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Experimentation: The Road to Military Discovery

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In most cases of peacetime military innovation, technological developments played an enabling or facilitating role in precipitating fundamentally new and more effective ways of fighting. In a narrow and specific sense, such innovative developments were revolutionary. Yet the underlying technologies themselves (the internal combustion engine, radio communications, radar etc.) as well as the new military systems to which they gave birth (airplanes, tanks, amphibious landing craft, aircraft carriers, radar and so forth), formed only a part of these innovations, if not the smallest part...(Countries) still had to integrate advanced weapons systems with appropriate tactics, operational concepts and doctrines in order to realize the full potential of new ways of fighting. There was nothing inevitable about the outcomes.”

—Barry Watts and Williamson Murray
in *Military Innovation in the Interwar Period*

After 16 years of waging counterinsurgency (COIN) wars in Afghanistan and Iraq against terrorists and insurgents, the US national strategy is increasingly undermined and even threatened by what has been termed *4+1*. The *4+1* threats are Russia, China, North Korea, and Iran, plus the threat of violent extremist organizations (VEOs) and their innovative, information-led strategies that include “little green men,” “grey zone confrontations,” and even threats of nuclear attack on the US homeland. The nature of these threats is such that the Joint Force is re-focusing its thinking on how best to fight high-end competitors employing complex or hybrid mixes of capabilities and strategies. To counter such threats, the Army and Marine Corps have drafted a [multi-domain battle concept](#) (or MDB, which comprises air, land, sea, space, and cyber).

Even as MDB is being integrated in doctrine such as the [Army’s new FM 3-0, Operations](#), Generals Milley and Neller—the respective Army and Marine Corps Service chiefs—are fully aware that new concepts must be rigorously scrutinized through extensive war gaming and experimentation to validate their feasibility across the forces.¹ Thus, the US Army is spearheading

¹ See Kevin Woods and Tom Greenwood’s forthcoming article, “Multi-Domain Battle: Time for a Campaign of Joint Experimentation,” *Joint Forces Quarterly* (Jan 2018).

a multi-year experimentation campaign in the European and Pacific theaters to assess if MDB is a viable concept for addressing 21st-century security threats.

Developing, validating, and ultimately implementing warfighting concepts is extremely challenging for any military Service. Historically, not every concept has been successfully implemented, as previous failures with the Pentomic Division, Active Defense, Rapid Decisive Operations, Effects Based Operations, and Air Sea Battle demonstrated. These examples suggest we should steel ourselves for set backs, disappointments, and failures. One way to hedge against potential setbacks and to increase the probability of success is to involve at the outset a broad array of stakeholders in the experimentation process.

The Army, seeking to move beyond COIN and Unified Land Operations doctrines, has embraced MDB as a coherent warfighting concept that employs lethal and survivable combat formations in full-spectrum operations to prevail against potential adversaries. While the US military remains the pre-eminent global force, US dominance on land, sea, and in the air has eroded. Potential adversaries have made enormous strides in modernizing their forces and their ability to find, fix, and engage US power projection forces away from the US homeland. This threatens to reduce America's future freedom of action and to increase risk to unacceptable levels. The relative changes in capabilities between the US Services and the 4+1 threats lead the Army to believe that MDB, or some other new concept, is necessary for the future force.

The upcoming experiments will allow the Army to test MDBs overall utility through Multi-Domain Task Forces (MDTF)—newly created land-based formations of unspecified size that are capable of cross-domain operations. Such experimentation can explore how to defeat threat anti-access/area denial (A2AD) strategies over contested operating areas to deter future adversaries and to create opportunities. MDTFs could increase the persistent overseas peacetime presence of US forces (during the “competition phase short of conflict”) and after hostilities commence. But for MDTFs to be effective, they must demonstrate that they are survivable against enemy multi-domain attacks: they must be composed of stealthy and highly mobile forces that can hide, stay light, and remain agile or they must occupy hardened positions, which will likely require significant investment in fixed infrastructure that some partner nations may not welcome.

Upcoming experiments could help illuminate the trade-offs required by US Army MDTFs in terms of lethality and survivability (force protection) and whether the desired degree of persistence (forward presence) appreciably advances a Joint Force Commander's campaign plan at a sustainable cost in manpower, resources, and alliance relations. Additionally, the insights gleaned from the experiments should help the Army determine what changes may be required to Service doctrine, organization, training, materiel, leaders, people, and facilities as the Army tailors MDTFs for employment in disparate theaters with unique and demanding requirements.

Although the Army is leading the MDB war gaming and experimentation campaign, the effort's outcome will depend on successfully incorporating four additional stakeholders. First is the Chairman of the Joints Chiefs of Staff (CJCS), General Joseph Dunford, and the Joint Staff, who, under Title 10, Code 153, are responsible for "formulating policies for concept development and experimentation for the joint employment of the armed forces...identifying new joint military capabilities based on advances in technology and concepts of operation needed to maintain the technological and operational superiority of the armed forces; and recommending investments and experiments in such capabilities to the Secretary."

With the defunct Joint Forces Command no longer driving and shaping the experimentation process, the CJCS and his staff are trying to leverage "bottom up" Service-led experimentation that focuses primarily on niche warfighting capabilities before grappling with thorny Joint and multi-Service actions required for successful cross-domain operations. This approach could make the integration of joint priorities into future experiments problematic.

The current experimental design for upcoming Joint Warfighting Assessments 18.1 and 19.1 has the Services shouldering most of the effort, with limited participation from flag officers (and their staffs) serving at joint commands who could provide rich insights into MDB's theater-wide implications at the operational and strategic levels. Their real-world experience could also help illuminate the optimum organization for joint headquarters that may conduct MDB operations, if those headquarters should be temporary or permanent organizations, and what, if any, additional changes may be necessary to streamline traditional Cold War-era relationships between geographic and functional commands. Ultimately, MDB, like any Service (or in this case

two-Service) concept, will require a joint sponsor, so the Chairman and Joint Staff's participation in the concept development process is essential to progress.²

The Air Force, Navy, and Marines are the second group of critical stakeholders who will be active participants (to varying degrees) in the upcoming experiments. As the warfighting experts in their respective mission domains—air, sea, and the littorals—the Army's sister Services rightfully believe they bring critical capabilities to the MDB fight. But, will their capabilities become organic to the MDTF structure—making the MDTF more joint than US Army-centric? Or, will the other Services remain mostly an “outside” force (remaining outside the enemy's A2AD envelope) and responsible for penetrating the adversaries' shields with scalable force packages that can bolster widely distributed MDTFs with additional mass and reinforcing precision fires to prevent MDTFs (i.e., the “inside” forces) from being neutralized or destroyed? To what degree will MDTF commanders be able to leverage Air Force, Navy, and Marine Corps assets presently forward deployed/forward based overseas to create the desired effects? Will a laborious and time-consuming Request for Forces process be necessary before these assets are placed at the disposal of MDTF commanders or will they be permanently “on-call”?

Special Operations Forces (SOF) and DoD's interagency partners are the third group of stakeholders that should participate in the upcoming MDB experiments. Both provide unique capabilities and have sizeable numbers of personnel operating overseas during peacetime in areas where future MDTFs might be deployed and employed. Determining the optimum relationships among SOF, interagency actors, and MDTFs will be important and will help determine if the former can feasibly serve as enablers and advance party elements before MDTFs begin arriving in theater. More importantly, given the MDB White Paper's emphasis on deterrence during the “competition phase short of conflict,” should these elements play more substantive roles in helping execute cyber, information and unconventional activities? For example, theater-wide deception plans undertaken to mask MDTF's real footprint with ghost signatures might necessitate that these elements discharge an enduring and clandestine role beyond their traditional security cooperation and “white world” US embassy functions.

² The Joint Staff conducts wargames termed Global Integrated Exercises, but these events are less about trying to develop through experimentation optimum joint warfighting concepts for the 2035–50 timeframe than they are about addressing near-term threats that could impact multiple combatant commands.

Finally, integrating US friends, partners, and allies into the MDB concept deserves to be examined in detail during the upcoming experiments because this last group of stakeholders might, ultimately, be the most important. While MDB represents a potential “leap ahead” warfighting approach, the United States must be careful not to create a new capability gap with its partners or degrade interoperability that it has spent decades developing. Moreover, without basing, overflight rights and the support of host nation populations—it is difficult to conceive how MDTFs can be operationalized in the Pacific and elsewhere. Avoiding a “Yankee go home” backlash seems fairly obvious; however, less clear may be the inherent advantages to be accrued from “internationalizing” or organizing MDTFs as coalition formations—a mosaic of civil-military networked enterprises—that are regionally based to resist anti-western hegemony.

Obviously, no single experiment, wargame or table top exercise can delve into all of MDB’s nuanced dimensions. That is why each of the four key stakeholder groups discussed here must view the upcoming Joint Warfighting Assessments as “voyages of discovery” to be undertaken as part of a multi-year campaign. Moreover, it is imperative that stakeholders become involved at the beginning of the experimentation process so they can benefit from the collective learning that will occur as the MDB concept is refined and strengthened or as a new path is blazed toward a more effective and enduring warfighting concept.