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# THINKING AND CODIFYING:

## The U.S. Army Operating Concept and Army Warfighting Challenges

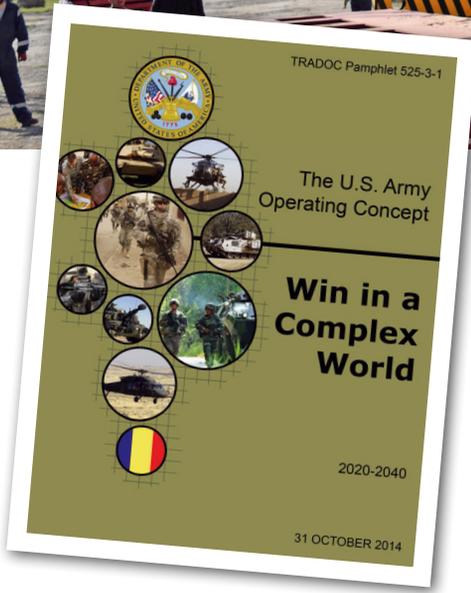
**Editor's Note:** The views expressed in this article are those of the author and do not necessarily reflect the official policy or position of the U.S. Department of the Army, the U.S. Department of Defense, NATO, or any of their other agencies.

IN 1991, THE DISSOLUTION OF THE SOVIET UNION posed a welcome dilemma for Western militaries. For decades, they had been structured primarily to meet the needs of the Cold War, but the sudden absence of an overarching adversary required the development of a new organizing principle. The Chief of Staff of the U.S. Army at the time, General Gordon R. Sullivan, initiated this re-alignment by directing Training and Doctrine Command (TRADOC) to lead the Army's effort to begin "thinking and codifying itself" for the new era.<sup>1</sup> Although the security outlook today is somewhat different than it was twenty-five years ago, it is similar in the sense that once again we must take stock

of the situation and alter our structures and practices accordingly. Or, to borrow Sullivan's phrase, Western militaries need to think about what they must do and then codify how they will do it.

IN BROAD TERMS, institutional "thinking" is manifested in concept documents, the insights from which are then "codified" in doctrine. The natures of these respective functions cause concepts and doctrine to operate within different time horizons. To be useful, concepts should peer far enough into the future so that the insights derived can be applied to generate new capabilities. Conventional wisdom holds that the size and complexity of military organizations and the long development period associated with modern weapons requires concepts—at least those that pertain to the entire force rather than just some smaller sub-set—to look as far as twenty years into the future. Doctrine, by contrast, is grounded





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in the present, setting out how we wish to use existing capabilities. Put differently, concepts imagine the future in order to guide present decisions, while doctrine adapts the legacy of past decisions—in the form of our current structure and capabilities—to address today's military problems.<sup>2</sup>

Such, at least, is the theory, but several factors are making concepts more like doctrine. The cost of weapons, infrastructure, and personnel are rising faster than budgets, meaning that new capabilities constitute a smaller share of our military forces, which will be increasingly dominated by variants of legacy platforms. This trend is most evident in Air Forces. Because the United States can afford only so many fifth-generation F-22s and F-35s, decades old F-15s and B-1s continue to fly alongside even older B-52s and U-2s. Of course, component modernization ensures that even aircraft based on designs more than half-a-century-old are far more capable than their original form. Nonetheless, engineering trade-offs and strategic decisions made long ago continue to shape our force today due to the limitations of airframes' basic physical configuration and in overall fleet numbers.

A similar path dependence is now evident in ground forces as well. In the four de-

acades after 1940, American armored vehicle technology progressed from the M3 Lee to the M1 Abrams tank, the equivalent of the progression from a sturdy biplane to a jet fighter. Since then progress has slowed significantly. To be certain, modifications have made the M1A2 SEP significantly more capable than the original M1, but as with aircraft, underneath the modernized components, there are still fundamental characteristics inherent in the base vehicle that dictate what can and what cannot be done in way of improvements. Yet the M1 chassis is likely to remain the basis of the tank fleet for at least five more decades and the M2/M3 Bradley Fighting Vehicles might last nearly as long.

The force of the future will bear a stronger resemblance to that of today than was the case during the early portions of the Cold War. Concept writers have reduced scope for institutional re-imagining as they are increasingly bound by the tyranny of past decisions.

Paradoxically, the extraordinary pace of technological change renders this inertia less problematic than it might appear. This counterintuitive conclusion rests upon the premise that we have little chance of correctly anticipating the disruptive technologies that will alter warfare over the next two decades. Thus, even if we had the money and the institutional



wherewithal to design a completely new force for 2035 based upon first principles, once we reached that point, we might find that we had missed the mark completely.<sup>3</sup>

There is some safety in having a force designed from the aggregation of many different concepts over the course of many years. Our predecessors were as capable and well-intentioned as we are today, and might, by virtue of their experiences, have been more attuned to some aspect of warfare than we are now. Thus, their legacies might be quite useful, provided that we are ready to adapt them quickly when the situation demands.

The conclusion to be drawn from the foregoing discussion is that the utility of concepts is not a function of how strictly they accord to specified time horizons. Instead, their worth is measured by how well they enable the institution to focus scarce resources and provide an intellectual framework for reconciling the old and new into the best possible method of operations.

### Thinking: The U.S. Army Operating Concept

With this expansive definition in mind, let us now examine the U.S. Army Operating Concept (AOC), interchangeably known as "Win in a Complex World, 2020-2040". TRADOC updates the operating concept every few years, an occasion that often attracts little attention, sometimes even within the Army. It was therefore noteworthy that "Win in a Complex World" was released at the annual conference of the Association of the U.S. Army (AUSA) in October 2014. This showcasing signaled the importance of the AOC, which is meant to begin the reorientation of the Army for the post-Operation Enduring Freedom era.

Another indicator of the importance of the document as a touchstone of institutional change is that General David Perkins, the TRADOC Commanding General, compares it to AirLand Battle (the 1982 and 1986 Editions of Field Manual 100-5 Operations), which many regard as perhaps the best example of American institutional thought and adaptation.<sup>4</sup> Yet, that comparison of a concept to doctrine—even one as successful as AirLand Battle—hints that "Win in a Complex World" might not conform to conventional notions of what a concept should be.



**From left:** General David Perkins, TRADOC (U.S. Army Training and Doctrine Command) Commanding General and Lieutenant General H.R. McMaster, Director, Army Capabilities Integration Center and Deputy Commanding General, Futures, TRADOC. TRADOC was borne of innovation and agility, and quickly adapts to shifting world, national, and institutional situations, in both peace and war.

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As a Strategic Communications tool, however, "Win in a Complex World" was a marked success, even eliciting some notice from the mainstream civilian press. The reception in the specialist defense media was generally positive, with headlines such as "Reinvention and Change in the U.S. Army", "The Army Gropes Toward A Cultural Revolution", and "The Army's Answer to Its Identity Crisis".<sup>5</sup>

Admittedly, some of this attention was due to the media-friendly backgrounds of the two Generals most closely identified with the development of the AOC: Perkins and Lieutenant General H.R. McMaster, the Director of the subordinate element of TRADOC responsible for the AOC. Perkins first earned fame as the Brigade Commander who led the "Thunder Runs" into Baghdad in 2003. McMaster has been in the public eye for even longer, as one of the chief protagonists of a 1994 Tom Clancy non-fiction bestseller, the author of an influ-

ential history of civil-military relations during Vietnam, a Commander recognized for innovative tactics in the Iraqi city of Tal Afar, and one of the officers selected by a celebrated promotion board led by General David Petraeus. In 2014, McMaster was featured as one of TIME's 100 most influential people.<sup>6</sup>

But if some of the civilian attention to "Win in a Complex World" might have been due to extraneous factors, that does not disqualify it as a serious statement of institutional adaptation. Several months before the release of the AOC, Secretary of the Army John M. McHugh and Chief of Staff of the Army Raymond T. Odierno signed a memorandum charging TRADOC with leading "Force 2025 and Beyond" (F2025B), an effort to develop a "comprehensive strategy to change the Army and deliver landpower capabilities."<sup>7</sup> The F2025B directive created a special governance structure meant to improve coordination



NATO exercise NOBLE JUMP 2015.  
PHOTO: MCD/EVERT-JAN DANIELS

among TRADOC, U.S. Army Forces Command, and the secretariat responsible for acquisitions and technology, an indication that from inception it was intended to produce change of a magnitude and at a pace beyond what normal processes will allow. The AOC is best understood as the conceptual component of that larger effort.

Yet, some who are familiar with force development conceptual work believe that carrying the Strategic Communications burden has detracted from the AOC, causing it to focus more on immediate threats than on long-term threats far into the future.<sup>8</sup> These criticisms have some merit, for despite the sub-title, it is not readily apparent to the reader how 2040 will be fundamentally different than 2020. A detailed examination of the characteristics of the future operating environment as described by the AOC will follow shortly, but for now it is sufficient to concede that the descriptions of how both adversaries and friendly forces will operate in the future are not that different than patterns already evident today.

Yet, even though some of what the AOC describes is not new, it does not mean that technologies (like the Internet) or developments (like urbanization) that are already underway will not be critical features of the future. More-

The scope for significant change lays mainly in the surrounding technologies, the way we organize our forces, and in how we manage, train, and educate leaders and soldiers.

over, the manifestations of these larger trends are likely to change over time; technology-enabled interaction in ten and twenty years' time might be quite different than what we see today. Still, some might be disappointed that the AOC does not make bolder predictions about how such trends might unfold into the far future of the 2030s. But, while such predictions would be interesting, only the exceptionally bold would choose to wager any considerable sum on those predictions actually coming to pass. The Army can hardly take risks on behalf of the nation that we would not run as individuals. In any event, as already noted, the economics of defense dictate that in twenty years the Army will not be radically different than it is today, as many of the vehicles and aircraft that are now or soon to be in service will continue to define the general shape of the force.

The scope for significant change lays mainly in the surrounding technologies, the way we organize our forces, and in how we manage, train, and educate the leaders and soldiers who will employ the force. In all of these areas, it is best to keep an eye on the near horizon and continually make optimizing adjustments than to make big bets on the future that are likely to fail.

Another reason for the more presentist cast of "Win in a Complex World" was that in institutional terms the future was already upon the U.S. Army in 2014. As part of the reduction from an active component strength from a wartime peak of 560,000 to 450,000 soldiers by 2017, the ground combat units were being reorganized from 42 Brigade Combat Teams (BCTs) with two maneuver battalions each to potentially as few as 30 three-maneuver-battalion BCTs. At the same time, plans were being developed for an even more drastic change to the aviation force that featured a simultaneous reduction of units, the elimination of two aircraft types, greater use of manned- and unmanned-aircraft teams, and a contentious rebalance of capabilities between the active component and National Guard.

More generally, the approaching end of combat operations in Afghanistan was bringing one phase of the Army's history to a close, while the character of the next phase was unclear. Thus, decisions that would reverberate into the future were due to be made regardless of where the institution was at in its concept and doctrine cycle. The immediate needs were to capture the lessons of Iraq and Afghanistan,

make the best possible judgement about what dangers might be lurking in the darkness immediately ahead, and begin the conceptual reorientation for a new era. The AOC fulfills those needs.

### Thinking: The Context

What, then, is the direction of advance established by "Win in a Complex World"? The title provides one indication, as it can be read as a subtle shift from the "Prevent, Shape, Win" mantra of General Ray Odierno's early tenure as Chief of Staff of the U.S. Army. This is not to say that *Prevent* and *Shape* have fallen from the minds of American military planners; in fact, both are present within the AOC. But with the regional alignment of forces well underway, there was a sense that the U.S. Army can turn its attention to preparing for the toughest fights of the 21<sup>st</sup> century.

The preface by General Perkins gives insight into what the AOC is meant to achieve. "'Win,' it states, 'occurs at the strategic level and involves more than just firepower.'"<sup>9</sup> This observation might seem unremarkable; that the mere accrual of tactical victories does not necessarily lead to the achievement of policy objectives has been a tenet of western strategic thought since at least the time of Carl von Clausewitz. But, some commentators argue that this established principle has not always been observed in practice, alleging that the U.S. Army has suffered from an undue emphasis on tactical and operational method over the last several decades.<sup>10</sup> Future historians will surely debate to what extent that this was the case. Yet, even if unfounded, there is a natural tendency in concepts and doctrine to focus on operational technique and leave "the politics" to be dealt with elsewhere.

As we consider this specific document, it must be observed that it is, after all, titled the Army Operating Concept. But, if the link between operations and strategy is not attended to in high-level concepts or doctrine, then where will it be addressed? Army institutional planning is guided by policy documents, like the Quadrennial Defense Review, but these do not address the question of how we should turn operational victories into the strategic win. Neither does the current round of joint concepts link the operational to the strategic, nor do they provide sufficient granularity to guide detailed policy



and resource allocations at the service-level. So, while the focus on the strategic level exceeds the scope of the AOC as literally implied by its name, the overreach is, at worst, a victimless crime and might well fill a conceptual void and improve real-world outcomes.

Yet, if the desirability of the strategic win is self-evident, how to achieve it in "the complex world" alluded to within the subtitle is not. As the preface notes, the U.S. Army must be able to work effectively in a number of different theaters of operation with a diverse array of potential partners and against an equally diverse array of potential adversaries.<sup>11</sup> It is the sheer number of possibilities presented by these myriad permutations of location, hostile, and friendly forces that make the world "complex" for force planners.

In the face of this complexity, the best alternative is to seek to provide the widest range of options; the "strategic win" is more likely if land forces have multiple ways to deploy, organize, and operate. Such flexibility allows both policymakers and commanders to tailor the application of the military instrument to the political and strategic situation, while at the same time presenting adversaries—whoever they may be—with multiple dilemmas that complicate and constrain their own options.

The description of the future operating environment offers greater detail about the complex world envisioned by the AOC. The document identifies a range of potential ad-

versaries that encompasses an array of entities from powerful states like Russia, hostile regional powers like Iran, through non-state transnational terrorist and criminal organizations. All will undoubtedly do their best to take advantage of proliferating military technologies and increasingly potent dual-use technologies to gain advantage and counter Western military strengths.

It is thus necessary to assume that any given threat will potentially be more dangerous than a similar adversary would have been just ten or twenty years ago. Our technological superiority is no longer a given; though it will persist in many capability areas, against some adversaries there will be parity and in some cases we might even find ourselves at a technological disadvantage. For instance, Russian forces in Ukraine have demonstrated proficiency in electronic warfare that the U.S. Army cannot currently match.<sup>12</sup> "Win in a Complex World" also makes special note of the proliferation of weapons of mass destruction, counter-space capabilities, and cyberspace capabilities.

The AOC highlights two trends that, while not strictly military, will have significant implications for security. The first is what it terms the "increased velocity and momentum of human interaction and events."<sup>13</sup> This refers to the extent to which communications and transportation technologies, particularly the Internet, have increased the volume, speed, and number of connections among popula-

tions around the world. The other significant trend is urbanization; a largely global phenomenon. Both developments are already evident and seem likely to continue. If so, the future operational environment will see ground forces thrust into the midst of civilian populations; both physically in towns, cities, and mega-cities, as well as virtually through the near instantaneous spread of information (and disinformation) around the world.

### Thinking: How the Army Operates

The first half of "Win in a Complex World" can thus be summarized as reiterating the need for the U.S. Army to be able to secure the strategic win despite more capable adversaries and a challenging operating environment that leaves little room for error. The section "How the Army Operates" describes in ten parts the method by which the Army intends to meet this challenge. Unfortunately, the AOC does not organize these ten elements into a hierarchy that might explain how they interact, but for the purposes of this article they will be grouped into three categories:

- Institutional characteristics,
- Strategic/operational capabilities, and,
- Operational/tactical methods.

**Institutional characteristics:** There are two institutional characteristics. The key to understanding their significance is found in the preface, in which General Perkins notes that the complexity of the strategic environment ensures that any preparation for war will, at least to some extent, "get it wrong."<sup>14</sup> As ever, the initial burden of adjusting to unanticipated characteristics of future battlefields will fall upon the shoulders of those at the point of contact; competent leaders with cognitive skills allowing them to adapt will thus act as something of an institutional shock absorber. Therefore, the first necessary characteristic is to **develop innovative leaders and optimize human performance.**

But, ultimately even the most innovative leaders can only improvise so much while in contact; the full resources of the institution must quickly be brought to bear on solving unanticipated problems. Thus, the second characteristic is to **ensure institutional and operational synergy.**



Portuguese mechanised infantry during TRIDENT JUNCTURE 15.  
PHOTO: SGT SEBASTIEN FRECHETTE, NATO



Put differently, the generating force must effectively respond to operational signals. Such a response might be the development and fielding of a new piece of equipment, but might also be some form of non-materiel change, such as altering training methods, finding and assigning individuals with specific skills to where they are needed, or modifying unit organization.

**Strategic/operational capabilities:** The second category has three parts that collectively encompass the Army's main roles. Defined as they are by enduring policy imperatives, there is understandably little new in those capabilities. The first two—**engage regionally** and **respond globally**—were then incorporated into the 2013 Army Strategic Planning Guidance as a descriptor for what the Army was already doing.<sup>15</sup> The third strategic/operational capability, **respond to and mitigate crises in the homeland**, is even older, having been the Army's role since its inception. But, while the basic strategic/operational capabilities remain constant, how they are delivered will change.

Effective regional engagement with Partners requires continual adaptation to fluid military and political conditions. How the U.S. Army responds globally will also change, particularly in response to the spread of anti-access/area denial capabilities. Responding to crises in the homeland is also evolving. Climate change might alter the frequency and intensity of natural disasters. In a conflict, adversaries could retaliate against the United States through asymmetric means, such as cyber attacks, that would require assistance to civilian authorities at the same time that the military is engaged in an overseas campaign.

**Operational/tactical methods:** The remaining five elements are tactical/operational methods, and so more closely resemble the intuitive notion of an operating concept. According to the AOC, in the future **conducting joint combined arms operations** will consist of rapid, fluid transitions between dispersal in order to confuse and frustrate adversaries and concentration in order to strike with surprise and mass. But, at the same time that ground forces are dispersing and concentrating to strike at the enemy, they must **establish and maintain security** at critical points within the area of operations. To some extent this can be achieved through means other than static defense, such

as partnering with local law enforcement, security services and military forces or conducting raids and other offensive operations. Even defensive and stabilization operations need not necessarily be done from a reactive posture.

Nonetheless, there is a certain tension between wide area security and the rapid cycle of dispersal and concentration envisioned for joint combined arms operations. The AOC also recognizes that the ability to conduct such agile maneuver is dependent on exceptional intelligence and logistics capabilities. Hence, **develop situational understanding through action and sustain high tempo operations** are also identified as areas for future development. In describing the former, the AOC notes that merely collecting information does not necessarily equate to understanding; data must be placed in the proper political, social, cultural, and military context to be of use.

The AOC also cautions that we cannot rely solely on information gathered by technical means at distance; land forces must be willing to aggressively pursue information through physical interaction with the population and the enemy. In terms of logistics, the rapid transitions between dispersal and concentration pose obvious challenges for logisticians supporting multinational forces. This will be even more difficult when facing adversaries who might have the ability to disrupt our lines of communication. Yet, it is the final tactical/operational method that is perhaps the most important. However they are achieved, we must **consolidate gains**. Implicit within that statement is the truth that tactical actions must contribute to the larger policy objective. Thus, consolidate gains closes the circle, linking "How the Army Fights" to the goal of the "strategic win" stated in the preface.

## Codifying: The Army Warfighting Challenges

At a recent conference, General Perkins echoed the thinking-codifying formulation of General Sullivan two decades earlier: "The Army doesn't have the luxury of just thinking about the future. We're not a think tank. We actually have to produce the future."<sup>16</sup>

If the main body of the AOC represents the end of the thinking, then the second appendix—aptly titled "From Concepts to Capabilities: Building the Future Force"—represents

the beginning of the codification. That section contains the Army Warfighting Challenges (AWFCs), which are the main mechanism for bringing the thought within the AOC closer to fielded capabilities.

The AWFCs are defined as "enduring first-order problems" whose solutions are essential to maintaining effective ground forces in the future.<sup>17</sup> Each AWFC consists of a top-level problem and a set of supporting "learning demands" that, if answered, will address the core issue. For instance, the warfighting challenge of **Exercise Mission Command** has nine learning demands, one of which is "How do Army forces, at all echelons and under all conditions, prepare, execute and access operations using analog procedures and maintain commonality when the digital Mission Command Information Systems (MCIS) are degraded or unavailable?" Though hardly poetic, such specificity is the key to ensuring that concepts go beyond esoteric generalization and produce tangible outcomes that are technically feasible and can be practically implemented in operations. But, it is not just **what** questions are being posed, but also **who** is included in the process of finding answers. The AWFCs are designed to elicit the participation of a variety of stakeholders so that solutions are not developed within a specialist stovepipe that ignores the needs of other functions.

For instance, the Fires Center of Excellence (FCoE) at Fort Leavenworth is the lead for AWFC #17, Integrate Fires, but any full solution requires more than just the contributions of the FCoE or even the Field Artillery Branch; command, ground maneuver, air maneuver, communications, intelligence, and logistics must all also be taken into account. Neither is this collaboration limited to elements within TRADOC; the AWFCs provide a pathway for the field army to contribute. In the case of fires integration, U.S. Army Europe (USAREUR) has brought its perspective informed by European contingency planning, multinational exercises, and lessons about Russian capabilities gleaned from training missions to Ukraine.<sup>18</sup> Web-based collaboration even allows individuals from across the Department of Defense to contribute.

In practice, few individuals have the wherewithal to create detailed staff products for what is essentially a full-time virtual workgroup, but there is much work being done throughout the Army not directly connected



No individual or small group, however brilliant, can capture the entirety of modern warfare.

to the AWFCs that can still be incorporated into their solutions. For instance, a group of West Point cadets who had been working on a biomedical research project were able to contribute their research to the Improving Soldier, Leader and Team Performance AWFC through the MilBook collaboration portal.<sup>19</sup>

Of course, creating a mechanism for addressing a problem is no guarantee of a solution. Whether the AWFCs lead to the desired objective will not be known for many years. Yet, it is promising that since the release of the current series of AWFCs in 2014, they continue to evolve. This indicates that they are being actively tested and when found wanting improved. In early March, an update to the AWFCs included changes to the top-level descriptors of two of the challenges and twenty-six new or revised learning demands.<sup>20</sup>

Another sign of progress is that lessons generated by the learning demands have influenced requirements. For instance, there is an obvious desire for command posts to have the greatest possible capacity to amass, analyze, store, and distribute data; the AWFCs have helped place that imperative in balance with the necessity for formations to be mobile.<sup>21</sup> Armies have always had to make such trade-offs, but the AWFCs offer a means to ensure that all relevant views are taken into account rather than one functional element making decisions based upon its own narrow criteria and without reference to the bigger picture.

The history of doctrine in the U.S. Army suggests that ways of fighting imposed by fiat from the top are more likely to fail, as any gains are negated by new problems created by the biases of their creators; no individual or small group, however brilliant, can capture the entirety of modern warfare. Successful doctrine,



Exercise NOBLE PARTNER 16 opening ceremony, Vaziani Training Area, Georgia, 11 May 2016. PHOTO: MSGT GERARD BROWN

such as AirLand Battle, is typically the product of challenge, learning, and negotiation between doctrine writers and the field army.<sup>22</sup> The AWFCs are a means of channeling such energies.

### Maneuver Space

Codification is a long process, so there is still considerable scope for Allies to contribute their insights and influence the course of "Force 2025 and Beyond". It should be noted that the AOC and AWFCs are both products of multinational consultation through exchange and liaison officers, reciprocal collaboration in conceptual events such as the American "Unified Quest" and the British "Agile Warrior" wargames, and participation in experimentation like the Army Warfighting Assessments and Network Integration Exercises.

Yet, for all of this exchange of ideas, the description of coalition operations is one of the least developed aspects of "Win in a Complex World". The preface refers to a "Global Strategic Landpower Network" but there is no further mention of that concept. Instead, most subsequent references to Allies and Partners seem to imply that the main purpose of multinational collaboration is to make Allies as much like the U.S. Army as possible. Even if one were to accept the desirability of that goal,

it is an unachievable objective. The reality of budget pressures combined with the politics of national industrial bases, procurement, and export controls limits the progress that could be made along those lines. Thus, we must acknowledge that even a purely NATO expedition would be a polyglot military force, and most actual coalitions would be even more fractured in terms of military interoperability. We must assume that our forces will experience considerable heterogeneous friction.

One role of concepts, therefore, is to attempt to lessen that friction by ensuring that interoperability is a key consideration in setting requirements. It is not hard to imagine a seemingly beneficial technical improvement that yields some marginal increase in American tactical performance, but which causes a net loss of operational effectiveness across the coalition as even the most stalwart allies are "priced-out" of maintaining interoperability because of the change. This is all the more important because of the ambitious mode of operations described by the AOC. Fluid, rapid transitions between dispersal and concentration in the face of an adversary with electronic, cyber, and space capabilities would be a challenge for the command, intelligence, and logistics systems of even a well-trained homogenous national force; it might be beyond the reach of an alliance or coalition. Yet



the alternative of static, plodding operations is not tenable either. Allied input is critical to the development of operational approaches that balance what the capabilities of our adversaries compel us to do with what we as a multinational force are feasibly able to do.

The other promising element for further development is the task of consolidating gains. It has no single natural home among the AWFCs, even though one might argue that of the ten elements of "How the Army Operates" it is most critical to securing the strategic win promised in the preface. It is in this respect that the perspectives and wisdom of Allies might be most useful, for arguably the greatest obstacle to consolidating gains is a lack of understanding. Thus, a diversity of perspectives is more likely to lead us to creative concepts for the successful deployment of military capabilities within political, economic, social, and cultural contexts.

Diversity might be particularly useful in developing concepts for "gray zone" warfare, a

condition in which an adversary enjoys a tactical **military** advantage because of a disparity in the **political** will and authorities to apply force in a given situation. Though, hopefully, aggressive states that use such means will find that they are counterproductive in the long run; it is a matter of military professional responsibility to develop means of mitigating the short-term consequences of such mischief.

The nature of gray zone competition means that materiel aspects are the least important, while political, legal, social, and cultural considerations are paramount. Bringing multiple perspectives to bear on such ill-structured, subjective problems is the best means of developing solutions, and there is certainly ample scope for imaginative contributions in this regard. It is the role of concepts to begin developing the intellectual framework to address such difficult problems. So, even while the work of codifying the insights contained in "Win in a Complex World" continues, there is still much thinking to be done. ✦

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Later this year, Harvard University Press will publish his book, "Preparing for War: The Emergence of the Modern U.S. Army, 1815-1917".

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