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Multi-Domain Operations in Context

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Introduction

During the wars in Iraq and Afghanistan, the United States Army undertook a comprehensive review and analysis—demonstrated principally by the Russian New Generation Warfare study—of the rise in aggressive behavior exhibited by potential great-power competitors (then called near-peer competitors).¹ This resulted in several disturbing observations.

First, but not surprising, there are nations (most notably Russia and China) that have studied the American way of war and developed concepts and doctrine to counter traditional U.S. advantages. Second, adversary nations have invested in capabilities to deny the United States and our allies access to theaters where we might want to operate; this is known as anti-access and area denial, or A2AD. Third, countermeasures taken against the United States and our allies are not mirror images of our own capabilities. Sophisticated counter-capabilities have been developed that are likely to gain dominance in operational domains where there is either parity or where the United States is deficient. Fourth, the framework of the competitive space has changed dramatically. Where once the tactical and operational definition of deep, close and rear was limited to a particular theater, today's framework is expanded in both time and space and includes a less well-defined area of operations. Finally, the psyche of America, and arguably that of our western allies, is predominantly binary, i.e., if there is no war, then we are at peace. This notion is not shared by most of the non-western world, certainly not by our most provocative great-power competition. On the contrary, for many nations, competition of states and ideologies is a constant. Periodically, competition escalates into highly-lethal armed conflict. However, rather than having peace upon cessation of armed hostilities, there is actually a return to competition—shaped by the results of the armed engagement, but still a competitive state.

These observations point to the necessity of revisiting our existing doctrine to determine if a new azimuth needs to be charted and, if so, what form it ought to take. In point of fact, the Army's development and publication of the concept of Multi-Domain Operations (MDO) is that azimuth.²

MDO is not mature doctrine, nor should it be regarded as such. Rather, it is a concept that, while well-researched and extensively studied, is still maturing. This concept necessarily returns the U.S. military to a time when each higher echelon (division, corps, theater Army) has a unique task and purpose across domains, the successful prosecution of which enables the success of subordinate formations.

Our most recent combined arms maneuver experience at the corps level was the opening phase of Operation Iraqi Freedom in 2003. This essay compares that operation with the operational environment of an MDO engagement, seeking to provide crucial insights and so help to inform current discussions of MDO.

Domains

The land and maritime domains have been recognized for centuries as the means to project economic, military and political power. With the rapid advance of aviation, the air domain has become equal to the land and maritime domains in importance. Effective collaboration and cooperation among these three domains

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have been central to effective military campaigns since the latter half of the 20th century. While the medium of these domains is different, each is limited by endurance and geography; they each must occupy contiguous physical space to be mutually supporting.

Advances in science and technology continue to lead to new and impactful capabilities. Like advances in airpower, advances in the technologies first of space and then of cyber have led to their recognition as separate and distinct operational domains.

The use of space and space-based systems has led to economic and military advances that have become near-essential. Satellite imagery allows for highly-accurate mapping of the earth's surface for military and commercial use. Space-based surveillance platforms provide overhead observation of areas unconstrained by geographic and political boundaries. Global Positioning System (GPS) capabilities give accurate position location for everything from family automobiles to military vehicles. Access to and control of the space domain has become essential to the execution of operations ranging from logistics support to humanitarian assistance to major combat.

The cyber domain also penetrates everyday life. From management of power grids to automated command and control to influence operations that use social media, the cyber domain has become critical enough that, if it is not understood, defended and used to our advantage, it can in fact yield adverse results. Additionally, the anonymity that is frequently associated with cyber activity is a powerful tool; bad actors can almost invisibly cause negative effects that are all the more damaging because their uncertain origin can lead to delayed decision and reaction.

Unlike land, air and maritime domains, space and cyber domains have few limitations as to geography or boundary. However, taken together, these five domains comprise the operational environment for which leaders and units must be trained in the 21st century.

MDO Framework

Before delving into corps operations, it is necessary to understand the concept and framework of MDO. Primarily, it describes the operational and strategic context of a competitive world order. It is not the world as we would like it to be; it is the world as it exists. It is a world made up of actors who might not agree that democracy should be the preferred means of governing, nor that free trade and capitalism are the preferred global economic condition. These actors have their own thoughts about governance and economics, which are sometimes at odds with American ideals. They act in accordance with the belief that the only means by which they can gain greater global influence, wealth and stature is through competition with the United States and other like-minded governments.³

This competitive reality is an important piece of the MDO framework. Our ongoing competition with Iran provides a good example. Unlike conventional thinking—that peace is the absence of war—the framework takes a more Clausewitzian view of the struggles among nations with differing interests and ideologies.⁴ These differences, and the desire to advance one's own interest, suggest that competition among states, particularly those with long and proud political and economic histories (such as Russia and China), is a constant. Competition which seeks advantage across multiple domains does not automatically lead to armed combat. In fact, if strategic goals can be achieved without a lethal exchange, so much the better. Of course, conflict does sometimes escalate to a kinetic fight, i.e., a war. However, when the shooting stops, regardless of outcome, a renewed competition (probably under different conditions) takes over—one that is again manifest across domains.

The MDO framework also includes strategic and operational depth. At the tactical level, the description of deep, close and rear are useful constructs to describe that which must be protected, contested and fought over. The MDO concept recognizes that deep, close and rear do not adequately describe the competitive environment of the 21st century. Accordingly, while maintaining the tactical definition of deep, close and rear, the concept expands the space to include operational and strategic depth on either side of the line of scrimmage. This is a highly impactful expansion that brings the homelands of opposing nations into the contested area. This introduces the likelihood that non-geographic domains (space and cyber) will be used to impede support, slow reinforcement, gain advantage and influence the tactical fight well before that fight is joined.⁵

It is important to note that the MDO concept offers solutions to the dilemmas presented by great-power adversaries with advanced capabilities across domains. The U.S. military must be postured for continuous competition, defeating information and misinformation campaigns, and demonstrating a credible deterrent. If deterrence fails,

we must engage in operations to penetrate the adversary's long-range anti-access capabilities. Once penetrated, we can initiate operations to dis-integrate adversarial conventional forces by destroying their cohesion and their ability to provide mutual support. Exploitation is continuous across domains and echelons, first as the advantages gained through dis-integration are realized and second as we maneuver to positions of advantage to isolate and defeat adversary land forces. Finally, we must be prepared to return to competition, shaped by the outcome of the campaign.⁶

On a broad level, the implications of the MDO concept are profound and complex—and consequently worthy of study and debate as to its efficacy. It introduces terms which are not traditionally used in a military context; in any discussion, terms need to be well-defined and uniformly understood. Because MDO necessarily has joint application, the language it employs must be codified in joint concepts and doctrine. MDO itself, and its implementation as doctrine, requires leaders and units who are supremely well-trained in its execution. This is a tall but necessary order.

Corps Operations Across Domains

Those of us who participated in the initial combat operations of Operation Iraqi Freedom (OIF) will quickly recognize that it was not the type of multi-domain operation described above. Soldiers had the luxury of deploying from sanctuary and conducting RSOI (reception, staging, onward movement and integration) in theater with few threats. U.S. military forces enjoyed near total dominance of the space, air and maritime domains. If there was a cyber domain, it was in its infancy, except perhaps for an integrated information campaign. The land domain was the only one that was truly contested, but U.S. forces were still able to conduct ground operations at times and locations of their choosing. Future corps commanders will not be so fortunate.

Future commanders are likely to be at a disadvantage from the outset. It will be difficult, if not impossible, to mask the movement of forces, regardless of service. If forces are already in theater, they are likely to have to disrupt, delay and deceive to buy time for the buildup of combat power forward. It is also likely that movements will be contested at their origin, with home station railheads, airfields and ports made less efficient due to the effects of directed cyberattacks on control systems and infrastructure. Tracking of movements will be made difficult by disruption of position location devices. Purposely deceptive information campaigns—to include social media—will confuse the source of disruptions. Uncertainty will be injected into public and political consciousness as to the necessity of operations. A2/AD will begin at home.

During OIF I, the United States enjoyed air supremacy due to effective shaping of the air domain before the start of ground operations. Close air support was readily available to ground forces. Junior leaders became “joint warriors” who were highly-skilled at the integration of USAF, Navy and Army air assets into ground maneuver.⁷ It is unlikely that this will be the normal case against a great-power adversary in any domain. Each domain will have to use its unique reconnaissance, offensive and defensive capabilities in a fight for superiority in their own domain in order to gain the capacity and flexibility to combine with other domains in the joint fight. Even when cross-domain capabilities are employed, it is likely to be a temporary rather than permanent advantage. Adversaries will likely be fighting to eliminate any opposing advantage and to create their own. The cat-and-mouse struggle for domain advantage will be continuous, ever-changing and central to the corps fight.

Offensive maneuver and sustained tempo are prerequisites for successful corps campaigns, regardless of concept. Maneuver and tempo are dependent on capability, intent and situational awareness. None of us who experienced the debilitating effect of a three-day sandstorm in early April of 2003 will ever forget how the situational awareness we had previously enjoyed was impacted.⁸ Although visually-impaired, we still had the advantage of a “thin fielding” of GPS devices on which to rely, yet the capacity for offensive maneuver was limited. Moreover, the dust-induced grounding of aviation assets reduced the effectiveness of combined arms operations, while the logistics flow, vital to continued offensive action, slowed to a crawl. With GPS denied and the employment of effective deceptive techniques, the MDO fight might seem like being stuck in a sandstorm that never ends, continually fighting for situational understanding and seeking opportunity for complimentary actions across domains. Fighting an enemy with air, space and cyber parity will challenge the corps commander and his staff to find ways and means to create opportune conditions for subordinate units to engage in coordinated and independent kinetic actions. The future corps will truly be in a fight from home station onward.

During OIF I, U.S. and allied formations used the principle of mass to great advantage. They were able to physically mass at will without fear of response. Mass, responsive logistics and superior small unit lethality were keys

to the rapid advance to Baghdad and the ultimate success of that phase of the operation. Against a great-power adversary, given the lethality of modern and developmental lethal means, physical mass will be a recipe for disaster. This includes the threat to any massed logistics formations. In fact, any significant signature, be it visual, thermal, acoustic or electronic, will invite a response. Formations will learn to routinely mass effects while remaining widely dispersed in time and space. This is nothing new to the U.S. Army. Artillery units have always been adept at massing fires while remaining dispersed by location. Now, however, that idea must be expanded across the force and across capability—and with better execution than that of any potential adversary.

One of the lessons of OIF I is that victory through combat, however quick, however decisive, is temporary. Post-conflict relationships always return to some form of competition. While the United States was intending to give the Iraqi people an opportunity for democratic rule and participatory government, there were people with other ideas. Members of the displaced regime saw an opportunity to extend their power and influence through an armed insurgency that took advantage of their relationships with the tribes with whom they had had pre-war relationships. The Shia majority saw the governmental vacuum as an opportunity to flex their own insurgent power and solidify a position as the majority—and therefore ruling—political entity in the country. Iran saw the fall of Baathist regime as an opportunity to extend their reach across the region. The list of opportunists goes on. The lesson that MDO addresses is that a return to competition under different and only partially-predictable conditions is probable, regardless of the results of armed conflict.

In the case of OIF I, there was pre-hostilities competition leading up to ground combat operations. Competitive posturing gave U.S. forces positional and logistical advantages in theater, while pre-war training in the desert environment provided relevant skills and confidence. Across all phases of the operation, U.S. dominance across domains was absolute and permanent. Across the corps (and synchronized with the Marine Expeditionary Force on the right flank), the joint force was able to penetrate, dis-integrate and exploit with relative ease due to its superior lethality, well-trained and well-led Soldiers and a relentless logistics support system which anticipated needs. Great-power competitors have studied this success and taken definitive steps to eliminate the advantage. This is where MDO, which is the conceptual rebalancing of U.S. military thinking for an uncertain future, comes into play.

Mission Command

It is said that mission command is the art and science of decisionmaking.⁹ In the case of MDO, more science will demand more art. Dispersed operations with contested networks and communications will demand intimate understanding of intent throughout formations so that intent can be carried out in the absence of definitive direction.

If cross-domain opportunities will be time-limited and temporary, then leaders will be compelled to understand and act with certainty even when faced with uncertain circumstance. Leaders at every echelon will be expected to look for and act on opportunities within their capability and within acceptable risk. Mission command will increase in importance on the MDO battlefield.

It is unlikely that the mission command tools of today will meet the demands of tomorrow's MDO environment. It would be difficult and perhaps impossible for a single person to understand, visualize, describe and direct across five inter-related domains in real time, but there is also not currently any contemporary tool or technology which would enable one to do so. There are efforts to provide multi-sensor, multi-shooter solutions across services and capabilities; technical solutions that can match sensors to targets to shooters are necessary, but they are insufficient to fully solve a commander's problem of multi-domain battlefield visualization and anticipation of opportunity. It is not yet clear how or if a commander with responsibility for the multi-domain fight can provide guidance and direction to an artificial intelligence algorithm that is designed to ease his cognitive load.

While MDO matures and makes its way into Army and joint doctrine, the tools, techniques and training of leaders in the art and science of mission command must mature at the same pace, lest we have a concept without practitioners.

Conclusion

MDO is a maturing concept, not joint or Army doctrine. While it offers a glimpse of an operational environment and great-power competition, it still demands experimentation, discussion and debate.

The five operational domains accepted by the U.S. military are as varied as are the services and commands that operate within them. The ability for commanders to visualize and direct cross-domain actions that create opportunities for their subordinate commands is not pre-ordained. The art, science, tools and training of mission command must co-evolve with the MDO concept for it to be executed.

The MDO framework reflects the reality of 21st century competition among nations and trans-national actors. The framework appropriately adds significant depth to the operational field of action to the extent that one's home country is in play. One can debate terms and definitions, but it would be irresponsible to not recognize that persistent competition (kinetic, non-kinetic and in depth) is a condition which emerges from advanced technologies in the hands of those nations with political, economic and social ideologies in opposition to those of the United States.

Operations during OIF I juxtaposed against the operational and technical projections of the MDO concept provide a window into how difficult such operations might be—and the actions that must be taken to turn good ideas into the positive momentum that can enable an executable doctrine.

Finally, and perhaps most importantly, the U.S. military must find a formula by which to balance near-term readiness with future capability. Once committed to a conflict, the nation rightly expects its military to win—and win we must—today, tomorrow and well into the future.



General William S. Wallace retired from active duty with the Army on 1 January 2009 after more than 39 years of active service that spanned five decades. During his career, he commanded at every level from platoon to corps and, on two separate occasions, led Soldiers in combat. In 2003, as the V Corps Commander, General Wallace led the coalition attack to Baghdad in Operation Iraqi Freedom. In 1972, he served as a military advisor in Bac Lieu Province of Vietnam. General Wallace's last assignment was as Commander, U.S. Army Training and Doctrine Command. General Wallace holds MAs from the Naval Postgraduate School in Operations Research, Salve Regina University in International Relations and from the Naval War College in National Security Affairs. He is a member of the U.S. Army's Fort Leavenworth Hall of Fame. In 2018, General Wallace was selected as a Distinguished Graduate of the United States Military Academy at West Point.

Notes

- ¹ Asymmetric Warfare Group, "Russian New Generation Warfare," version 2.1, *CALL Handbook* no. 17-09, April 2017.
- ² U.S. Army Training and Doctrine Command (TRADOC) Pamphlet 525-3-1, "Executive Summary," in *The U.S. Army in Multi-Domain Operations 2028*, 6 December 2018.
- ³ TRADOC Pamphlet 525-3-1, "Executive Summary."
- ⁴ Carl von Clausewitz, *On War*, trans. and ed. Anatol Rapoport (London: Penguin Books, 1968).
- ⁵ TRADOC Pamphlet 525-3-1, version 1.5.
- ⁶ TRADOC Pamphlet 525-3-1, "Executive Summary."
- ⁷ Greg Fontenot et al., *On Point: The U.S. Army in Operation Iraqi Freedom* (Fort Leavenworth, KS: Combat Studies Institute, 2004).
- ⁸ Greg Fontenot et al., *On Point: The U.S. Army in Operation Iraqi Freedom*.
- ⁹ Department of the Army, Army Doctrine Publication 6-0, *Mission Command* (Washington, DC: U.S. Government Printing Office, 17 May 2012).



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