



Preparing for the Fight Tonight

Multi-Domain Battle and Field Manual 3-0

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This is the second of three articles discussing multi-domain battle through the lens of U.S. Army Training and Doctrine Command. This article discusses the rationale and the approach for incorporating aspects of multi-domain battle into Field Manual 3-0, Army Operations, due to be published October 2017. In recognition of the centennial of American Expeditionary Forces entering World War I, the articles

incorporate relevant historical observations and lessons to help drive home the new and differentiate it from the old.

On 10 September 2001, the Army knew it would fight and win by conducting full spectrum operations, and in 2003, the opening of Operation Iraqi Freedom demonstrated U.S.

dominance on the battlefield.¹ In the following years, however, the force would struggle to adapt as the operational environments changed. The introspection that eventually followed led to new doctrine.

As the pace of change increases, the tension escalates between the need to prepare for future operations and the difficulty of anticipating operational environments. Resisting change, however, is not an option; the Army must adapt at least as fast as the Nation's adversaries change their ways of conducting operations. Even though we can anticipate some changes and forecast certain trends, many characteristics of future environments are unknowable. To mitigate this uncertainty, Army forces must be able to constantly adapt and innovate so we can fight and win in the environments we could face—within the next five years, or “tonight”; within the next five to ten years, or “tomorrow”; and in the future beyond 2030.

The Army needs to forecast mid- and long-term trends and prepare for them to the best of its ability, but also it needs to develop operational principles that can help guide adaptability and innovation during operations and training today. *Multi-domain battle* bridges all these requirements.

The Example of German Doctrinal Change in World War I

From the World War I German experience, it is clear that military success depends on an organization willing to learn, a central concept that can integrate innovation and adaptation, and the ability to proliferate and spur implementation across the force. German tactical success prolonged the war at great cost to the Allies even though German forces eventually lost.

In the summer of 1914, the opposing armies of both the Central and the Allied powers anticipated a short decisive campaign, based on their doctrine and tactics.² However, by December of that year, the doctrinal foundations of all combatants were found wanting. Armies adapted in the fight, establishing elaborate field fortifications spanning the entirety of the western front, because none of them could afford to sustain the casualty rates incurred in the first few months of the war. The race was on for new tactics and doctrine to break the stalemate—in a conflict that would claim over 8.5 million lives before an armistice ended the war.³

(Graphic on previous page courtesy of the U.S. Army)

Creating new doctrine in the midst of large-scale combat is a costly endeavor because doctrinal tactics are devised using trial and error and are paid for in blood. Among the armies of World War I, the Germans are considered the most successful in changing and implementing tactical doctrine during the war.⁴ They applied a dynamic process that used a central concept, complemented with innovation originating at the tactical level and empowered by an organization willing to learn.⁵

Initially, however, German forces mired themselves in rigid doctrine. “Halten, was zu halten ist,” meaning “hold on to whatever can be held,” reflected German military theory behind an inelastic first-line defense lacking any real depth.⁶ As the war progressed, the Allies evolved by effectively using massed artillery to support infantry assaults, with lethal results.⁷ Leading up to the summer of 1916, despite failing doctrine and an evolving battlefield, the German military resisted doctrinal changes, and its relative combat power suffered.⁸

It was not that German units were not trying. The failure was one of leadership. Those who survived the front lines were innovative and adaptive. As one German general quipped, “bullets quickly write new tactics,” but those new tactics were stifled at the local levels, failing to reach an organization in desperate need of best practices.⁹ Even senior staff in the German High Command had identified scalable examples of tactics that proved successful across the western front, but Gen. Erich von Falkenhayn, chief of staff of German forces, saw no need for such changes. It was not until Falkenhayn was removed, and Field Marshal Paul von Hindenburg and Lt. Gen. Erich Ludendorff arrived, that the German High Command would implement much needed change.

The leadership Ludendorff brought to the German High Command enabled the percolation of new ideas that would take hold throughout the force. By December 1916, the

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operations section of the German High Command had consolidated field reports and intelligence from across the western front to develop new doctrine. *The Principles of Command in the Defensive Battle in Position Warfare* established a benchmark of when the German military took on the core concept of “operational depth” and applied it as a learning organization.¹⁰

Throughout 1917, the Germans repeatedly frustrated French and British forces, who fought with dogmatic and formulaic tactical doctrine to disastrous effect. Germany’s response was the continued reexamination and evolution of its doctrine.¹¹ The learning paid off, as the first units to employ elements of *Principles* and other emerging German doctrine regained their relative fighting power advantages that had been in decline since 1915.¹² The Allies eventually recognized the value of Germany’s new doctrine, and they tried, without success, to incorporate aspects of it during the winter of 1917 to 1918.



The Need to Change Army Doctrine in 2017

Current U.S. Army doctrine effectively guides the relatively familiar low-intensity hybrid fights the Army likely would fight tonight, but that doctrine does not adequately address major combat operations. For example, at the time this article was written, doctrine did not sufficiently account for how to synchronize capabilities in sea, cyber, or space domains during large-scale combat operations against peer opponents. The revision to Field Manual (FM) 3-0, *Army Operations*, due to be published October 2017, will begin to correct this deficiency.

Some ideas percolate throughout the operating force and lead to change regardless of their source. An idea comes to the forefront usually because of conditions requiring urgent change. In war, as casualties

Field Marshall Paul von Hindenburg (left) was appointed chief of the General Staff with Gen. Erich Ludendorff (right) as his deputy 29 August 1916, following the failure of the German attack against Verdun and the subsequent resignation of Chief of the German General Staff Erich von Falkenhayn. Ludendorff was responsible for developing and enacting the Hindenburg Program, an effort to organize what remained of Germany’s depleted material and personnel resources in a new total national war effort. As part of this process, Ludendorff took the lead in revamping the army’s tactical doctrine that had become largely ineffective. Collecting observations during frequent personal battlefield circulation tours at the front, he developed and promoted a system of flexible defense that initially battered the French and the British armies in 1917. (Photo courtesy of Library of Congress)

mount and tactics fail, the urgency is clear and compelling. Generally, however, change slows down as a multitude of possibilities and probabilities circulates

in a force not engaged in major combat operations. In this murky environment, where leaders lack consensus about problems as well as solutions, change may seem less urgent and more difficult to achieve. Yet, it is in this period of possibilities and probabilities that the opportunity and utility for change exist.

Doctrine, as described in FMs and other doctrinal publications, guides Army forces committed to training, deploying, and operating around the world today—forces who could find themselves conducting

same time TRADOC is further developing multi-domain battle as a concept.

How the Current Force and Doctrine Developed

On 11 September 2001, the United States was thrust into a period defined by war and persistent conflicts. From Afghanistan and into Iraq, the U.S. military employed decisive force that led to quick initial victories and resulted in overwhelming domi-



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the fight tonight. *Concepts*, as described in U.S. Army Training and Doctrine Command (TRADOC) pamphlets, change the Army; the concepts TRADOC is using in 2017 represent how the Army might conduct operations in 2020 to 2040 (at the time this article was written, revisions were in development).

TRADOC concepts guide purposeful, useful, and meaningful change on a large scale to one of the biggest organizations in the world. The core groups who use TRADOC concepts for planning, however, represent less than one percent of the Total Army—people working on the Department of the Army staff, in acquisitions, or as part of the Army Capabilities Integration Center (ARCIC). Readers should keep in mind that TRADOC normally publishes concepts more than five years before their ideas are expected to evolve into the doctrine that guides operating forces. *The U.S. Army Capstone Concept*, TRADOC Pamphlet 525-3-0, for example, was published in 2012. It introduced a precursor to multi-domain battle that was called “cross-domain synergy,” in which forces would seek “complementarity ... in different domains [to include space and cyberspace] such that each enhances the effectiveness and compensates for the vulnerabilities of the others.”¹³ In the case of multi-domain battle, therefore certain aspects have been studied for the past five years. These validated elements are being integrated into FM 3-0 at the

nance in all domains. However, as the dust of Baghdad settled in late 2003, the doctrine that had prepared the Army for the next fight rapidly became inadequate for the conflicts the Army faced on the ground.

The Army spent the next few years designing, implementing, and fine-tuning principles, tactics, techniques, and procedures for use against an enemy enmeshed into the population with weapons we were not prepared to face. Slowly, just as the German army in World War I, the U.S. military came to realize doctrine needed to reflect current operational environments, as well as the pace of change.

For the next decade, joint forces focused almost exclusively on defeating improvised explosive devices and building capabilities needed for countering insurgencies. In 2006, the Army published FM 3-24, *Counterinsurgency*, to provide the doctrine operating forces needed (Army doctrinal literature consisted only of FMs until 2009; FMs now emphasize doctrinal tactics).¹⁴ The doctrine in FM 3-24 gave a central framework, and a point of departure, for a situation that had been rapidly changing. New leadership and surge forces applied the new doctrine, and ultimately the government of Iraq and Multi-National Forces–Iraq gained a position of relative advantage. These actions saved American lives, as fatalities dropped from 904 in 2007 to 149 in 2009.¹⁵

It is critical to understand that during the wars in Iraq and Afghanistan, the Army accepted risk to



modernization, both intellectually and financially. While the Army was growing counterinsurgency and security cooperation capabilities, our peer and near-peer adversaries were investing heavily in modernizing their capabilities to degrade and defeat the advantages U.S. forces had enjoyed since the end of the Cold War.

Starting in 2002, future Deputy Secretary of Defense Bob Work warned of emerging concerns over China, Russia, and Iran, which were actively modernizing anti-access/area-denial strategies.¹⁶ Through these strategies, Russia and China have developed considerable capabilities for constraining U.S. military strengths.

After over a decade of counterinsurgency and nation building, the Army introduced Army Doctrine Publication (ADP) 3-0, *Operations*, in 2011. ADP 3-0 set in motion a renewal for decisive action by introducing *unified land operations*, an evolutionary concept reflecting the progression from AirLand Battle and full spectrum operations.¹⁷ Unified land operations allowed for a previously discarded elements to be reintroduced. For example, the operational framework reintroduced *deep, close, and support* areas, recognizing lethality as fundamental to military operations, and the doctrine added two Army core competencies: combined arms



A Stryker Infantry Carrier Vehicle lies on its side after a blast from a buried improvised explosive device (IED) 6 January 2007 in Iraq. The Stryker was recovered and protected its soldiers on more missions until another bomb finally put it out of action. Joint doctrine focused on defeating IEDs and conducting counterinsurgency for most of the war in Iraq and Afghanistan until the introduction of Army Doctrine Publication 3-0, *Operations*, in 2011 that enlarged the scope of necessary capabilities for future conflicts. (Photo courtesy of the U.S. Army)

3-0 will drive necessary changes to both ADP 3-0 and ADRP 3-0, as well as the rest of Army doctrine. Multi-domain battle will be integrated into FM 3-0 in a way that Army operating forces can apply the doctrine *without making significant changes to the current force*.

The Force and Doctrine the Nation Needs

Multi-domain battle captures the idea that military success depends upon capabilities in the air, cyberspace, land, maritime, and space domains and in the electromagnetic spectrum. This is true for the Army and the other services, as well as our adversaries. From the perspective of U.S. forces, it is an idea that will help units avoid a position of relative disadvantage against a peer or near-peer adversary in critical geographic spaces around the world. Multi-domain battle guides closer coordination and integration of capabilities than ever before.

For example, the Army cannot depend on the Air Force to solve tactical problems in a dense, integrated air defense system environment when an enemy has superior long-range fires and capable intelligence, surveillance, and reconnaissance. Units that go to ground when making contact to await guidance or the delivery of airpower capabilities would likely be destroyed by massed artillery in a close fight.

While joint forces currently employ elements of multi-domain battle, the most egregious doctrinal void has been the lack of principles for multi-domain capabilities in large-scale combat operations. The Army and the other services must be able to converge capabilities across multiple domains in an integrated fashion to gain and then exploit the initiative. In sum, our doctrine needs to guide ready forces with converged and integrated capabilities spanning across domains, as compared to synchronizing a federated set of stove-piped capabilities.

The revision of FM 3-0 will not fill all the doctrinal gaps. Rather, it will provide guidelines to commanders,

maneuver and wide area security.¹⁸ ADP 3-0 made old terms of operational art and science new and relevant again. Army Doctrine Reference Publication (ADRP) 3-0, *Operations*, did the same, in greater detail. However, the Army has not had an FM 3-0 *Operations* manual focused on large-scale combat operations at the theater army, corps, or division level since 2011.

Despite a few updates since 2011 and a significant revision in 2016, both ADP 3-0 and ADRP 3-0 still offer only limited principles for large-scale combat operations. The need for a new FM 3-0 to address this doctrinal shortcoming in the interim was clear. The new FM



staffs, and leaders as they employ multi-domain capabilities into training, planning, and operations. It will be up to the leaders of today to innovate, iterate, and adapt this doctrine before a major armed conflict, should it occur.

Unified Land Operations and Multi-Domain Battle

The emerging concept of multi-domain battle, therefore, is being designed to help shape the Army for anticipated challenges. As a TRADOC concept, multi-domain battle will be about aligning requirements to develop *future* capabilities required to win in the future fight. However, what of the challenges the Army may face tonight? In Europe, the Pacific, and the Middle East, our adversaries have adapted their capabilities to challenge advantages to which we have become accustomed. We must begin the process of change now by recognizing ways to improve and innovate with the technology and capabilities we currently have, and more important, we must begin to shift culturally to a new mind-set for operational problems.

Two sections of FM 3-0 will focus specifically on key elements of multi-domain battle. The first element will

Field Manual 3-0, *Army Operations*, will provide doctrine to help Army leaders anticipate requirements and synchronize capabilities in land, air, sea, cyber, and space domains during large-scale combat operations against peer opponents in the present and near future. (Graphic composite by Jim Crandell, Army University Press. Background picture of Call of Duty: Black Ops 3-OFFICIAL TRAILER & BREAKDOWN!, Flickr.com. Foreground photo by Cherie A. Thurlby, Department of Defense)

be the extended multi-domain battlefield, to be described in a section on anticipated operational environments. It will integrate space, cyberspace, the electromagnetic spectrum, and the information environment into how commanders view the overall operational environment. It will say that all battle is multi-domain. The doctrine will guide commanders and staffs in how to converge and integrate multi-domain capabilities during operations.¹⁹

The second element will consist of an updated operational framework for conducting unified land operations, related to understanding an operational environment. Enemies are likely to initiate hostilities from an initial position of relative physical, temporal, and cognitive advantage, as well as other factors peculiar to the land domain

across the continuum of conflict.²⁰ The physical aspect is straightforward: geography, terrain, infrastructure, weapons ranges, and so on. The temporal aspect introduces the added complexity of wide-ranging time-based variables that affect an operation, requiring commanders to think far beyond just synchronization. Virtual aspects will include activities related to information, cyberspace, and electronic warfare. Finally, the cognitive aspect will relate to understanding the enemy and ourselves and also the perceptions and behaviors of populations. Cognitive considerations will be informed by the physical, temporal, and virtual aspects of the operational framework.

To address probable enemy positions of relative advantage, FM 3-0 will discuss the necessity of synchronization, capabilities convergence, and high operational tempo while accepting risks more substantial than those of counterinsurgency or stability tasks.²¹ Sound methods of mission command, mobility, reconnaissance-in-depth, protection, and sustainment will be critical to the successful prosecution of large-scale operations. In addition, commanders and staff must bring innovation and flexibility to how they employ tempo and synchronize maneuver, cross-domain fires, and information actions. It is through the convergence of these effects across multiple domains that the Army will prevail against a peer enemy.

In the multi-domain battle concept, joint forces will employ speed of recognition, speed of decision, and speed of action to exploit windows of domain superiority with force-oriented operations to destroy key enemy capabilities. The requirements and considerations of multi-domain battle will provide the framework by which commanders and staffs employ these actions to defeat the enemy. A multi-domain concept emphasizing the opportunity to achieve well-synchronized, high-tempo offensive action, potentially in the form of deep maneuver, will help Army forces defeat enemies with superior long-range fires and air defense capabilities.²²

Conclusion

We are in the fortunate position of having the humility to accept that we need to improve the way we conduct operations, even though we cannot predict the next fight with absolute certainty. We are revising our operational doctrine, beginning with FM 3-0 in October 2017, so forces can prepare to face the trends that are evident and the unpredictable changes that will arise. From here, it is up to commanders and staffs, professional soldiers, and leaders to apply and further refine doctrine so that we are all ready to fight and win. Victory starts here. ■

Notes

1. Field Manual (FM) 3-0, *Operations* (Washington, DC: U.S. Government Publishing Office [GPO], 2001 [now obsolete]), 1-4, cited in Bill Benson, "The Evolution of Army Doctrine for Success in the 21st Century," *Military Review* 92, no. 2 (2012): 5, accessed 19 July 2017, http://usacac.army.mil/CAC2/MilitaryReview/Archives/English/MilitaryReview_20120430_art004.pdf. Note: Before 2009, all Army doctrine was contained in FMs. A doctrine reorganization effort called "Doctrine 2015," begun in late 2011, created Army doctrine publications (ADPs) and Army doctrine reference publications (ADRP)s for fundamental principles, while FMs became limited primarily to tactics. When published in 2001, FM 3-0 contained "capstone" operational doctrine; the forthcoming 2017 version will not be equivalent. See ADP 1-01, *Doctrine Primer* (Washington, DC: U.S. GPO, 2014).

2. Benjamin Maher, "The Origins of Operational Depth in the First World War" (monograph, School of Advanced Military Studies, Fort Leavenworth, KS, 2016), 18.

3. John Graham Royde-Smith, "World War I, 1914–1918: Killed, Wounded, and Missing," *Encyclopaedia Britannica Online*, accessed 21 July 2017, <https://www.britannica.com/event/World-War-I/Killed-wounded-and-missing>.

4. Timothy Lupfer, *The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War*, Leavenworth Papers no. 4 (Fort Leavenworth, KS: Combat Studies Institute, 1981), viii.

5. Robert T. Foley, "A Case Study in Horizontal Military Innovation: The German Army, 1916–1918," *Journal of Strategic Studies* 35, no. 6 (December 2012): 11.

6. Maher, "The Origins of Operational Depth in the First World War," 28.

7. Foley, "A Case Study in Horizontal Military Innovation," 11.

8. Lupfer, *The Dynamics of Doctrine*.

9. Wilhelm Balck, *Development of Tactics [in the] World War*, trans. Harry Bell (Fort Leavenworth, KS: General Service Schools Press, 1922), 14.

10. Lupfer, *The Dynamics of Doctrine*, 13.

11. *Ibid.*, 35.

12. Lupfer, *The Dynamics of Doctrine*.

13. U.S. Army Training and Doctrine Command (TRADOC) Pamphlet 525-3-0, *The U.S. Army Capstone Concept* (Fort Eustis, VA: TRADOC, 2012), 38.

14. FM 3-24, *Counterinsurgency* (Washington, DC: U.S. GPO, 2006 [now obsolete]), superseded by FM 3-24, *Insurgencies and Countering Insurgencies*, 13 May 2014.

15. "Operation Iraqi Freedom, Iraq Coalition Casualties: Fatalities by Year," [icasualties.org](http://icasualties.org/Iraq/ByYear.aspx), accessed 21 July 2017, <http://icasualties.org/Iraq/ByYear.aspx>.

16. Andrew Krepinevich, Barry Watts, and Robert Work, "Meeting the Anti-Access and Area-Denial Challenge," (research study, Washington, DC: Center for Strategic Budgetary Assessments, 2003).

17. ADP 3-0, *Unified Land Operations* (Washington, DC: U.S. GPO, 2011 [now obsolete]), cited in Benson, "The Evolution of Army Doctrine for Success in the 21st Century."

18. ADP 3-0, *Unified Land Operations* (2011).

19. Unpublished draft, FM 3-0, *Army Operations*, publication expected October 2017.

20. *Ibid.*

21. *Ibid.*

22. *Ibid.*