategies, to change the policy, or to properly resource the strategy. Where there is a gap, adaptability is supposed to stand in for strategy.

In this way, the emphasis on adaptation and adaptability represents the neglect of strategy and statecraft. By emphasizing the plasticity of the military to change its practices and force employment to increase effectiveness, the literature can be used to underplay the determinative role of resources and politics. It also ill-serves policy, by failing to reflect on the limits of that plasticity, and the implications of what military operations entail for politics. "Military operations have a dynamic all their own, and this undermines all attempts to organize them for purposes of political signalling," or, we might add, for a wide array of other purposes for which a diplomatic or political tool is instead needed.³³

Studies of military adaptation, when they *do* bring politics in, tend to focus on the ways politics supposedly mitigates or frustrates military innovation. The narratives are either of intrepid military entrepreneurs overcoming political opposition or of politics getting in the way of military innovation, shutting down productive experiments, firing innovators, etc. In the cases addressed here, politics has acted more as a catalyst of military adaptation, and as simply another environmental factor around which the military will shape itself.³⁴

³¹Hew Strachan. 'The Lost Meaning of Strategy'. *Survival* 47.3 (1st Oct. 2005), pp. 33–54.

³²Andrew Bacevich. 'A Modern Major General'. *New Left Review*. II 29 (2004), pp. 123–134.

³³Lawrence Freedman. 'Escalators and Quagmires: Expectations and the Use of Force'. *International Affairs (Royal Institute of International Affairs 1944-)* 67.1 (1991), pp. 15–31.

³⁴Caverley, 'The Myth of Military Myopia'; Caverley, 'Explaining U.S. Military Strategy in Vietnam'.

5.3.2 Reassessing the Relationship between Adaptation and Victory

The evolutionary model shown here emphasizes the extent to which military organizations will adapt themselves to the environmental and organizational facts, whatever they may be. Adaptability will generate fitness between the organization and its environment: it cannot of itself bring about a new environment beyond an ecological equilibrium. Victory is not the product of efficiency or 'effectiveness'; it is a political outcome, and one which does not necessarily appear within the environment itself. A military's adaptability can improve its ability to condition the environment or create opportunities, but it is the role of strategy to envision and intend the artificial exploitation of particular environmental characteristics to reach a potential end point. Moreover, militaries and sub-organizations within them will adapt to *what the organizational pressures actually are*, and not simply what senior leaders say. So, for example, despite command emphasis on counter-insurgency in Vietnam, the widespread *belief* that offensive military operations were career-improving drove a bias for action amongst junior officers.³⁵

It is perhaps in regards to explaining these kinds of contradictory behavior that evolutionary models most convincingly demonstrate their superiority to rationalistic or teleological understandings of military adaptation. Increasing body counts in Vietnam; producing stoplight charts in Iraq; co-opting insurgent militias; none of these are necessarily 'adaptive' in the sense of furthering the overall organization's stated goals, but they are nonetheless examples of people and organizations becoming what their environments asked them to become to improve their survival. And, of course, the enemy may provide adaptive pressures that are harmful to one's strategy. Marines forced to reduce their foot patrols in Ramadi or Army infantrymen in Vietnam learning a suspicious attitude towards local villagers in VC controlled areas were adapting to their environment, even if the aggregate effect might have been against US strategy.

The Limits of Adaptation

As this thesis has proved, the US military, rather than being a static or doctrine-bound organization, was extraordinarily adaptive to nearly every operational challenge with which it was confronted. And yet, there are some practical limits on how adaptable the military may be, as well as on the utility of adaptation itself.

³⁵Dawkins, 'The United States Army and the "Other" War in Vietnam'.

While it has mostly lain beyond the scope of this thesis, there are limitations on how adaptable any organization can be. The US military entered these wars with a structure, history, identity, and resource endowments. One cannot simply have wished these away. The US military's operational code, and the kinds of tasks it is prepared to do, is essential to its ongoing identity as the violence-generating arm of a global superpower, especially given realistic resource constraints and expectations of future force employment.³⁶ Moreover, the habitus of counterinsurgency is simply different from the habitus of conventional warfare, meaning that not only organizational characteristics but habits of mind needed to change as the US military adapted to these wars.³⁷ But there are also some important limitations to the utility of adaptability as such.

Particularity

It was mid-2006 now and a lot of the truisms on the board either were outdated or had been reversed by events. Lessons had been learned, some too late. But to spend time in Iraq is to acquire a visceral understanding of the flexibility of information and the power of place over knowledge. What is true in Ramadi is not necessarily true in Iskandariyah. What is true in Baghdad is almost never true in Basra. In Iraq, information is tribal like the people who live there. It keeps its own company. Things only seem absolutely true in Washington.³⁸

This thesis has provided evidence to doubt the connection between the battlefield utility of an adaptation in one environment from its utility in another. To some extent, there is an inverse relationship between fitness for a particular environment and fitness in any other. "The most useful information invariably came in the form of the anecdote, the casual aside that over time became the platoon mantra, the anonymous epigraph written on the latrine-wall".³⁹

In fact, in America's recent wars we have a near-perfect "natural experiment" of the transfer value of what is learned in war, and the results are strongly supportive of this thesis.

³⁶Jackson, 'Defeat in Victory', pp. 47–51.

³⁷Ian Roxborough. 'Learning and Diffusing the Lessons of Counterinsurgency: The U.s. Military from Vietnam to Iraq'. *Sociological Focus* 39.4 (2006), pp. 319–346. According to Bourdieu, habitus "could be considered a system of internalized structures, schemes of perception, conception, and action common to all members of the same group" (T. Hopf. 'The Logic of Habit in International Relations'. *European Journal of International Relations* 16.4 (1st Dec. 2010), pp. 539–561).

³⁸Morris, 'Big Suck'.

³⁹Ibid.

The same organization (the US military), at nearly the same time, with many of the same people conducted the same kind of war (counterinsurgency with a weak client state) against an ideologically and technologically akin enemy. And yet, the US military in Afghanistan failed to achieve even what it had achieved in Iraq. Much of what succeed in the former, when tried in the latter, failed miserably, including population-centric counterinsurgency, tribal outreach, counter-IED tactics and more. Apparently (and predictably), the network of circumstances that had made those things work in Iraq did not obtain (or obtain in the same way) in Afghanistan. Of course, even within Iraq, it appears that “forgetting” is a tricky thing. Only a few years after US forces left Iraq, they re-entered it as part of the fight against ISIS. A recent Department of Defense Inspector General Report found that US forces had once again neglected the composition, quality, and capabilities of the Iraqi forces which were supposed to “hold” areas cleared by offensive operations.⁴⁰

Unpredictability

In order to know that driving on dirt roads in Ramadi was dangerous, you had to have an IED (improvised explosive device) go off in your face. Before you started draping camouflage netting over the gunner’s turret atop a Humvee, you had to lose a gunner to a sniper. In order to learn the lesson, you had to lose somebody.⁴¹

The unpredictability, reflexivity, and complexity of warfare is another reason why particular adaptations are necessarily limited in value, and why adaptability as such is necessary. Karl Popper once proved that “future invention” is impossible, because the specific understanding of what it would take to invent something in the future or to predict its invention would be to invent it.⁴² For the same reason that ‘future invention’ is impossible, setting out the exact scope in which a present-day “lesson learned” will prove valuable in the future (much less, to successfully encode it in organizational practices) would have, among other things, the effect of likely deterring it or causing a hypothetical enemy to advance his tactics as well. There will never be perfect doctrine for the same reason there will never be perfect novel; warfare as a human practice will continue to evolve.⁴³ The only ‘final doctrine’ will be

⁴⁰Inspector General, Department of Defense. *U.S. and Coalition Efforts to Train, Advise, Assist, and Equip the Iraqi Police Hold Force*. DODIG-2018-147. Washington, D.C.: Department of Defense, 13th Sept. 2018.

⁴¹Morris, ‘Big Suck’.

⁴²Alasdair MacIntyre. ‘Ideology, Social Science, and Revolution’. *Comparative Politics* 5.3 (1973), pp. 321–342.

⁴³Hunzeker, ‘Perfecting War: The Organizational Sources of Doctrinal Optimization’, p. 610.

the one that leads to global thermonuclear war.⁴⁴

Adapting to the Future

Michael Howard has suggested that military organizations usually get the next war wrong, and so that the paramount thing is to predict it as closely as possible, and to adapt quickly once it started. General Dupuy, a senior officer in Vietnam and the revered founder of TRADOC was blunter: “[P]eople aren’t smart enough to see what we’ll need in the year 2000. The reason we aren’t smart enough to do that is that the people we ask in 1979...possess a 1979 mentality. So the Army they see out there is simply a reflection of the 1979 Army with some gimmicks”.⁴⁵

In this way, it is a mistake to confuse “learning the lessons of war” with military strategy. Precisely because of particularity and unpredictability, those lessons are unlikely to be adequate preparation for the next war. Moreover, hewing to them too closely is likely to restrain one’s creativity and lead one to “fight the last war.” It is for this reason that military strategy draws from history, literature, and the creative arts. Strategy between wars does best when it articulates political relationships and goals and attempts to shape military organizations in light of the wars they are likely to fight (necessitating shaping them away from wars they are not likely to fight). Strategy is not, therefore, a matter of adaptation, but of imagination.⁴⁶

5.4 The Paradoxical Utility of Forgetting

It is in light of strategy that the paradoxical utility of forgetting what is learned in war becomes clear. Because it is often unclear which “lessons” may be useful in the future, the cost of maintaining the entirety would be prohibitive. Forgetting what was learned can also be a reasonably effective way of preventing “fighting the last war.” To the extent that actual specific capabilities were lost after Vietnam, they were lost due to organizational selection pressures. In some instances, these capabilities had to be rebuilt again for Iraq. In most others, though, the needs of Iraq were sufficiently distinct that attempting to ape the Vietnam experience caused more harm than good.

One early critic of America’s counterinsurgency aversion inadvertently makes the case

⁴⁴This is also the most likely source of Kant’s ‘Perpetual Peace.’

⁴⁵Frederick W. Kagan. *Finding the Target: The Transformation of American Military Policy*. New York: Encounter Books, 2006, p. 51.

⁴⁶Lawrence Freedman. *The Future of War: A History*. New York: PublicAffairs, 2017, p. 287.

for the utility of forgetting. Krepinevich analogized America's purging of counterinsurgency knowledge as General Motors deciding it would no longer make cars in 1975, and then being told in 2002 to start making them again.⁴⁷ And yet, imagine how costly it would have been for GM to make a vehicle for thirty years with no market! Organizational forgetting – when it is done to repurpose scarce resources for a new strategy – is an adaptive response.⁴⁸

Indeed, the discourse of forgetting treats organizational memory as a choice without trade-offs. Rephrased in the language of scarcity, forgetting can be seen as a rational choice. If the price of AirLand Battle, NATO interoperability, extended deterrence, and ultimately the end of the Cold War was forgetting the lessons of Vietnam, was that worth it? It seems foolish to simply say no.⁴⁹ Moreover, we must include pathologies or highly-environmentally specific adaptations in our calculations. Strong adaptation to a particular war, as well as strong memories of it, can have a distorting affect on military discipline or the ability to adapt to future wars. While this can be useful for militaries likely to continually fight in the same terrain, is a fatal error for great power militaries.⁵⁰

Similarly, if organizational memory involved tradeoffs, the cost of “re-learning” must be taken into account. In both Vietnam and Iraq, the military quickly built a rapid procurement infrastructure to rush needed tools to the field and to speed adaptation and experimentation in the field. And yet, the “startup” costs of doing so seem minimal, and certainly far less than the cost of maintaining the rapid procurement capability for thirty years would have been.

5.5 Future Avenues of Research

This thesis, as an heuristic, theory-building case study, suggests future lines of inquiry to test its predictions and expand upon its inductively-built causal mechanisms. The most obvious first step would be to expand the study to other wars and to other countries. Due to the determinative role of organizational disruption, studying other militaries that activate or

⁴⁷Krepinevich, ‘Vietnam and Iraq: Why Everything Old Isn’t New Again’.

⁴⁸Charles J. Dunlap Jr. ‘Forget the Lessons of Iraq’. *Armed Forces Journal* (1st Jan. 2009).

⁴⁹Robert Killebrew. ‘Rebuilding the Army — Again’. *Armed Forces Journal* (1st Mar. 2013).

⁵⁰A close reading of histories and memoirs of the 1970s, when Vietnam war experience was most concentrated in the military, reveals a dark side to ‘experience and memory.’ Some units were so sure of their own experiences that they were unwieldy, even rebellious (Anderegg, *Sierra Hotel : Flying Air Force Fighters in the Decade after Vietnam*, pp. 48–9; Frank C. Carlucci. *Memorandum to the Deputy Under Secretary for Policy*. 26th May 1982. URL: <https://nsarchive2.gwu.edu/NSAEBB/NSAEBB46/document7.pdf>). Units heavily staffed by veterans had strong cultural attachments to their past experiences in ways that might hamper training, discipline, and especially modifying TTPs in favor of the demands of future warfare. At the same time, the same individuals might be dedicated to passing on knowledge and fixing the mistakes of the past- as in many things, there is a balance to be had.

inactivate military organizations at a much slower rate could be illustrative. The thesis also implies that organizational forgetting after conventional wars is likely a more powerful force than the current literature has reckoned. Potential examples include the 9th Tactical Air Command and the 77th Infantry Division (amphibious) after WWII and British colonial air policing.⁵¹ In any case, it is my hope that the theory and evidence offered here opens new and productive avenues for the study of learning and forgetting in military organizations.

⁵¹David E. Omissi. *Air Power and Colonial Control: The Royal Air Force, 1919-1939*. Manchester University Press, 1990.

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