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DECISIVE ACTION TRAINING ENVIRONMENT AT THE JMRC, VOLUME IV

MULTINATIONAL INTEROPERABILITY

Lessons and Best Practices

Decisive Action Training Environment at the Joint Multinational Readiness Center, Volume IV

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Foreword

The Joint Multinational Readiness Center (JMRC) is forward-deployed and strategically located in U.S. Army-Europe; thus offering exceptional opportunities for learning during the conduct of combat training in a multinational operating environment. JMRC contributes substantially to the strengthening of the North Atlantic Treaty Organization (NATO) alliance through its exercise program; the rich experience of these opportunities continues to provide huge benefits in the ability to glean important lessons and best practices.

Every combat training center (CTC) rotation conducted at JMRC is different, owing to the various types of units and nations that participate, as well as the various types of training activities that are conducted. However, the decisive action training environment (DATE) featuring brigade-level force-on-force activities has been a central area of focus since 2012. JMRC leaders, planners, observer coach/trainers (OC/Ts), and opposing forces have continually endeavored to ensure the rotation is cutting edge and reflective of the current operating environment and emerging trends. Similarly, JMRC supports numerous "away game" exercises in Europe and other missions, such as reception, staging, onward movement, and integration for the rotational armored brigade combat team; collectively, these experiences yield tremendous insights. The process of collecting and analyzing observations and working to find ways to resolve gaps in technological, human, and procedural challenges is a never-ending mission.

The resulting insights and lessons derived from such experiences are highly useful in negotiating the complex challenges associated with training to fight during unified land operations when working alongside a number of multinational forces. Thus, the importance of sharing these lessons and best practices is not lost by our cadre of OC/Ts and other trainers who regularly offer their feedback. They are committed to their mission and ensuring that our Army is a "learning organization."

This newsletter takes a look at several challenges of mission command, opening with a view from the NATO perspective. Also included is a comparative study of the various methodologies used for the military decisionmaking process and the importance of seeking to understand the lowest common denominator between these processes. Likewise, it is important for leaders to understand the differences between unit capacities versus capabilities. The newsletter offers several techniques for bridging multinational fires interoperability and illustrates how the Russian-Ukrainian conflict has influenced and shaped the DATE training conducted at JMRC.

Other topics discussed in this newsletter are the use of graphic control measures, camouflage techniques, employment of reconnaissance, cyber security, digital systems interoperability, religious support, and conducting after action reviews.

The intent of publishing this newsletter is to share the experiences gained while learning how to tactically interoperate with multinationally mixed allies and partners during unified land operations. Ideally, these insights positively impact our ability to build readiness in the theater and "fight tonight," if required, which collectively ensures that we can deter potential adversaries and prevail.

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DATE at the JMRC, Vol. IV

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Chapter 1

NATO Interoperability: Fostering U.S. and NATO Headquarters Understanding

LTC Ashley F. Thames, COL Ken Wanless, COL Michael Gabel
1st German/Netherlands Corps

Introduction

On 4 APR 1949, the 12 original member states signed the North Atlantic Treaty and formed the North Atlantic Treaty Organization (NATO). At the time, the NATO alliance served three purposes: deter Soviet expansionism, demonstrate a strong North American presence in Europe to prevent a nationalist militarism revival, and encourage political integration.[1] NATO's success at achieving these initial goals and at maintaining the peace in Europe following World War II continues as the alliance accepts new partnerships and manages its new security environment. The 12-member organization of 1949 now includes 28 states and multiple partner nations. Most people identify the importance of Article V of NATO's charter as the key deterrence that sustains peace. Also important is Article III, which enables peacetime activities that are the foundation for building NATO capacity and capabilities. Article III establishes the mandate for organizations like the 1st German/Netherlands Corps (1GNC), one of nine NATO Rapidly Deployable Corps headquarters in the NATO force structure, to train and improve the security posture for the alliance's ability to act should deterrence fail.

Part I: The North Atlantic Treaty Article V and Article III

The North Atlantic Treaty's preamble declares that members "are resolved to unite their efforts for collective defense and for the preservation of peace and security."[2] In support of this vision, the Treaty provides 14 articles to which all signatories must adhere. Members agree in Article V "that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all." It is the most well-known article because it commits alliance members to action, "if such an armed attack occurs, [with] each of them, in exercise of the right of individual or collective self-defense…will assist the Party or Parties."[3] Thus Article V is a unifying concept that increases security for member states and serves as a deterrent for anyone intent on upsetting peace and stability in the region.

Effective collective self-defense in a time of crisis or security challenges is only possible when member states apply resources (time, personnel, and funding) toward that goal. Article III is the keystone provision that mandates member nations to develop military capacity and capabilities in order to ensure the community can resist armed aggression. The article states that the parties "by means of continuous and effective self-help and mutual aid, will maintain and develop their individual and collective capacity to resist armed attack." This codifies the requirement for nations to maintain their own capabilities for defense and commits alliance members to participate in multinational training events and other mutual programs leading to increased collective capacity. This is fundamental to NATO's success. Member nations develop collective defense through deliberate efforts to share ideas, train together, and ensure interoperability during multinational conferences and exercises. NATO does this regularly, with organizations like the 1GNC.

Part II: Headquarters, 1GNC

Germany and the Netherlands formed 1GNC, based in Münster, Germany, as a binational corps 20 years ago by combining the 1st German and the 1st Netherlands Corps to meet their nations' future training and security requirements. The ability to sustain corps capacity resulting from the German and Dutch integration eventually provided NATO with a binational headquarters that joined the NATO force structure in 2002, and today receives support from 13 nations. The headquarters mission is to conduct high-intensity operations, crisis management, peace support operations, as well as humanitarian and other relief missions.[4] As a NATO headquarters, the 1GNC demonstrates that future security comes from collective defense and proved it during three operational deployments and its execution as a NATO Response Force (NRF) headquarters. Thus, 1GNC is ready to perform the following:

- Conduct future operations across the spectrum of conflict.
- Improve NATO capabilities through experimentation.
- Develop and lead multinational integration efforts in NATO as the only corps with two framework nations.

The corps achieved these goals by remaining at the forefront of NATO response and development during 2015. As an outcome of the Wales Summit, September 2014, Supreme Headquarters Allied Powers-Europe and the framework nations tasked 1GNC, the 2015 NRF, to lead the concept development and execution of the Very High Readiness Joint Task Force (VJTF) during a short-notice Exercise Noble Jump. The 1GNC also led a renewed focus on corps-level operations during its Exercise Strong Sword, developing new insights into shaping operations and the comprehensive approach. Lastly, the corps expanded its participation in U.S. exercises to improve interoperability.

Part III: 1GNC Participation in U.S.-Led Exercises

The U.S. embeds personnel in most of the NATO corps headquarters to improve U.S./NATO operational capability and facilitate unity of effort. At 1GNC, the U.S. contingent fills 14 billets across the staff that creates opportunities for increased interoperability with U.S. formations.

1GNC used its time as NATO's NRF to develop military capacity and assurance with other NATO nations. The U.S. contingent assists the corps in integrating with U.S. formations by initiating direct interaction with U.S. units. The corps/U.S. coordinated interaction begins at the Land Command/U.S. Army-Europe (USAREUR) Combined Training Conference (CTC) and culminates with successful exercise execution.

The outcome of the CTC facilitated USAREUR support to the 1GNC NRF 2015 certification process. USAREUR provided corps-level assets to ensure 1GNC capacity. USAREUR provided U.S. regionally aligned forces (RAF) to train with 1GNC in several exercises, such as integrating a U.S. RAF tactical operations center into its 1GNC NRF exercises. The corps also coordinated C-17 airlift support to conduct strategic deployment training from Muenster/Osnabruck Airport in May 2015. The staff coordinated the RAF air assault assets for the formal VJTF validation Exercise Noble Jump in Zagan, Poland.

Over the course of 2015, 1GNC participated in two U.S. exercises to build greater interoperability and assurance. Both U.S. exercises experimented with a non-Article V crisis response operation scenario. The scenario coordinated the transition from a rapidly deployable U.S.-led coalition of the willing to a NATO-led force. The scenarios envisioned a NATO force that must plan with early entry coalition members to assume responsibility for operations. In March 2015, the corps provided a team to support the U.S.-led Exercise Austere Challenge in Grafenwoehr, Germany, and in August, the corps sent a team of senior leaders to support Exercise Swift Response in Constanta, Romania. In both exercises, the corps executed handover/takeover responsibilities from a U.S.-led coalition to a NATO-led coalition.

Part IV: Way Ahead

As 1GNC seeks to improve its future interoperability, the U.S. contingent identified two focus areas for the corps in the future: planning and the handover/takeover execution. Focusing on these two tasks improves interoperability between NRF/high readiness force and U.S. formations.

For planning, 1GNC proposes integrating U.S. and NATO headquarters planning teams and liaison officers (LNOs) "pre-crisis" to integrate planning efforts. Planning teams/LNOs provide both organizations with expertise necessary to coordinate the reception, staging, onward movement, and future handover/takeover between units. The U.S. European Command and USAREUR are the primary organizations coordinating training with NATO, and the Joint Multinational Readiness Center located in Hohenfels, Germany, primarily facilitates that training. These organizations can ensure increased interoperability across the force by integrating the exchange of these teams in their exercises yearly. The current year NRF headquarters is best suited to fulfill that role. Integrating planning LNOs ensures understanding of strategic movement requirements, force flow restraints, and clarity on the NATO force structure. Early involvement in the planning process ensures U.S. and NATO collaboration and facilitates deployment of forces while also clarifying standards and timelines for a U.S.-led coalition handover/takeover to a NATO force.

There are significant differences in capabilities between the diverse NATO rapidly deployable corps headquarters and U.S. formations. When conducting handover/takeover, it is important for U.S. formations to identify those differences to ensure a smooth transition execution. Planning teams and LNOs initially address challenges they face during execution. Two particular areas of interest during the handover/takeover execution are the capability gaps (enablers) and computer and information systems (CIS) interoperability.

The lead element of the NATO headquarters is the operational liaison and reconnaissance team (OLRT). They know the headquarters force structure and the key enablers they bring. The OLRT identifies capability gaps between the outgoing and incoming forces, and plans with U.S. forces to mitigate risks due to these gaps. Coordination between forces may require key enablers to extend in the operational area until other NATO or U.S. elements replace them.

Any transition requires a good communications plan. CIS interoperability between U.S. and NATO organizations presents unique challenges. Each organization protects its information by operating its own CIS backbone. NATO programs such as the multilateral interoperability program gateway that serve as an interface between national systems. The U.S. identified the Battlefield Information Collection and Exploitation Systems (BICES) as the backbone for collaboration in a secure environment. BICES has worked in previous exercises, but that system

is not a tool NATO uses across the staff. NATO uses the BICES as an intelligence gathering function; however, a U.S. BICES/NATO SECRET backbone is available.

NATO SECRET or mission-specific networks coordinated for specific exercises are options to share information or establish virtual LNOs during early planning. The advantage to NATO SECRET is that all of the NATO command structure and NATO force structure operates on that system. The advantage to a mission-specific network is integrating non-NATO coalition members into the team. If the security situation in Europe continues to deteriorate, Europe needs more U.S. military support. Additionally, Article III of the NATO charter mandates that NATO members engage in peacetime activities that build NATO capacity and capabilities.

Because of the changing security environment and the imperative of Article III, the U.S. should continue to strengthen its ties with its NATO partners. Conducting exercises that build relationships and understanding of strengths ensures U.S. and NATO partners create a solid foundation focused on interoperability of forces. The U.S. must sustain this effort through increased training with NATO formations and filling manning requirements across NATO to develop capacity and ensure the alliance deters conflict before invoking Article V. Finally, training together provides assurance the U.S. is committed to the alliance.

Endnotes

1. “A Short History of NATO,” http://www.nato.int/history/nato-history.html (accessed November 7, 2015).

2. “The North Atlantic Treaty (1949),” April 4, 1949, Washington, D.C. http://www.nato.int/nato_static/assets/pdf/stock_publications/20120822_nato_treaty_en_light_2009.pdf (accessed November 7, 2015).

3. Ibid.

4. “1 (German/Netherlands) Corps, About Us,” http://1gnc.org/ (accessed November 6, 2015).

Chapter 2

A Tool for Parallel Planning in a Combined Brigade Combat Team

MAJ Joel P. Gleason and MAJ Patrick Bryan
Joint Multinational Readiness Center

Due to current operational and strategic realities, multinational operations are now part of today's tactical landscape. Because multinational formations are especially difficult to control due to myriad languages, cultures, vehicles, capabilities, etc., combat training centers have increasingly focused efforts on interoperability. In doing so, it has become apparent that effective planning is paramount to resolving many of the challenges associated with interoperability.

Many commanders, regardless of national origin, are catching their first glimpse of the wide array of planning procedures that exist in a multinational force. U.S. doctrine accurately states that commanders can most directly influence operations during the planning process.[1] But what is the appropriate planning process for a multinational brigade combat team? This should be among the first questions a commander poses when he learns that his unit is to function as part of a multinational operation, regardless of whether his unit represents the lead nation or is a subordinate headquarters. In order to execute a tactical-level operation with a multinational task organization, the commander should either establish a common planning process, or understand how diverse planning processes nest with each other. In other words, the commander must make sure that the planning processes are interoperable. This chapter seeks to de-mystify common planning processes, such as the North Atlantic Treaty Organization (NATO) operational-level planning process (OLPP), so commanders feel comfortable using a NATO process or letting subordinate units use their own national processes in parallel.

In order to comfortably place multiple planning processes in parallel, planners should seek to understand the lowest common denominator between processes. All planning methods can be "boiled down" to five basic steps:

1. Planning Initiation.

2. Planner Orientation.

3. Generation and Analysis of Options.

4. Selection (Decision) of an Option.

5. Resourcing, Execution, and Assessments.

The lowest common denominator chart (Figure 2-1) is a tool to assist commanders and planning staffs in synchronizing their planning processes. The chart is organized according to the five lowest common denominator planning steps with processes approximately aligned to these basic steps.

Lowest common denominators:	OLPP	JOPP	MCPP	ADM/MDMP	ESP	NLD	GRC
	Operational-Level Planning Process	Joint Design and Joint Operational Planning Process	Marine Corps Planning Process	Army Design Methodology and the Military Decisionmaking Process	Spanish Army Planning Process (at tactical level)	Dutch Army Planning Process	Greek Army Military Decisionmaking Process
	OLPP/MDMP-Style 7 Step Planning Processes						
	Multiple nations use the 7 Steps familiar to many U.S. and NATO officers. Some nations with similar processes are listed below.				Coalition CDRs seek common procedures. ESP, NLD, GRC have 7 Step variants with direct links to OLPP or MDMP.		
1. Initiate		Planning initiation	Design	Army Design Methodology			
	Initiation of OLPP			Receipt of mission		Review the situation	Receipt of mission
2. Orient	Problem and mission analysis	Mission analysis	Problem framing	Mission analysis	Mission analysis	Mission analysis	Mission analysis
					Evaluation of factors	Analysis of factors	
3. Generate and analyze options	Course of action (COA) development	COA development	COA development	COA development	COA development	Formulation of potential COAs	COA development
	COA analysis	COA analysis and war game	COA war game	COA analysis (war game)	COA analysis	Development and validation of COAs	COA analysis (war game)
	COA validation and comparison	COA comparison	COA comparison and decision	COA comparison	COA validation and comparison	COA evaluation	COA comparison
4. Decide	Commander's COA decision	COA approval		COA approval	Commander's COA decision	Decision	COA approval
5. Resource, execute, assess	Concept and plan development	Plan or order development	Orders development	Orders production	Orders production		Orders production
	Campaign assessment and plan review/revision				Execution		
			Transition				
	Nations using 7 Step models: Greece, Latvia, Lithuania, Netherlands, Portugal, Spain, United States Nations using NATO doctrine above tactical levels: Greece, Italy, Portugal				The Dutch and Spanish Armies use processes similar to 7 Step models, yet each is unique. Other processes listed to the left may have unique features. Many nations use NATO COPD and OLPP above tactical levels.		

Figure 2-1. Lowest common denominator chart showing multinational planning processes in parallel.

	DEU	CAN	GBR	FRA	RDSP	COPD
	German Army Decisionmaking Process	Canadian Army Operational Planning Process	British Army Combat Estimate (aka 7 Questions)	French Army Operational Decision Elaboration Method	U.S. Army Rapid Decisionmaking and Synchronization Process *	NATO Comprehensive Operational Planning Directive
					* Note: RDSP is a shortened process utilized during execution/ assessment	PH I: Indications and warnings
	Auftragstaktik (Mission command)		What is the situation & how does it affect me?	Direction		Phase II: Assessment
		Initiation			Compare current situation to order	
Situational awareness	Mission analysis	Orientation	What have I been told to do & why?	Analysis		Phase III: Response options development
Situational awareness	Estimate of situation: own, environment, enemy's		What effects do I need to achieve & what direction must I give in order to develop a plan?	Phase 1	Determine that a decision, and what type, is required	
Planning	Own possibilities	COA development	Where can I best accomplish each action/effect?	Provisional Findings	Develop a COA	Phase IVa: CONOPS development
Planning	Comparison of forces		What resources do I need to accomplish each action/effect?	Summary	Refine and validate the COA	
Planning	Comparison of COAs		When & where do the actions take place in relation to each other?			
Issuing orders	Commander's decision	Plan development	What control measures do I need to impose?	Phase 2 Maneuver development		
	See note on OPORD *				Implement	PH IVb: OPLAN development
Following up		Plan review				PH V: Execution
Following up						PH VI: Transition
	* The OPORD development scheme in German doctrine links mission analysis products to OPORD/ FRAGORD.	Planning and preparation techniques such as troop leading procedures (TLPs) are not listed in this chart but may be something tactical commanders can explore to find commonalities within a multinational task organization.			RDSP is not unique, as many doctrines have abbreviated procedures.	COPD is not aligned in time to the other processes, as it is a strategic and operational process.

Figure 2-1 (continued). Lowest common denominator chart showing multinational planning processes in parallel.

The NATO OLPP, which many Allies are comfortable using, is similar to the military decisionmaking process (MDMP). (See Figure 2-2.[2]) As a result, U.S. commanders and staffs may adapt quickly without significant friction. The OLPP also follows the basic 7-Step planning model common in most partner militaries. During a crisis, it may be prudent to let each formation continue with their familiar process while identifying and understanding subtle differences between the processes (see Figure 2-3[3]).

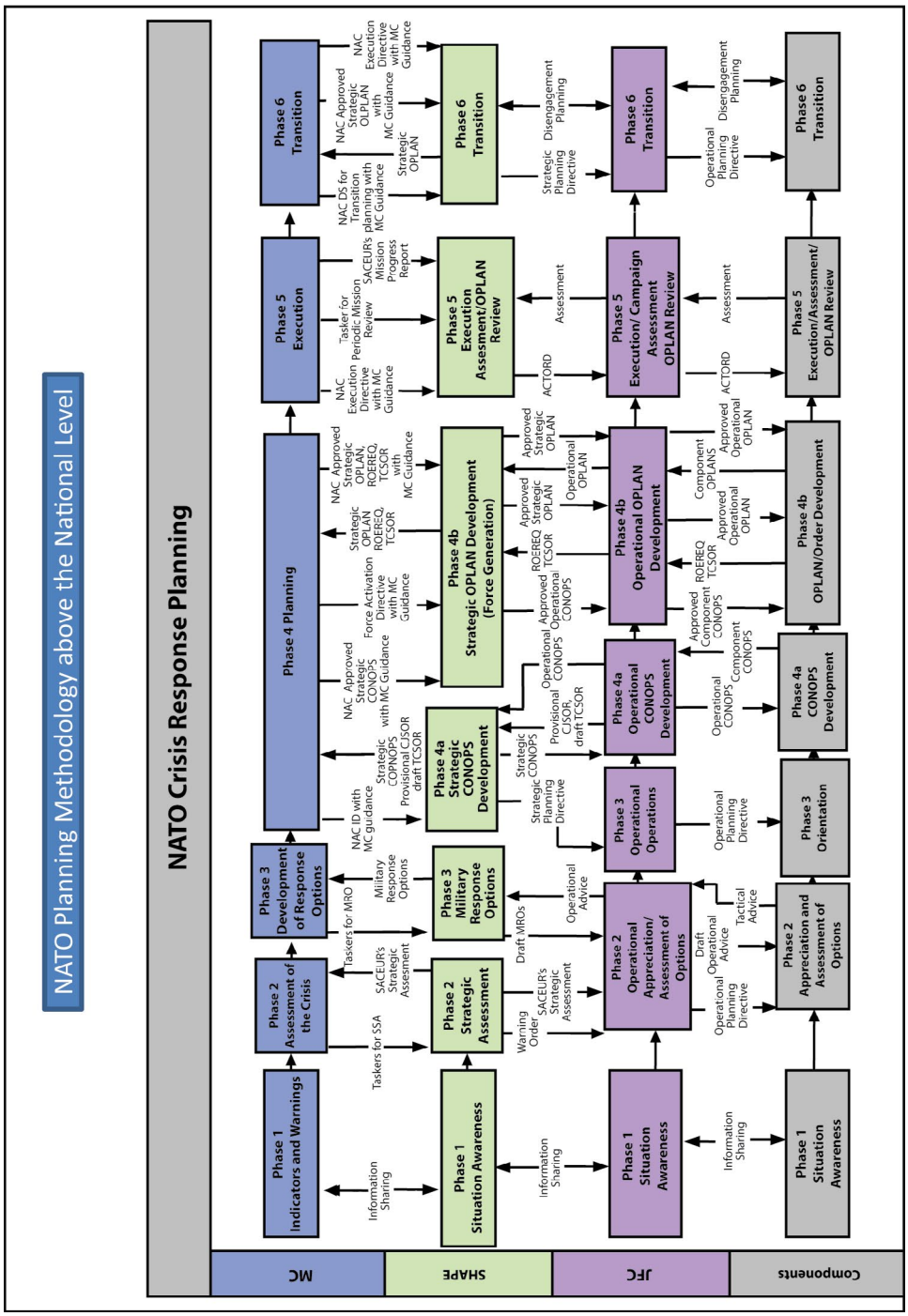


Figure 2-2. NATO planning methodology above the national level.

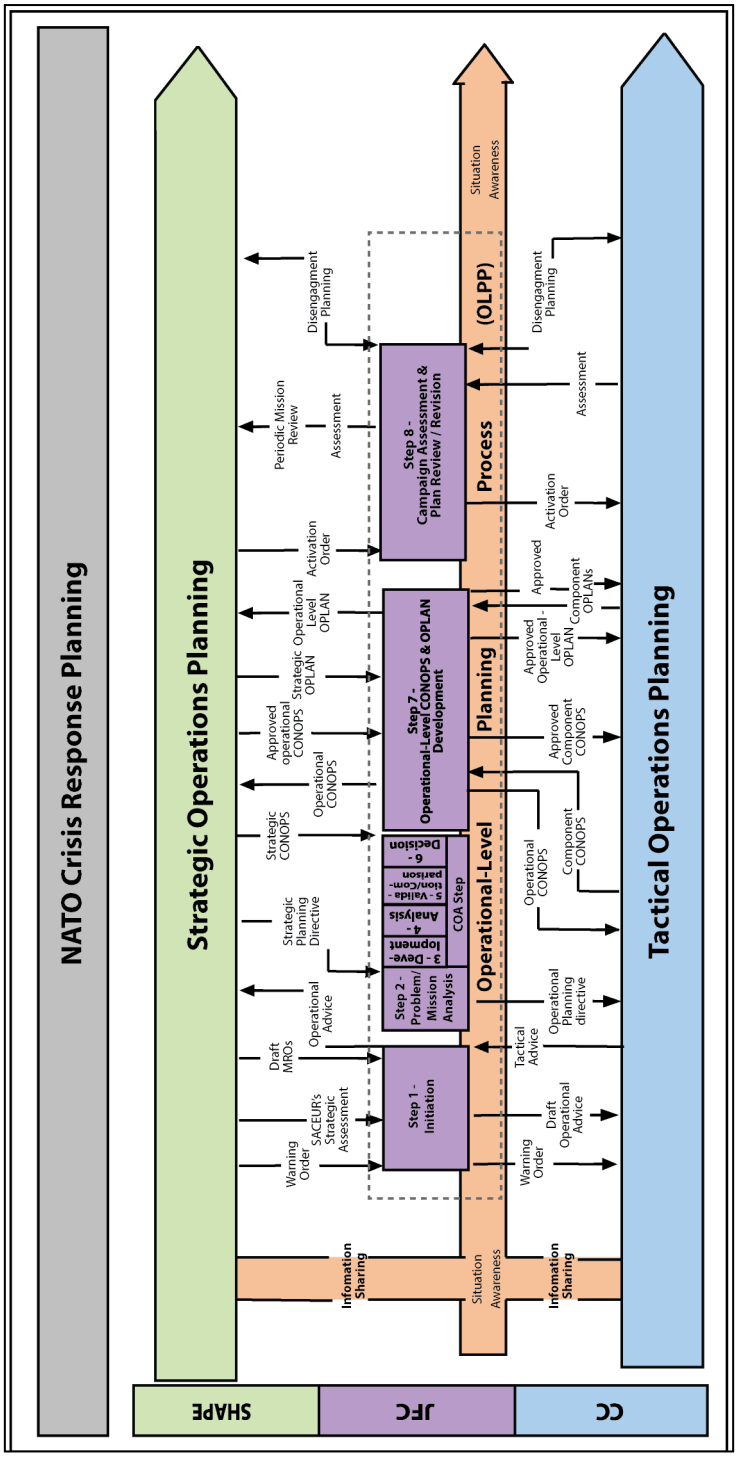


Figure 2-3. NATO crisis response planning.

The seven columns of the lowest common denominator chart are a 7-Step process that represents a multitude of processes similar to OLPP, including MDMP and the Joint Operation Planning Process. (See Figure 2-4.[4])

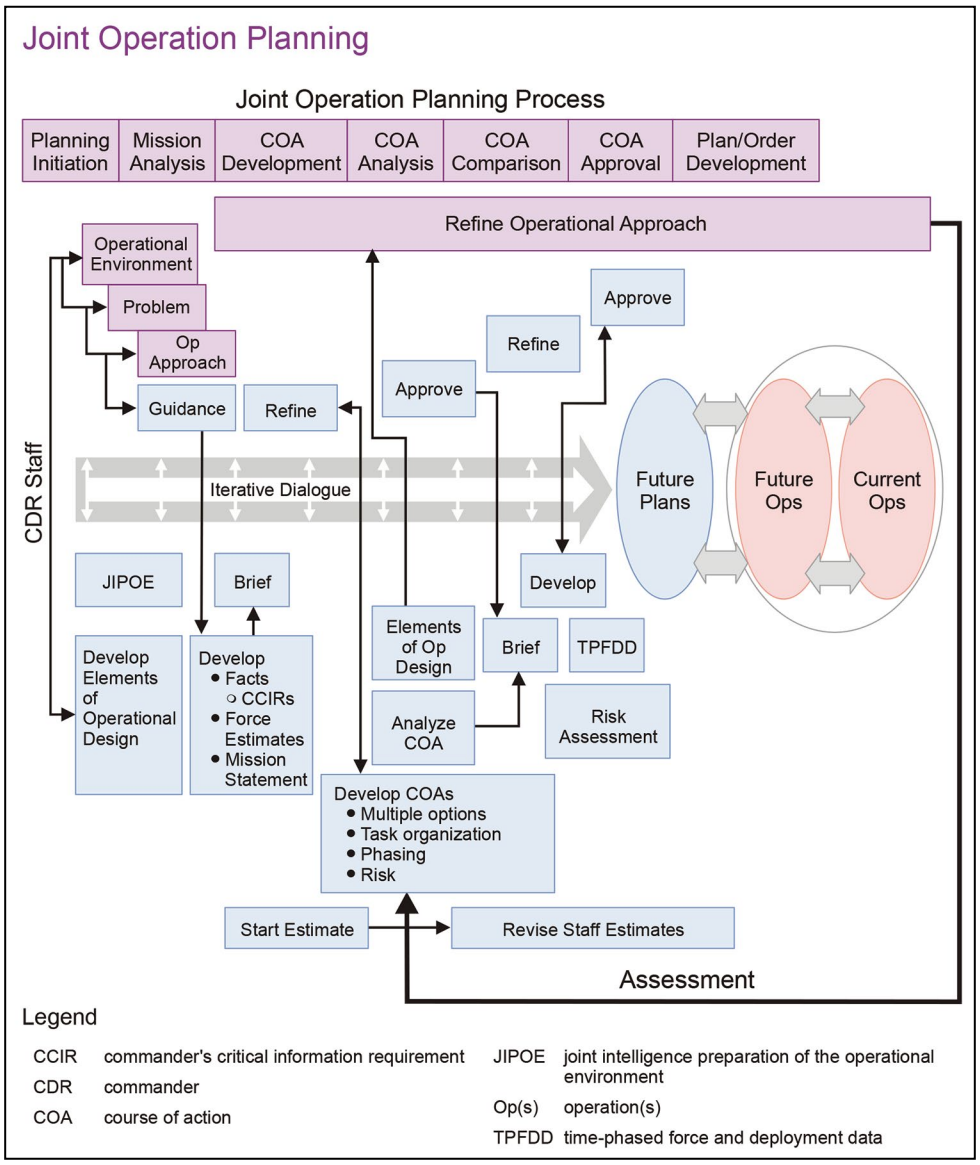
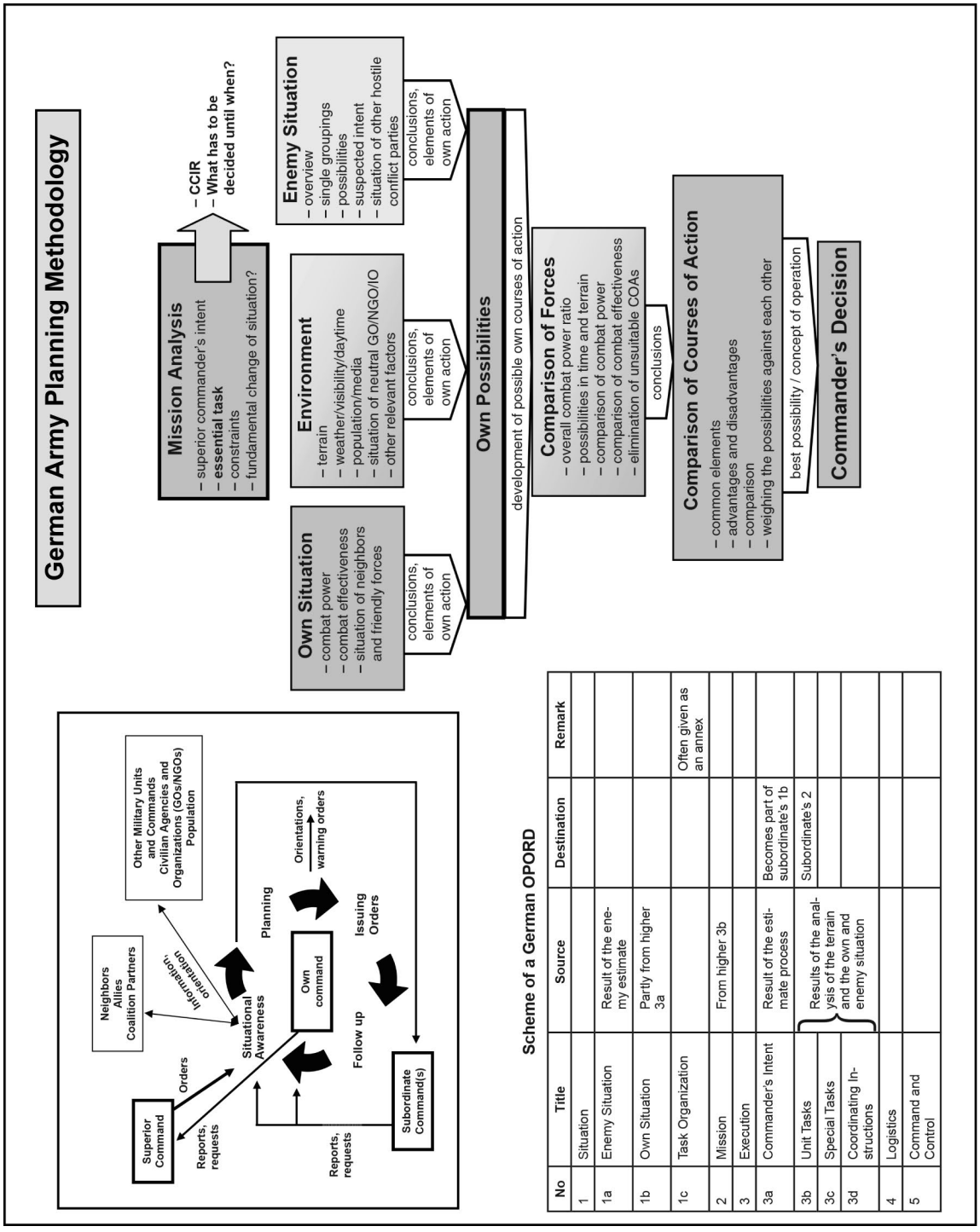


Figure 2-4. Joint Operation Planning Process.

These seven steps are grouped according to the lowest common denominators although the five lower steps are more helpful with planning processes outside the familiar 7-Step model. Many nations use the 7-Step model and not all are listed. Commanders who have elements within their formation that use a 7-Step model (like OLPP) should not spend a lot of energy on worrying over the varied names used for the same steps, but instead focus on the principles behind each step, thereby keeping the processes in parallel.

Six relatively diverse planning models also are deliberately provided in the last six columns of the chart to help commanders and planners find the parallel steps in processes that are unlike the basic 7-Step model. The German planning process is close to the 7-Step model, but gives an example of unique considerations that are less familiar. (See Figure 2-5.[5])



Scheme of a German OPORD

No	Title	Source	Destination	Remark
1	Situation			
1a	Enemy Situation	Result of the enemy estimate		
1b	Own Situation	Partly from higher 3a		
1c	Task Organization			Often given as an annex
2	Mission	From higher 3b		
3	Execution			
3a	Commander's Intent	Result of the estimate process	Becomes part of subordinate's 1b	
3b	Unit Tasks	Results of the analysis of the terrain and the own and enemy situation	Subordinate's 2	
3c	Special Tasks			
3d	Coordinating Instructions			
4	Logistics			
5	Command and Control			

Figure 2-5. German army planning methodolgy.

The Canadian Operational Planning Process (OPP) is a great example of a 5-Step model that is also common.[6] The United Kingdom's Combat Estimate (a.k.a., The Seven Questions[7]; see Figure 2-6) and the French Army's *Methode D'Elaboration d'une Decision Operationnelle* (MEDO) also provide great examples of alternative perspectives to planning.[8] The rapid decisionmaking and synchronization process exemplifies a shortened version of the 7-Step model that is found in many armies for abbreviated decisions.[9] (See Figure 2-7.)

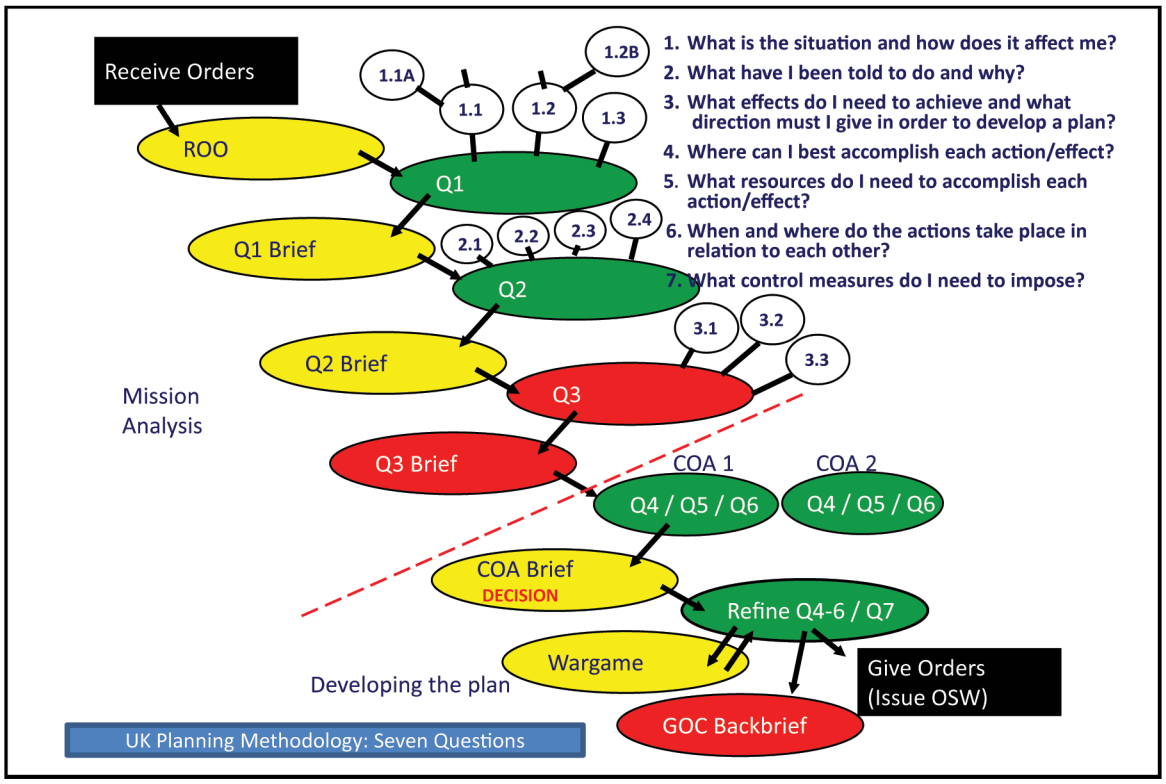


Figure 2-6. UK planning methodolgy; seven questions.

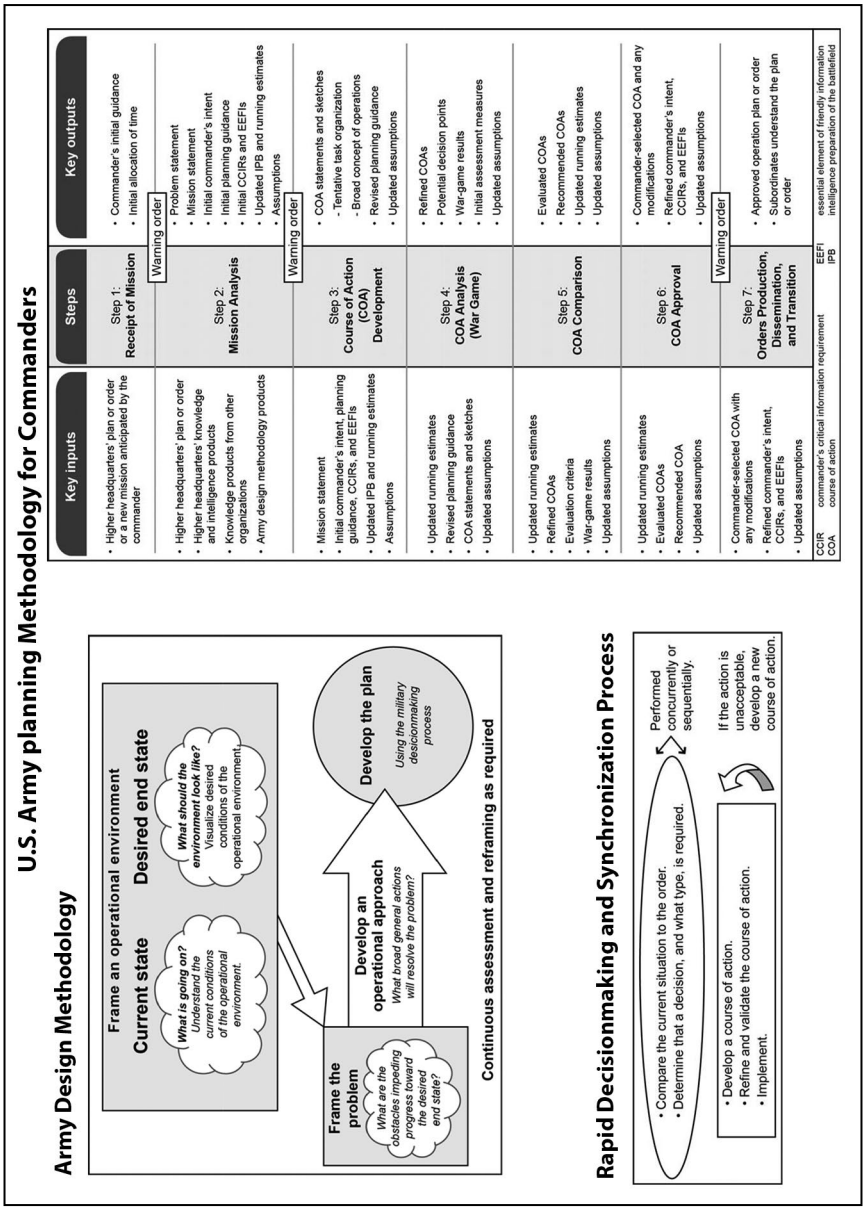


Figure 2-7. U.S. Army planning methdology above the national level.

The final planning process is the NATO Comprehensive Operational Planning Directive (COPD).[10] Although NATO officers are familiar with COPD, it is not recommended for use at the tactical level because it is designed to respond to the strategic and operational direction of the North Atlantic Council on a much slower timeline. It should also be noted that the COPD is aligned with the five lowest common denominator steps, but only Phase III through Phase IVb actually occur at the same time as any tactical planning.

The multitude of planning processes available cannot be represented easily on one page; however, the llowest common denominator chart provides a quick reference to assist coalitions in comprehending and synchronizing diverse planning processes. The purpose is not to fully comprehend any planning process, but to decrease friction between diverse elements conducting parallel planning. This outlook provides a baseline for commanders to coordinate with their

higher, adjacent, or subordinate units without forcing everyone to adopt an unfamiliar planning process in the middle of a crisis. However, during more deliberate multinational operations, it may be appropriate to establish a common process, and the lowest common denominator chart provides a baseline to do so.

Friction decreases as the commander determines which planning process is best for the organization and how adjacent processes function in parallel. Commanders utilize the five basic steps from the lowest common cenominator chart to make sure planning processes are interoperable. In this way, commanders feel comfortable using a NATO process or letting subordinate units use their own national processes in parallel.

Endnotes

1. For more information on MDMP, see Army Doctrine Publication 5-0, *The Operations Process,* 17 MAY 2012.

2. For more information on OLPP, see Allied Joint Publication (AJP) 5, *Allied Joint Doctrine for Operational-Level Planning,* JUN 2013.

3. AJP 5, Chapter 2, Section B.

4. Joint Publication 5-0, *Joint Operation Planning,* 11 AUG 2011, page IV-3.

5. German MDMP diagrams taken from Armor Magazine, NOV-DEC 2007, pages 15-22 at https://www.benning.army.mil/training/eArmor/2007/NOV_DEC/ArmorNovemberDecember2007webWithList.pdf.

6. Canadian planning methodology/OPP from the Canadian Defense College, Version 4, APR 2009.

7. United Kingdom (UK) planning methodology: Seven Questions. Obtained from a U.S.-UK slide brief, Exercise Eagle Owl, formation-level planning exercise conducted by Command and General Staff College Class 12-02, slide 13.

8. French Army planning methodology, Operational Decision Elaboration Method (MEDO) from Objectif Doctrine # 28-08, 2001, page 39.

9. U.S. Army planning methodologies for commanders, including the Army Design Methodology, Rapid Decisionmaking and Synchronization Process, and the MDMP, obtained from Army Doctrine Reference Publication 5-0, *The Operations Process,* 17 MAY 2012, pages 2-6, 2-12, and 4-6.

10. NATO COPD from Allied Command Operations, DEC 2010. Interim V1.0, 17 DEC 2010.

Chapter 3

Capacity Versus Capability and Effects on Interoperability

CPT Marcus Smith and SFC Jahir Avila

Joint Multinational Readiness Center

> "We have to understand what our strengths and weaknesses are. We have to work together to build multinational capability to solve these problems."
>
> — GEN Raymond T. Odierno, Aspen Security Forum, 23 JUL 2014

The Joint Multinational Readiness Center (JMRC) at Hohenfels, Germany, takes pride in its mission to unite different battalion-sized units to form a brigade combat team that trains together. Multinational brigade training seeks to further the cause of peace and to strengthen the North Atlantic Treaty Organization (NATO) alliance through the rapid deployability and flexibility that a multinational task force provides NATO. As identified in Allied Joint Publication 01 (D), *Allied Joint Doctrine – 0314* (pages 3-4), this "interoperability of formations and units of a joint and multinational unit has three dimensions":

- Technical (e.g., hardware, systems)
- Procedural (e.g., doctrine, procedures)
- Human (e.g., language, terminology, and training)

There is a gap involving the way organizations think about these dimensions that has resulted in sub-optimal planning and execution of operations as a multinational task force. Staffs must differentiate between capacity and capability when assessing the components of interoperability because one does not beget the other. Doing so will create a deeper and necessary understanding for commanders and among allies task-organized to fight side-by-side.

Observations of multiple rotations at JMRC highlight the concern of merging the ideas of capacity and capability into one category. Unifying the terms does not sufficiently address the complexities involved in modern military operations. The understanding of tactical capacity must precede the understanding of tactical capability. During the battalion-level military decisionmaking process, the consideration of capacity is not specified during the assessment of relative combat power. Army Techniques Publication 5-0.1, *Army Design Methodology*, 1 JUL 2015, may have been written assuming the planning unit had uniformed capacity at the subordinate unit level. In multinational operations, planners cannot make this assumption.

Capacity

Capacity is the first element required for interoperability. Capacity at the tactical level is found in two forms. The first type is the material the unit possesses. This material capacity is simply the type and number of weapons, radios, vehicles, life-support equipment, and the roster of soldiers available. The material capacity is characterized by technical specifications and quantities and is

a matter of objectivity. An example of material capacity is the presence of NATO Type I radios in a unit. These radios are designed with specifications to function with encryption. A unit either does or does not have this resource, and therefore either does or does not have the technical capacity to communicate with NATO encryption. The second type of capacity is the human capacity. Human capacity is best characterized by aptitude, internalized methods, adherence to systems, and completion of institutional courses. Both types are objective, able to be measured, and empirically evaluated.

Figure 3-1. Soldiers perform a medical evacuation rehearsal. After evaluating and stabilizing the casualty, they move to and mark the selected helicopter landing zone.

During unilateral operations, staffs assume tactical capacity. If two separate tactical-level units that are the same in terms of nationality, component, type, and branch operate together, their capacity and corresponding capability is the same. Because staffs have operated for such a long time with like-units, they incorrectly assume tactical capacity when dealing with subordinate components from other countries. If two units operate together and they are unlike in any way, especially nationality, the understanding of capacity cannot be implied. Moreover, defining capacity is not specified during the current form of the planning process. (**CALL Director's Note:** This is implied under Mission Analysis Step 4: Review available assets and identify resource shortfalls.) Detailing the planning process to include the specification of capacity as described above is one way to begin improving the commander's level of understanding. Publishing a clear standard for the expected material capacity to partners is another way to begin alleviating the issue. Without a standard, the dissimilar subordinate unit must be proactive in explaining its capacity and its differences in capabilities to the headquarters. Whether the method is top-down or bottom-up, specifying capacity informs Allied forces understanding when assessing relative combat power.

Capability

Capability is the second element necessary for interoperability. Capability is an individual's or unit's ability to maximize the use of capacity on the battlefield to achieve mission success. Capability is a function of discipline, training, initiative, motivation, and internalization of leader philosophy. Capability is the effective use of one's capacity for a purpose, namely mission accomplishment. An example of capability is the use of a radio properly filled with encryption to communicate securely. Another example would be the lethal engagement of an enemy at the maximum-effective range of a crew's weapons system because the crew understands the ballistics of the system.

If two squads have the same number of soldiers, types of uniforms, weapons, radios, vehicles, and all other equipment, they have identical material capacity. The soldiers may even have the same motivation, aptitude, and understanding of tactics, techniques, and procedures, further equating the human capacity between the two squads. The squad of soldiers with more training, time together, and better leadership, has an increased capability by virtue of those more subjective variables.

Observations

Prior to an exercise conducted in fiscal year 2016, observer coach/trainers (OC/Ts) identified what is commonly referred to as a "capabilities gap" when a returning company attempted to train as a part of a rotation without life-support systems and equipment common to the other units. The company's lack of wet-weather gear and appropriate sleeping bags made operating impossible after days of rain in near-freezing temperatures. A lack of compasses and canteens contributed to the unit's patrolling failures. By the end of a previous exercise, the mere participation of the unit was detrimental to the multinational battalion's success. Up until this point, OC/Ts were using the term "capabilities gap" as an inclusive term to describe both capacity and capability. The emphasis was on capability because that is what creates the effect on the battlefield, and it is the effect that matters. The OC/Ts shifted their paradigm and began to look at capability and capacity individually and recognized that the unit's previously described "capabilities gap" could have been better explained as a capacity gap. Members of this unit were unable to contribute in part because they were under-equipped. After identifying this trend, OC/T observation focus for subsequent rotations was to gauge progress of equipment acquisition and more importantly, the tactics, techniques, and procedures used to overcome a lack of equipment.

The aforementioned rotation provided an opportunity to observe both a fulfillment in capacity for some needs, namely life support, and a continued deficit in others. The rotation further provided observations for the way changes in capacities affected capabilities. The new observations revealed that, even though the unit had material capacity, it lacked the associated capability. When this previously ill-equipped unit returned for another rotation, they brought with them new sleep systems, rain gear, global positioning satellite (GPS) systems, and individual equipment that would permit the execution of a variety of missions. OC/Ts observed numerous examples indicating that capacity is not an indicator of capability.

The unit brought the latest generation of commercial GPS systems for mounted and dismounted navigation. The unit had the material capacity to operate successfully, but they had not trained using the system at all. Junior leaders within the unit insisted on operating with the GPS systems and refused to revert to manual navigation using maps and compasses when they were unsuccessful. The unit lacked the capability to operate the system and spent hours lost in the training area navigating in vain. The company reported a capacity and the battalion staff mistakenly assumed a capability.

Radios were an ongoing concern. The Harris radios the company possessed were ineffective because the soldiers did not know how to change frequencies on the radio without the communications officer. On one occasion, company leaders were unable to coordinate with aircraft on short notice because they could not program a new frequency on the single-channel radio system (plain text) due to a lack of training. Moreover, the lack of radios by number slowed the tempo of communication and created a lack of capability based on insufficient capacity alone. These gaps in capacity and capability discredited the unit in the eyes of the battalion leadership, and they began to discount the company from participation in battalion operations.

Capacity can create the perception of a unit's capability. During a situational training exercise, the battalion commander observed that grenadiers from an attached company did not carry rifles in addition to their RPGs. This observation created the appearance of a lack of material capacity and initiated doubt in his mind as to the unit's capabilities. In reality, the unit possessed a surplus of rifles, but did not task-organize weapons systems like the other companies within the battalion. The battalion commander began to discount the capability of the unit based on this perception. Here the staff can conduct a more detailed analysis during the assessment of relative combat power. A staff analysis that details the differences in capacity and capability outlines the contributing units objectively and provides a better perspective for the commander. This will provide a shared understanding before there is a misunderstanding.

Recommendations

Recommendations for leaders who will incorporate units from multiple nations into their formations include the advanced publication of standardized equipment expected for NATO operations by number and type. Publishing a clear standard for an expected material capacity to partners would alleviate misunderstanding during the assessment of relative combat power. This is not to suggest a permanent change to a unit's manning and table of organizational equipment, but to allow for an ad hoc complement when participating in NATO operations. Leaders would benefit from detailed planning that analyzes warfighting functions for both friendly and enemy forces by capacity and capability. Prior to the exercises, leaders should invest time and effort into developing relationships with the leaders of the other countries with whom they work. Understanding personalities, cultural/national considerations, and other attributes should happen before the operations begin. These recommendations make the capabilities known to decision makers and begin to bridge the gaps in limitations during the execution of operations.

Conclusion

The diversity within a multinational operation makes a team unique and potentially more powerful. When the capabilities of multiple units of differing nationalities are implemented correctly, they give a commander more options. These differences require more inventive and detailed planning to provide the commander with an assessment of the combat power by capacity as well as capability. The result of planning should be a greater shared understanding of what

can arrive to the battlefield and what it will do once it is there. Knowing the difference between capacity and a unit's capability for that capacity is critical. Multinational interoperability works for tactical units with this level of understanding. There is extensive value in understanding the principle of capacity and how it is distinguished from capability at the tactical level. Interoperability becomes more accessible when formations have a shared understanding of capabilities. Multinational training is critical to address the challenges of NATO operations. Units must train to fight and win the peace alongside their allies, and interoperability begins with the building blocks of tactical capacity and how it gives way to understanding capability.

Chapter 4

Bridging Multinational Joint Fires Interoperability with Competent Fire Support Liaison

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Overview

The North Atlantic Treaty Organization (NATO) continues to evolve from an operational doctrine that promoted multinational divisions and corps during the Cold War to multinational interoperability at the brigade level and below in current operations. This crucial doctrinal shift to brigade-level interoperability allows NATO to adapt to rapidly changing global security challenges. However, there is a deficiency within NATO doctrine, standardization agreements, standard operating procedures, and disproportionate capabilities and capacities at the battalion level that make multinational interoperability challenging.

These multinational operations are the future of fighting global conflicts and require an acute focus of understanding and integration. For the competent fires liaison, it is critical to allow formations to work within their tactics, techniques, capabilities, and capacities, while supporting the larger multinational maneuver formation in order to develop a common understanding within Joint fires. These liaison requirements are not the same for all multinational task forces (TFs). In a multinational brigade with subordinate battalions that have similar doctrine and robust fire support cells in their staffs, minimal liaison support from the brigade is required. However, in a multinational brigade whose battalions have divergent doctrine, incompatible communications, and limited fires staff cells, the brigade should provide a fire support liaison officer (FS LNO) package to the subordinate battalions.

Developing liaison packages requires detailed understanding of each echelon; in multinational TFs, there should be a non-reciprocal liaison relationship. Brigade elements assign liaison to the battalion TF to create shared understanding and competence across the brigade's fires warfighting function. FS LNO packages should be able to bridge gaps in capability and capacity between the brigade and the battalion and should account for doctrinal differences. In order to create a fully integrated and synchronized maneuver element, it is vital to establish and build shared understanding of all practices, procedures, and capabilities across all echelons.

Integration of Fire Support Liaison Personnel

During multinational operations, fires interoperability at the battalion TF level relies heavily on an effective FS LNO package from brigade. This package requires competent personnel, digital fires equipment, effective communications equipment, and mobility in support of a rapidly deploying multinational force. The doctrinal fires differences in Eastern European militaries, Western European militaries, and the United States is diverse and requires a FS LNO package to develop common fires understanding. The task force FS LNO package helps create common understanding while working with the organic fire support and operations personnel to bring all multinational assets to the fight and support the maneuver commander's scheme of maneuver.

The FS LNOs provide the supported battalion commanders with an understanding of the brigade's fire support capabilities, the multinational assets that are available, and any planning considerations. FS LNOs are able to rapidly de-conflict the ground and air for Joint fires effects.

Figure 4-1. A U.S. LNO team briefing the fires plan and asset allocation to multinational partners.

Observer coach/trainers (OC/Ts) at the Joint Multinational Readiness Center (JMRC) have observed that multinational formations with a strong Western doctrinal foundation interoperate well with units from the United States. Interoperability gaps primarily include the capability of digital architecture, using common communications security (COMSEC), confirming doctrinal terminology, and asset allocation (centralized fires versus decentralized fires). JMRC OC/Ts have observed larger deviations of Joint fires capacity, capability, and doctrinal practices with Eastern European battalions. These militaries still mirror the former Warsaw Pact doctrine from 1955-1991. They remain strongly tied to their national doctrinal roots, in that Joint fires is promulgated at the land forces or division level, causing an institutional divide, which develops seams in fires effectiveness.

Lack of battalion-level training with Joint fires causes over-reliance on organic mortar systems (**Call Director's Note:** The U.S. Army tends to do the opposite: Go big and under-utilize the mortars) and under-utilization of Joint fires. Some militaries do not have TF fire support elements (FSEs) or TF fire support officers (FSOs). JMRC OC/Ts observed TFs that assign the mortar commander the duties of the TF FSO with no additional training or personnel to support the mission.

Eastern European battalions have proven to be well-trained, and at times better than some other Western European battalions, at employing fires at the lowest level. However, when offered Joint fires allocation to support the maneuver commander, the challenge of integrating and synchronizing fires becomes very apparent. Employing fires using organic mortars is usually executed effectively, but adding other combined or Joint assets such as field artillery, general support High-Mobility Artillery Rocket Systems, close air support (CAS), or close combat attack aviation proves challenging and often is executed sequentially rather than simultaneously. Prior to multinational operations, most Eastern European units do not have the opportunity to train with and integrate into a combined arms maneuver operation. These countries tend to use only organic assets during their normal fires employment; therefore, they lack a robust and experienced element to support planning, de-conflicting air and ground, and the overall employment of a multitude of assets on their own.

Figure 4-2. Multinational Joint fires observers and Joint terminal attack controllers conducting a Joint fires engagement using CAS, close combat attack aircraft, and general support field artillery.

The task force FS LNO package must be tailored for each battalion in order to address deficiencies in capacity and capability to support the brigade operations. This integration may only require a vehicle and communications equipment in a battalion that has a more robust Joint fires interoperability. This communication equipment includes radios with common COMSEC features or linked with a tactical voice bridge, the Advanced Field Artillery Tactical Data System (AFATDS) (if the countries are not a partner with the Artillery Systems Cooperation Activities [ASCA] Program), or other digital fire processing links when applicable.

Whether a battalion is manned with experienced Joint fires personnel or has no organic fire support personnel at all, the LNO package must be scaled to facilitate planning, de-confliction, and employment of Joint fires. This LNO package should include a vehicle, radios that can be both vehicle-mounted and remote-mounted in the tactical operations center (TOC), digital connectivity with an AFATDS or other ASCA digital fire processing system, and a sufficient number of personnel to man 24-hour operations to support the fires planning, the employment of Joint fires, and a tactical air control party for terminal control of CAS assets.

Integration of FS LNO Equipment

It is critical to communicate early and understand the subordinate battalion's capacity and capability to properly identify the necessary equipment for an FS LNO package. Following this coordination, the brigade may be required to adjust the LNO package after being deployed as some gaps in communications during coordination may create gaps in abilities. Early integration of FS LNO equipment is critical to validating the plan and identifying shortfalls in the LNO package implementation. A multinational battalion should integrate the personnel and equipment, establish critical communication nodes, and rehearse all possible aspects of their employment as early as possible to confirm that the network and package is capable of accomplishing the mission. JMRC OC/Ts observe shortfalls in planning, equipment layout, and the utilization of equipment in the TOC during planning and operations. These failures have hindered the LNO's ability to support the battalion (e.g., having radio with no ability to remote-mount the equipment or having remote-mounted equipment that cannot be used in a mobile fight; both are critical to the modern battlefield).

Following the successful validation of personnel and equipment for the full spectrum of both mobile and TOC-centric mission command, the LNO and FSE must continue to refine and rehearse their mission. Implementation of new equipment and procedures into tactical operations that the TF has not used before can cause adverse delays in fires execution. Without proper planning and rehearsals, the multinational TFs may work around brigade systems and clear fires without fully understanding the capabilities of the systems and restrictions from the higher headquarters.

Integration of FS LNOs in the Planning Process

A successful LNO package must have scalable personnel requirements. Early communication and understanding of the nation's abilities and needs is critical to providing an effective LNO team. In many organizations, this may only require the communication structure and a traditional liaison between the two echelons. These organizations are generally structured to plan, coordinate, and employ Joint fires in a manner that mirrors U.S. doctrine. However, requirements for other organizations may be much more robust because of a lack of Joint fires organizational structure.

Integration of the FS LNO team in the battalion's planning process varies greatly among the different formations. The LNOs may assist with planning or may be the primary FS planners. Being prepared to execute the required role, and understanding the battalions expectations is critical to successfully integrating the FS LNO team and supporting the unit. The FS LNO team must be capable of supporting, advising, and assisting battalion fires personnel; liaising with brigade fires; and if tasked, serving as the primary TF FSE.

Identifying the Most Effective LNO Package

The best LNO packages not only provide the digital communication requirement to liaise with the higher echelon, but also provide their own competent fire supporters to assist in managing and planning operations. In situations where the LNO supports a unit that does not have organic FS personnel, successful interoperability requires the FS LNOs to serve as the TF FSE. The optimal LNO package in these formations is a TF FSE with a senior TF FSO, TF FS noncommissioned officer (NCO), two AFATDS box operators/drivers, and two Joint terminal attack controller teams.

With current manning constraints, most brigades cannot give up a senior TF FSE to support LNO duties, but it is possible to piece the team together. The TF FSO does not have to be the senior battalion FSO in the brigade and the TF FSNCO does not have to be a seasoned Soldier in paygrade E-7/OR-7 FSNCO. A competent field artillery FSO and a Soldier in paygrade E-6/OR-7 FSNCO with a driver and digital box operator multiplies the multinational formation's fire support capabilities in planning and execution.

Airspace Coordination and Clearance of Fires Battle Drill Integration

Not all militaries have the same considerations for fires deconfliction. Some militaries are less risk averse in employing fires without accurate ground and air deconfliction. The FS LNO needs to be incorporated into the battalion rehearsals and understand the clearance and coordination methods that the TF is planning to use. This is a key component of FS interoperability as many countries are not accustomed to centralized fires clearance decentralized clearance of fires. The FS LNO should help the battalion staff understand fires coordination, deconfliction, and employment measures the brigade uses.

The earlier the LNO team is able to educate and develop the fires roles in centralized or decentralized clearance, requesting assets procedures, and employment procedures, the more effective the multinational force. The U.S. Army struggles to execute centralized clearance of fires after more than a decade of conducting the Global War on Terror, as do other countries that are familiar with having artillery aligned with battalions. In any situation, establishing the framework early in the planning process allows the battalion to build an interoperable fire support team.

The FS LNOs need to completely understand the brigade procedures and, if needed, educate the battalion on these procedures. Whatever the process is, all parties involved need to understand their roles and rehearse. Many battalions have a reluctance to rehearse fires drills in multinational TFs, which is a fault with adverse effects when the time comes to employ assets. The FS LNO should assert the requirement to work through rehearsals and battle drills with all members. The FS LNO's ability to quickly identify and clear the ground and air, while requesting assets, is crucial to effectively employing Joint fires in unified land operations.

Integrating Different Doctrines Within a Multinational Brigade

To achieve tactical interoperability, a multinational brigade must be able to effectively apply different national doctrine in a unified effort. There is a requirement to be flexible on techniques and practices to effectively build a team that fights in a cohesive multinational brigade. Open and detailed communication is crucial to identifying and understanding each multinational component of the formation. Some militaries are more deliberately aligned with their doctrine and others are more flexible. This can present challenges in merging some doctrinal FS principles, but it requires a willingness to learn.

Figure 4-3. Howitzers in support of a multinational brigade task force.

The FS LNO is a critical conduit for identifying, communicating, and supporting doctrinal differences between the brigade and the battalion. Early in the deployment of a multinational TF, the FS LNO must become well-versed in all aspects of the multinational and allied doctrine, not just FS-related doctrine, but also understanding the maneuver plan and anticipating contingencies. The FS LNO should be well-integrated with all personnel in the staff sections including the chief of staff, operations officer, intelligence officer, logistics officer, communications officer, fires personnel, and the TF commander. The LNO must take part in formal and informal conversations to ensure understanding of the maneuver commander's plan and to make his role understood early.

Understanding how the tactical operation is controlled and fought is critical. The Eastern European battalions use their forward tactical command post (TAC) to control the fight more than in U.S. formations. The U.S. military generally deploys a TAC when preparing to jump the TOC or in critical situations when communications require the forward deployment. Many multinational formations deploy the TAC more frequently and some always have the TAC out

because of organic communications requirements, commanders wanting to be forward in the fight, and for survivability or succession of command in the event one is attacked.

Understanding how the TF fights helps identify the personnel requirements and positioning of LNO teams. These teams may be required to split to cover both a TOC and a TAC — this needs to be understood and integrated in the operational employment of the LNO team. Critical planning requirements for LNOs include the following:

- Understanding the roles of the TAC and TOC.
- Knowledge of the commander's primary and alternate locations.
- Awareness of an operational change of mission command from the TAC and TOC, planned during the operation.

Most multinational armies conduct planning that is similar to the U.S. military decisionmaking process (MDMP) or NATO Comprehensive Operational Planning Directive. However, some organizations thrive on a more hasty planning process. Many European battalions use a detailed MDMP process and when time allows, often go strictly by the manual to develop coherent and detailed plans. However, JMRC OC/Ts also observed reactive planning processes that made fires planning chaotic and very difficult. The FS LNO is not going to change the battalion's planning process, but he can support by emphasizing the need to plan and coordinate Joint assets early during planning. This planning is not as effective without the detailed synchronization with the maneuver plan, but allows assets to be aligned early enough to be utilized. This may trigger the planning process earlier as the battalion strives to get the LNOs the answers they need.

Commander's Guidance for Fires

Interoperability of fires at the multinational TF level requires shared understanding of the scheme of maneuver, the fires plan, and the commander's guidance for fires at each echelon. The LNO must understand that each multinational formation approaches commander's guidance differently. Some formations may have extensive micro-details of expectations for fires, while others might have no guidance until the opportunity to use fires presents itself. It is important for the LNO to understand the commander's intent for fires and how he communicates changes to intent. If the FS LNO's role is providing liaison and assistance, this conversation should be with the S-3 (operations) or chief of staff and the FSO to understand the doctrinal and personality differences that the commander presents.

The situation is slightly different when the FS LNOs assume primary roles as the TF FSE and are the lead planners and employers of Joint fires. In these situations the FS LNOs need to work early with the S-3 and commander to understand how the guidance is given and present the information they need to successfully plan and employ Joint fires. In a formation that does not traditionally employ Joint fires, that guidance may not be existent or not detailed enough. The TF FSO must always strive for the shared understanding of the guidance for fires and all that they can bring to support the commander. The TF FSO should be able to articulate what assets he can support with, what he can request, and what requesting an asset requires from the TF (e.g., DD Form 1972, *Joint Tactical Air Strike Request,* for immediate CAS, priority of fires, brigade target allocations, or primary/alternate observers for a brigade target).

It is important to support the commander's scheme of maneuver with whatever level of detail is given. The FS LNO should build trust and understanding within the team to allow for the FS LNOs to present fires plan suggestions and help direct the successful employment of Joint fires. The FS LNO should support the TF FSO and the FSE and present suggestions and plans through the organic battalion's FS channels when opportunity allows in the planning process. The best relationships of FS LNOs are developed by supporting the organic FSE and assisting them in understanding the FS capabilities of the brigade.

Conclusion

The new NATO operational constructs challenge multinational TFs at the brigade level and below as they continue to bridge the gaps of interoperability. Interoperability within the fires warfighting function is difficult, but manageable and vitally important to future allied conflicts. While this chapter presents some specific recommendations for U.S. and allied units, it is important to realize that multinational units can overcome most interoperability challenges through constant dialogue that facilitates shared understanding. This open dialogue early and continuously is the key to developing a scalable liaison package to meet specific fires interoperability challenges.

Chapter 5

Graphic Control Measures in Multinational Operations

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Graphic control measures are an essential component of a ground tactical plan. They facilitate shared understanding by creating a common language used to depict time and space. Graphic control measures allow a commander to synchronize the effects of combat power while affording flexibility and providing a "common language clearly understood among all users" (Allied Procedural Publication [APP-6C], *NATO Joint Military Symbology*, May 2011). Graphic control measures are essential during multinational operations when different languages, doctrine, and terminology constrain communication and shared understanding. Graphic control measures allow a multinational force to communicate fluidly and synchronize all warfighting functions without misunderstanding due to differences in culture and language.

Despite the importance of graphic control measures during multinational operations, observer coach/trainers (OC/Ts) at the Joint Multinational Readiness Center (JMRC) consistently observe limited or poor use of graphic control measures during multinational training exercises. Use of high-quality graphic control measures dramatically affects the interoperability of multinational task forces by creating shared understanding despite cultural and linguistic differences.

During one JMRC rotation, OC/Ts deliberately tested a company team in a multinational task force by observing the production of orders and graphics during the execution of offensive and defensive operations. The intent of this assessment was to determine the extent to which graphic control measures improved the overall interoperability and tactical effectiveness of the company. The observed company was a motorized infantry company in a battalion task force composed of four infantry companies, each from different nations.

Earlier JMRC OC/T Observations

OC/T observations at both the company and battalion level, spanning seven multinational exercises prior to the assessed rotation, consistently reported graphic control measures as an area to improve for the rotational training units. Three distinct negative trends were evident:

- Little to no use of graphic control measures at the company or battalion level.
- No refinement of higher headquarters graphics.
- Limited cultural understanding during the operations process.

One positive trend was that when a task force made an effort to develop quality graphics that support the maneuver plan, all members of the multinational task force tended to quickly understand and use the graphics, regardless of which nation's doctrine and techniques were used.

Little to no use of graphic control measures at the company or battalion level was the most frequently observed of the three negative trends previously listed. Training units often create graphics that do not support the maneuver plan and are inadequate for direct and indirect fire synchronization. Other units fail to create graphic control measures entirely, relying instead on vague intent graphics or a blank map.

In a multinational operation, a unit with poor or no graphics becomes easily overwhelmed by basic communications challenges. Descriptive language becomes imprecise and lengthy, especially when communicated across a radio between Soldiers who are not speaking their native language. For example, a Soldier sending a report of "enemy 100 meters south of the dark green tree on top of the hill that has a building on it," expends far more valuable time than a similar report, "enemy 100 meters south of checkpoint 1." The report can also cause confusion based on the sending or receiving Soldier's understanding of the common language used in the operation. The building could be described in a number of ways that the receiving Soldier does not understand (shack, shed, cabin, lodge, etc.) or may be mistranslated, necessitating a request for clarification. OC/Ts frequently observe this confusion at the moment in the battle when speed and precision are most necessary and communications are challenging.

Training units often fail to develop their own graphics and instead rely only on graphics produced by their higher headquarters. While OC/Ts observe this trend across militaries to varying degrees, their observations indicate a clear divide in mission command philosophies between Eastern European and Western European militaries. Trends amongst former Warsaw Pact militaries include limited development of brigade graphics into battalion graphics at the battalion level, and no refinement of battalion graphics at the company level. Brigade- and battalion-level graphics frequently do not contain the detail required to facilitate operations at the company level and below. As a result, companies with no graphics of their own attempt to fight using battalion graphics or discard the graphics entirely and instead rely only on descriptive language and the Military Grid Reference System. That may work in some instances in a unilateral task force; however, the complexities of multicultural communication necessitate the abbreviated language of graphic control measures.

The third major trend is that training units fail to account for cultural differences during the operations process. These differences include language, background, and military training. Of the three major negative trends observed, this one is the least prevalent, but can be severely detrimental to a multinational task force. Within this trend, the most notable sub-trend is failure to account for varying levels of language proficiency, a problem that should be mitigated through improving quality of graphic control measures. Next, OC/Ts report instances in which a headquarters uses naming conventions that some members of the task force do not have a frame of reference for, and thus are less likely to remember. For example, "Objective Jackson" is as foreign to an Italian soldier as "Objective Garibaldi" is to an American Soldier. Lastly, military cultural and doctrinal differences create confusion within the multinational task force. Units stray from doctrine, creating their own terms and symbols, using slang and unofficial terms as if they were in doctrine, or (more frequently) using a myriad of undefined acronyms. Without explanation, these cultural misunderstandings hinder interoperability and create organizational confusion.

OC/Ts frequently observe that a multinational task force that uses detailed graphic control measures communicates with greater speed and accuracy than those that do not. The example depicted in Figure 5-1 was designed by a multinational airborne task force. The battalion staff designated zones with a simple naming convention and used road junctions as target reference

points, named J1 through J8. Although this system did not match the doctrine of each member nation or North Atlantic Treaty Organization (NATO) doctrine, it was easy to understand and provided sufficient detail for fluid communication on the objective. All members of the task force, regardless of national affiliation, quickly learned the system and effectively used it to interoperate with each other during a nighttime attack. The lesson learned is that simple yet detailed graphics, understood by all, enhances the interoperability of a multinational unit. (**Note:** And between units of the same Army.)

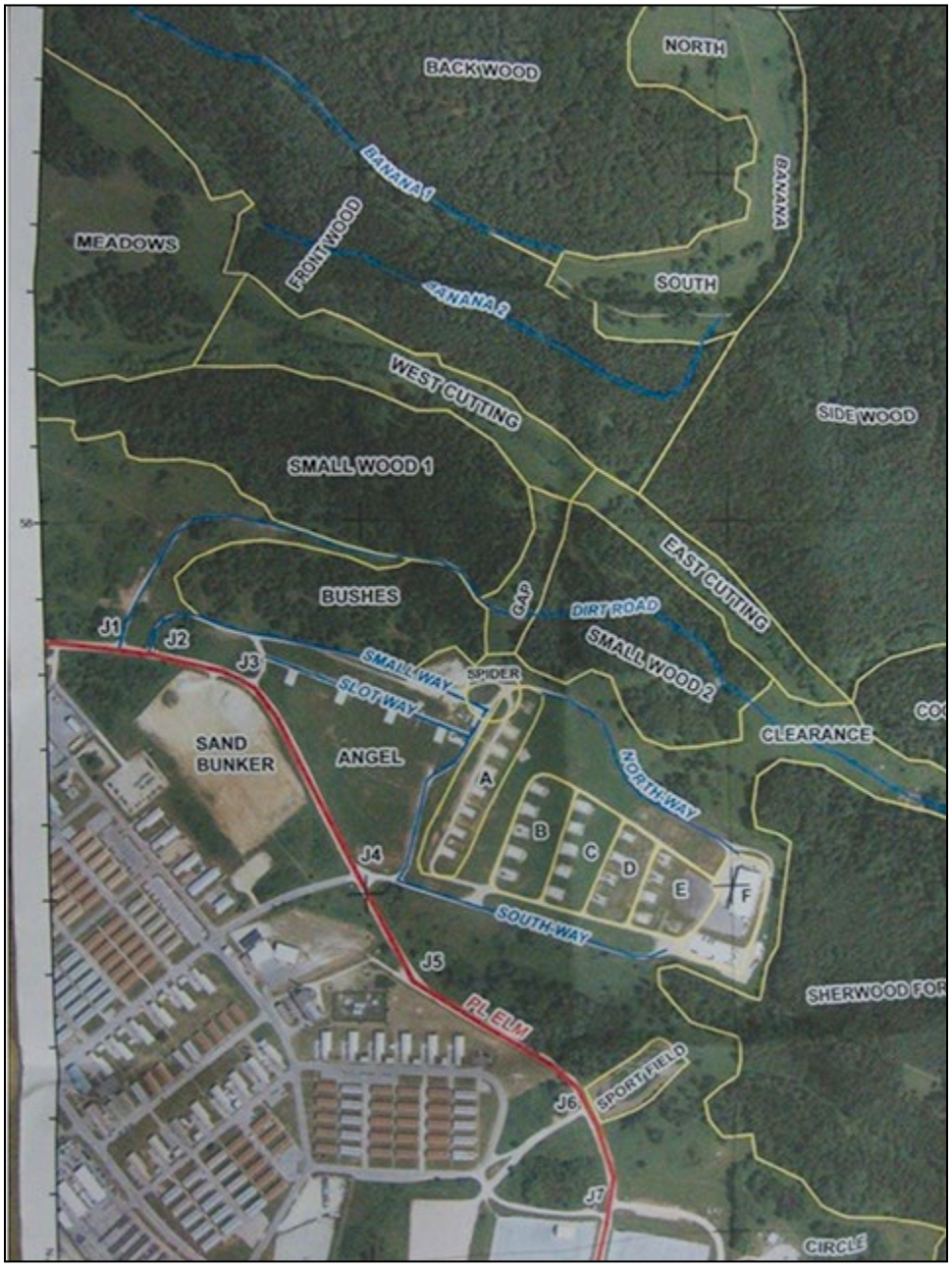

Figure 5-1: Zone naming convention used by a multinational airborne task force.

Test Methodology

During the rotational assessment, maneuver company OC/Ts tested the hypothesis that sound graphic control measures enhance the interoperability of a multinational unit. The unit observed was a motorized infantry company, equipped with variations of the BTR-60 armored personnel carrier, supported by anti-armor, mortar, and engineer platoons, and flanked by three other infantry companies, each from a different nation. OC/Ts trained the company leadership on offensive and defensive planning, with emphasis on developing graphic control measures that supported the maneuver plan. The company executed three company and one battalion situational training exercise (STX) lanes, followed by eight days of continuous unified land operations. OC/Ts assessed and evaluated the company's and battalion's use of graphic control measures and their effect on the results of the overall mission.

Exercise Test Results

Throughout the rotational assessment, the company's performance remained largely consistent with previously observed trends. The company and platoon leadership were reluctant to develop graphic control measures beyond those issued by their higher headquarters. They relied predominantly on the battalion's graphics, which were completely inadequate for company- and platoon-level operations. OC/T observations of the company's performance confirmed the effects of previously observed negative trends.

In its first offensive STX lane, an advance to contact, the tested company developed intent graphics that depicted the maneuver plan, but did not develop named graphic control measures (see Figure 5-2). As a result, the company net became clogged with reports once they were in contact with the enemy. Already burdened by a limited communications architecture, the company commander began receiving inaccurate reports from his platoon leaders and lost all situational awareness. Reports sent from the company to the battalion were equally inaccurate. The confusion caused two instances of indirect fire fratricide because neither the company commander nor supporting artillery had accurate friendly and enemy positions.

Figure 5-2: Phase lines drawn on this map were developed by the battalion. Note how graphics depict maneuver, but are not named control measures that facilitate mission command.

During defensive STX training, the company again failed to develop any direct fire graphic control measures; however, it did develop targets for artillery and mortars. The company and the platoons built inadequate sector sketches that depicted battle positions and ambiguous sectors of fire, but made no specific direct fire control measures. Two of the four platoons did not have a copy of the company fires overlay and none of the platoon sector sketches included preplanned indirect fire targets. The lack of graphic control measures constrained the platoon leaders from accurately and rapidly depicting the enemy situation for the company commander as the opposing forces began their attack. Because indirect fires were not integrated into platoon plans, all fires were controlled by the company commander personally; he fired targets he could not observe based on inaccurate reports from the platoon leaders. The commander managed to rally by repositioning his command post throughout the battle, but using clear graphic control measures that supported the defensive plan would have facilitated a better common operating picture and fluid synchronization of direct and indirect fires across the engagement area.

During an "attack urban terrain" STX lane, the tested company blanketed their objective with a combination of phase lines, alphabetical blocks, and numerical buildings. The commander used the graphic control measures to brief the scheme of maneuver in the operations order, and the company rehearsed on a large terrain model using the same graphics. These graphics were adequate to control the execution of the assault if disseminated down to lower levels, mainly team and squad leaders. However, the company did not disseminate graphics below the platoon

leader level. Some platoon leaders became casualties during the attempt to gain a foothold on the objective, leaving no one in the succession of command with a copy of the graphics. Additionally, surviving platoon leaders and the company commander completely disregarded the graphics once the assault began. This drastically disrupted the organization and momentum of the attack, causing it to quickly devolve into chaos at the decisive point. The end result was five incidents of fratricide and mission failure.

Figure 5-3: Graphics for the urban attack. These graphics supported the maneuver plan. However, only officers carried copies of the graphics and they completely disregarded them once the assault began.

When the company progressed into full spectrum operations, they continued to under-develop graphic control measures, as did the multinational battalion headquarters, which caused a significant gap in interoperability within the task force.

During a defensive operation, the battalion developed limited graphics that depicted only company battle positions and tactical tasks. All graphic control measures used from the battalion down to platoon level were a direct copy of brigade graphic control measures. The tested company developed no graphic control measures beyond their indirect fires overlay. Company and platoon sector sketches incorporated neither obstacles nor adjacent units. They did not establish interlocking sectors of fire with companies on their flanks, even though the battalion's defensive plan necessitated a cross-fire technique between the companies. This created two problems for both the company and the battalion. First, lack of direct fire control created gaps in the defense that the opposing force rapidly exploited. Second, lack of graphic control measures hindered the effective communication of enemy composition, disposition, and location between adjacent units. The tempo of the opposing force's attack exceeded the speed with which companies could communicate, precluding any target handover as the enemy traversed between company engagement areas. Designated target reference points, engagement areas, named areas

of interest, and other graphic control measures would have facilitated better interoperability among the companies.

Figure 5-4: Company graphics developed for the defense. With the exception of indirect fires targets, all control measures were developed by the brigade.

After the defense, the company began a steady campaign of short offensive operations, punctuated by periods of defense for planning and preparation. The company continued to rely on graphics from the battalion, which mainly used only graphics from the brigade. All companies used the brigade's graphics (a system of checkpoints that marked identifiable terrain features) to communicate when they were within the vicinity of one of the checkpoints. The observed effect was discernable; reports sent as a shift from the check point were substantially more fluid than reports when no graphic was available. They also began using the checkpoints as ambulance exchange points and logistic release points. However, neither the companies nor the battalion used the checkpoints to facilitate the maneuver plan, and rarely added graphic control measures where none existed. They did not disseminate graphics below the platoon leader level, leaving noncommissioned officers and vehicle crews unable to synchronize direct fires within the confines of the company and battalion plan.

The marginal application of graphic control measures by both the tested company and battalion validated observations of negative trends made by OC/Ts prior to the assessment. OC/Ts observed improved performance when companies from different nations used a common control measure to communicate, such as checkpoints. This validates the hypothesis that graphic control measures are essential for multinational interoperability because the units were most synchronized when they used the checkpoints to communicate.

Recommendations/Best Practices for Tactical Leaders

Based on the performance of the tested company and past observations of JMRC OC/Ts, the following interoperability lessons were learned:

- Graphic control measures are an essential component of multinational interoperability at the tactical level. They accelerate the pace of communications when Soldiers are not speaking their native language and allow everyone to visualize the fight.

- Leaders must ensure everyone involved understands the graphics and control measures. Inevitably, a multinational unit uses a blend of NATO and national doctrine, necessitating explanation of specific terms and symbols. Leaders should brief graphic control measures in the operations order to ensure that subordinates understand the functions of each.

- All members of a multinational taskforce should avoid undefined acronyms. Military acronyms are a language of their own. Every military has its own unique lexicon of acronyms and abbreviations. Leaders must never assume that everyone understands what they are briefing.

- Graphic control measures should include simple naming conventions. Soldiers who speak the operational language as a second language might not have a mental frame of reference for a name they just learned, making it challenging to pronounce or remember. Simple names include the phonetic alphabet, colors, basic animals, etc.

- Leaders should understand and adhere to Allied Procedural Publication (APP)-6C. APP-6C contains a plethora of military symbols and graphic control measures that are standardized across NATO. OC/Ts found that few units training at JMRC are familiar with standardized NATO symbols. Study of this publication prior to conducting multinational operations fosters interoperability and provides useful examples of graphics used to support a tactical plan. Symbols and graphics in APP-6C are closely consistent with Army Doctrine Reference Publication 1-02, *Terms and Military Symbols*, 16 NOV 2016, with the addition of multiple Joint symbols. Improved understanding of APP-6C by Allied leaders reduces the amount of time devoted to explaining graphics, allows all Soldiers to visualize an operation regardless of their native language, and facilitates communications.

- Leaders should incorporate the best of each team member's national doctrine and techniques into operations. The advantage of a multinational task force is its diversity. This not only allows the commander to pick from the best available, but it also fosters mutual understanding, respect, and cooperation.

Note: The first four lessons also apply to all non-multinational units. Concerning the fifth lesson, everyone must understand the language of graphics as they are defined in ADRP 1-02, *Terms and Military Symbols,* 16 NOV 2016.

Conclusion

The results of JMRC's exercise assessment validated previous OC/T observations. Although a few positive examples of interoperability facilitated by graphic control measures emerged during the exercise, it remains evident that producing quality graphic control measures is essential for multinational units to interoperate at the tactical level. Fighting alongside our Allies is mutually beneficial and essential today; it is also complex and challenging. Developing, disseminating, and implementing quality and mutually intelligible graphic control measures is critical for building interoperable multinational teams.

Chapter 6

Winter Camouflage Modifications: Observations of Multinational Techniques

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Winter weather conditions in early 2016 at the Joint Multinational Readiness Center (JMRC) provided an opportunity to observe allied capabilities in environmental camouflage adaptation. In the days leading up to the start of the exercise, Hohenfels received approximately 12 inches of snowfall in a 48-hour period, with temperatures sustained at below 30 degrees Fahrenheit. Throughout the execution of enhanced situational training exercises, temperatures warmed and snowfall remaining on the ground decreased from full coverage, to patchy drifted snow, to finally melting away. However, the background provided good opportunities to observe the effectiveness of snow camouflage patterns in the three bands of coverage listed in Army doctrine. These bands range from full coverage, 85 percent to 15 percent coverage, and 15 percent and below coverage.

Different allied partners employed some form of winter conditional camouflage for the time period of the exercise. Some Allies applied vehicular temporary camouflage paint similar to that available in Army inventory, as well as individual snow camouflage for soldier uniforms and weapons.

Figure 6-1. VALUKS (Slovenian) vehicles with snow camouflage paint.

Figure 6-2. Soldiers wearing snow smocks over their uniforms.

The JMRC aviation observer coach/trainer team reported that the applied snow camouflage pattern was extremely effective at concealing vehicles from easy observation at distances beyond 300 meters in both the full ground snow coverage and the 85 percent to 15 percent ground snow coverage conditions. Additionally, vehicles using supplementary natural concealment were further concealed using the modified paint schemes.

Figure 6-3. Fighting vehicles in defensive positions.

Figure 6-4. Infantry fighting vehicle using natural cover.

Figure 6-5. A tank remains effectively camouflaged even with decreasing snow coverage.

Figure 6-6. Patchy snow still provides concealment for dismounted Soldiers wearing "dirty snow" pattern smocks over their uniforms.

Doctrinal References

- Army Techniques Publication 3-37.34, *Survivability Operations*, 28 JUN 2013. (contains restricted distribution instructions; may have limited access)

- Army Tactics, Techniques, and Procedures 3-97.11, *Cold Region Operations*, 28 JAN 2011. Change 1, 10 JUN 2011.

Current U.S. doctrine addressing winter camouflage is very non-specific. Doctrinal guidance addressing patterns of temporary painting for solid colored vehicles in snowy conditions would prove helpful, particularly for U.S. Stryker, Abrams, and Bradley vehicles. In addition, more guidance should offer assistance in visual concealment and deception techniques, such as providing photographic examples of effective camouflage patterns or how to place netting over other types of vehicles such as cargo trucks. Other useful techniques should address proper care and treatment of the camouflage properties of current uniform patterns.

Recommendations

- Units conducting deployment and training in U.S. Army-Europe (USAREUR) should arrive prepared to camouflage individual Soldiers and vehicles in multiple environments, determining equipment requirements and national stock numbers for camouflage systems, paint, and decoy materials.

- Units must develop patterns to apply temporary snow camouflage paint to single-colored combat vehicles in the USAREUR area of responsibility.

- Units must continue to work with allied and partnered units to share best practices, patterns, and materials to aid in development of consistent camouflage, concealment, and decoy measures across multinational formations.

Chapter 7

Employing Reconnaissance in a Multinational Task Force

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Militaries from across the North Atlantic Treaty Organization (NATO) alliance train interoperability at the Joint Multinational Readiness Center (JMRC), located in Hohenfels, Germany, to respond to regional threats as a common unified front, rather than a disparate collection of allies only able to operate independent of one another. Multinational task forces (TFs) are frequently organized with battalions and brigades from across NATO serving as the TF headquarters elements. These TFs consist of companies, battalions, and assorted enablers from a wide range of NATO or Partnership for Peace armies. They typically have limited experience working together, are unfamiliar with each other's standard operating procedures, and are tenuously connected by a selected common language. A commander's biggest challenge in this situation is integrating unfamiliar subordinate units and quickly making the TF cohesive.

Based on JMRC observer coach/trainer (OC/T) observations from previous rotations, the successful integration and employment of reconnaissance (RECCE) units is particularly challenging for newly formed multinational TFs. This chapter provides optimal recommendations to TF commanders and staffs for how to integrate RECCE elements from allied nations at the battalion or brigade level. From the start, commanders should expect limited interoperability until several gaps in capacity and doctrine are filled. Essential to establishing interoperability with any RECCE element is determining the following: materiel limitations, how the unit is task organized, differences in culture, and doctrinal methods of employment.

Immediately upon integration, the brigade or battalion staff should determine the RECCE unit's materiel capacity. Not all armies employ RECCE units for the same purpose, and nations often equip them for specific tactical tasks. Budget constraints also might cause limited RECCE-specific equipment fielding, which can limit the scope of missions they are able to perform. Commanders and staffs must know the materiel limitations and strengths of newly assigned RECCE elements at the start of integration so they can employ them to rapidly and accurately answer the commander's critical information requirements. Commanders also avoid committing RECCE elements to missions they are unable to accomplish due to limited or specialized capacities.

As an example of the importance of understanding materiel capacities, one RECCE platoon was observed during a JMRC exercise without the proper equipment needed to operate effectively at night. They maneuvered in Soviet-era RECCE armored personnel carriers that lacked optics and only had night observation devices for their drivers. They also lacked long-range communication capabilities (thermal optics, cameras, and sensors), which hampered communications after maneuvering only 5 kilometers away from their battalion. Despite these limitations, however, they were ordered to conduct route RECCE and named area of interest (NAI) surveillance in limited visibility with the full expectation of collecting optimal information.

In one instance, the platoon lost communications with the battalion, but maintained two observation posts without reestablishing communications. When a company from an adjacent U.S. battalion air assaulted into their area of operations, the RECCE platoon could not conduct a RECCE handover — they could hear the helicopters, but could not confirm with their battalion if they were friendly or enemy. After receiving direct-fire contact from enemy counter-RECCE, the U.S. element called for fire danger-close to the RECCE platoon.

These types of risks can be mitigated if TF staffs take subordinate-unit capacities into account as they generate combat power. If the staff conducts an analysis of the incoming unit's equipment capabilities, they can determine what type of equipment they should cross-load and assign to RECCE.

Staffs also must understand how a newly assigned RECCE element task organizes and how their chain of command is structured to successfully integrate them into the TF. In many militaries, RECCE units work directly for the intelligence officer (S-2), and their effectiveness may hinge on how, or if, the S-2 is involved in the planning process. An S-2 observed during one rotation did not have a collaborative relationship with the battalion operations officer, and was possessive of the battalion RECCE platoon. As a result, the S-2 issued mission orders with no consideration of logistics, adjacent unit coordination, quick reaction force support, engagement criteria, or a plan for rearward passage of lines. Additionally, this platoon had historically trained to conduct split-section operations in order to cover more terrain, and operated like this during the exercise. This resulted in an inability to provide mutual support and as a second-order effect, the platoon incurred more risk than the TF commander would be comfortable with if he fully understood how they were operating. Unknown to the commander, a section in this platoon consisted of a single troop carrier vehicle and four personnel. If a section was compromised, destroyed, or if the vehicle broke down, the commander may have been forced to commit resources that he otherwise needed to accomplish the TF mission.

Another consideration is that some militaries are more officer-centric than others, and cultural barriers exist that may limit interoperability with a particular RECCE element. Breaking through that construct and empowering Soldiers and leaders to use disciplined initiative is critical to interoperability. The nature of RECCE missions requires trust in the tactical decision making abilities of Soldiers on the ground and their abilities to make critical decisions in the absence of the commander's direct guidance while operating within his intent.

OC/Ts asked one battalion RECCE platoon why they did not displace from an observation post to resupply radio batteries after they ran out of power, and a section leader answered, "because we were not ordered to." A RECCE element's leaders should be personally involved in the planning process and attend the TF combined arms rehearsal or any rehearsal of concept drills before conducting major operations; the commander should demand a backbrief in order to move beyond cultural barriers. That same platoon's leaders did not participate in TF rehearsals prior to the force-on-force missions, and as a result, the commander missed an opportunity to gain a better understanding of the RECCE platoon's scheme of maneuver and provide clear guidance.

During another rotation, a long-range surveillance (LRS) company was attached to a U.S.-led brigade TF during a JMRC exercise. In their home country, the LRS company was employed as a division-level asset for deep infiltration and information collection. During the exercise, the brigade tasked them to overwatch NAIs far beyond the forward line of its own troops and disrupt using Joint fires. Additionally, the commander expected them to provide real-time updates to help direct the brigade's main body to the path of least resistance. Instead, the company occupied hide sites and used their doctrinal methods of surveillance. They went "radio silent" until a planned communications window opened every two hours, at which time they transmitted information

to the company command post (CP). The information collected could only be filtered to brigade operations and intelligence by way of a runner from the LRS company CP, located adjacent to the brigade tactical operations center (TOC). The runner was not capable of rapidly answering follow-up questions due to the restrictive communications window. Because they were employed contrary to their doctrinal methodology, the company became ineffective and did not meet the commander's intent.

During the after action review, the staff realized that embedding a liaison officer from the LRS company in the TOC and cross-leveling high-frequency radio batteries would have benefited the mission. Had the brigade staff understood the LRS company's capabilities, limitations, and methodologies, the commander could have employed them more effectively. However, the onus cannot solely rest on the supported headquarters to determine the capabilities of a supporting element. While the staff is ultimately responsible for doing so, the supporting enabler personnel must be proactive in making their "sales pitch" — a detailed capabilities brief — to the supported commander. The best RECCE units observed are the ones that involve themselves in the planning process (**Note:** This applies equally to use cavalry squadrons/reconnaissance units and their high headquarters), and aggressively ensure their commander understands what they can provide to the TF.

JMRC OC/Ts regularly observe two consequences of the unsuccessful integration of RECCE assets. The first, as described in this chapter, is a misuse of the asset, and the second is a non-use of the asset. If a TF cannot figure out how to employ their RECCE element successfully, they tend to stop employing them altogether, violating one of the principles of RECCE — never leave RECCE in the reserve. The strength of the multinational TF is its diversity of assets and capabilities; a RECCE unit may not always look the same, but it always has the potential to fulfill a critical capability that the TF commander can leverage through adequate preparation and aggressive, early integration of the unit into his TF.

Chapter 8

Fratricide Avoidance in Multinational Operations

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Despite continuous collaboration among multinational partners in support of the Global War on Terrorism, there have been limited opportunities for our forces to join together to conduct unified land operations. As a result, today's Soldiers have rarely, if ever, had the opportunity to distinguish enemy from friendly forces in a decisive action environment.

Recognizing that this relative unfamiliarity can result in fratricide, combat training centers (CTCs) continue to develop a realistic decisive action training environment (DATE) that exercises a unit's proficiency with fratricide avoidance.[1] Many service members, regardless of national origin, are now catching their first glimpse of the wide array of combat equipment and capabilities that exist in a multinational force at the CTCs. Likewise, commands and staffs are increasingly confronting the complexities and challenges of having to account for such diverse formations.

Fratricide avoidance is crucial to the success of any mission, but it is uniquely important during multinational operations. One single fratricide incident between partner forces can undermine the vital trust that is necessary for mission accomplishment. An incident also can have operational and strategic implications well beyond the loss of life and equipment on the battlefield. Fratricide avoidance is therefore among the most complex challenges facing multinational force commanders on today's battlefield. Through proper planning and preparation, units can minimize fratricide risk during mission execution.

Fratricide Avoidance Planning

Multinational formations are especially difficult to control due to a myriad of languages, cultures, vehicles, uniforms, etc. Although there is no checklist solution, commanders can directly influence fratricide avoidance during the military decisionmaking process (MDMP) and troop leading procedures (TLP).[2] Placing an early command emphasis on properly understanding the operational environment, particularly as it concerns friendly and enemy forces and anticipated causes of fratricide, produces better and more proactive solutions during the planning process.

Each iterative step of the MDMP should recognize fratricide avoidance as an issue to be identified, discussed, and resolved or mitigated. Obviously, some of the tools to reduce the risk of fratricide are instinctive, such as technology, graphic control measures, standard operating procedures for passage of lines, or adjacent unit coordination. But, more critical thinking regarding fratricide needs to go into the planning process in order to show a measureable result.

None of the discussion regarding fratricide avoidance should occur in a vacuum; it should be an integrated effort among all the staff (including any liaison elements), with inputs such as applicable rules of engagement (ROE), enemy situation, friendly forces identification measures, task organization, etc. At receipt of mission, a designated staff officer should brief which forces have been declared hostile under an appropriate authority and how to distinguish those forces from friendly or neutral forces. Similarly, and maybe more importantly, during mission analysis one might ask which forces within the operational environment have not been declared hostile, but who could nevertheless affect operations.

The planning staff must next ensure that subordinate units understand the measures that have been implemented through effective briefing, orders production, and confirmation briefs. Likewise, the planning staff must ensure that the fratricide avoidance measures are completely understood by the current operations staff during the plans-to-operations transition. Not only does this shared understanding reduce the risk of fratricide, it also drives overall situational understanding of the operational environment.

Company-level leadership and below must address the same fratricide avoidance considerations as part of parallel planning during its TLP. For company-level and lower echelons, control measures and details about other units in the area of operation are of even greater importance. It is just as important to know not just who is next to you, but what that unit looks and sounds like. Questions such as exactly what type of vehicles they use, what those vehicles look and sound like during the day or at night in the open, in concealment, and in cover should become common knowledge of every Soldier. Similarly, every Soldier should be able to identify the uniforms of the adjacent units and what language they speak, as well as the process in place to communicate effectively with them.

At every level of command, confirmation of functional understanding through rehearsals and backbriefs ensures that target engagement criteria, target identification, adjacent unit coordination, and liaison, are not just rote recitation, but are completely understood. Units should post the ROE in the command post. The ROE should be concise and understandable and should highlight whatever specifics the commander deems most important. At a minimum, it should state who can be engaged, how to identify who can be engaged, and how they can be engaged. This is particularly important at the beginning of hostilities when the ROE is in a constant state of flux, but remains necessary throughout the mission/tasks (especially when ROE changes are implemented).

Thus, planning procedures that emphasize fratricide avoidance as a key issue (i.e., a commander's priority) is the first step in addressing fratricide in multinational operations. The next step is to prepare to avoid fratricide.

Fratricide Avoidance Preparation

From individual Soldiers to commanders and staffs at all levels, fratricide avoidance begins long before mission execution. Fratricide avoidance must become a central aspect of training and rehearsals. Commanders should insist that fratricide avoidance be made a mission essential task at every level. At the tactical level, the Army Universal Task List provides a framework to conduct and evaluate fratricide avoidance.[3] Because of the complexity of multinational operations, target identification and engagement must remain conscious, yet quick and seamless. Adequate preparation enables boldness and audacity.

To prepare for any operation, one must build and maintain situational understanding.[4] Operational environments are dynamic and complex, and often contain hybrid threats. Situational understanding regarding overall operational complexity is often confined to command and staff decision making. To a certain degree, that is understandable — the commander drives the operations process based on his situational understanding as his staff built it. But to avoid fratricide, it is imperative that every Soldier hone his situational understanding.

To drive situational understanding at its most basic level, every Soldier must first understand the ROE. For U.S. Soldiers, this means having a basic knowledge of the standing rules of engagement (SROE), which provide clear guidance on the use of force; that it can be used against a declared hostile force (DHF) or in self-defense (hostile act/hostile intent).[5] This baseline should be so ingrained in Soldier's minds during training that upon receipt of a mission, they need only ask: "Who is the DHF?"

Once Soldiers know whom they can target, they need to know how to identify those targets. Whether termed "target identification" or "positive identification of a DHF," the requirement is the same: that Soldiers engage only those who they can confirm are the enemy.[6] This is obviously more difficult than simply identifying tanks, infantry fighting vehicles, and other platforms that do not look organic to one's own unit. Again, multinational operations likely involve a variety of friendly combat systems, the origin of which is entirely unfamiliar to the shooter. In fact, because many former Soviet Bloc countries are now members of the North Atlantic Treaty Organization (NATO) or the NATO Partnership for Peace, it is entirely conceivable that friendly forces are operating the same vehicles as potential enemy forces. Further, diverse languages, cultures, and standard operating procedures complicate command and control, which further increases the fratricide risk.

Conclusion

As the United States and its multinational partners continue to focus their efforts on an uncertain future against uncertain enemies, they must build interoperability through mutual trust. Nowhere can that trust break down as easily as an incident of fratricide during mission execution. That is why it is so important to get this right. Soldiers at every level need to know whom they can engage (and whom they cannot engage) as well as what they and their equipment look like through situational understanding. The risk of fratricide during multinational operations is great, but through conscious and effective fratricide avoidance planning, preparation, and execution, we can reduce the risk to minimal, acceptable levels.

Endnotes

1. This assertion is based in both theory and observation. For example, during Exercise Combined Resolve V, a recent U.S.-led multinational brigade-sized DATE rotation at the Joint Multinational Readiness Center, Hohenfels, Germany, both the U.S. and its partner forces had difficulty distinguishing friendly versus enemy forces and equipment, which resulted in (training) fratricide.

2. See Army Doctrine Publication (ADP) 5-0, *The Operations Process,* 17 MAY 2012, for a general dicussion of the MDMP and TLP, the primary planning mechanisms for tactical-level planning.

3. Army Doctrine Reference Publication (ADRP) 1-03, *The Army Universal Task List,* 2 OCT 2015, paragraph 6.9.5, Perform Fratricide Avoidance. Among its subtasks are: detect and establish positive identification of friends, foe, and noncombatants; perform target detection; decide target engagement; and engage hostile target. Although doctrinally part of the protection warfighting function (WfF), fratricide avoidance applies to all WfFs and is so critical that its accomplishment is likely to determine the success of the next higher organization's mission.

4. ADP 5-0, page 5.

5. A "Declared Hostile Force" is "(a)ny civilian, paramilitary, or military force or terrorist that has been declared hostile by appropriate U.S. authority." Once a force is declared "hostile," U.S. units may engage that force without observing a hostile act or demonstration of hostile intent (i.e., the basis for engagement shifts from conduct to status). The Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3121.01B, 13 JUN 2005, SROE/Standing Rules for the Use of Force (SRUF). See also, Operational Law Handbook 2015, The Judge Advocate General's Legal Center and School, Charlottesville, VA, page 83.

6. Target identification and positive identification of a DHF are two sides of the same coin. ADRP 1-02, *Terms and Military Symbols,* 16 NOV 2016, defines target identification as "the accurate and timely characterization of a detected object on the battlefield as friend, neutral, or enemy." Joint Publication 3-01, *Countering Air and Missile Threats,* 23 MAR 2012, and ADRP 1-02 define positive identification as "an identification derived from observation and analysis of target characteristics including visual recognition, electronic support systems, non-cooperative target recognition techniques, identification friend or foe systems, or other physics-based identification techniques."

Chapter 9

Understanding Interoperability Through the Lens of Religious Support

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One of the main catchwords for today's Army is interoperability. The Chief of Chaplains has listed multinational interoperability as a priority of effort for the U.S. Army Chaplain Corps. Of the three key aspects of achieving interoperability, the technical dimension of religious support is a difficult concept to grasp because it is attained through systems within the unit focused on mission command. These mission command systems are critical to operations and communications across the formation. Therefore, if mission command is successful in multinational interoperability, then the religious support is successful at the technical dimension. However, the focus for religious support should be on the human and procedural dimensions of interoperability.

Where some might question whether multinational interoperability is relevant to religious support, one must look beyond the technical aspects of a mission command system communicating with another mission command system and take a wider view. Larger and more important are the human and procedural aspects, especially when considering how the military has grown to work with state services and other governmental or nongovernmental departments. Challenges primarily lie within our current and future multinational Allies and partners. The human aspect demands the ability to build strong personal and professional relationships with others. The procedural dimension requires that Soldiers train themselves to listen and remain open to learning from other national perspectives and experiences to understand how processes work for other nations. This approach requires a willingness to adapt and collaborate. These other two dimensions are critical to interoperability of religious support.

In a multinational environment, organizational religious support teams must build relationships through professional and personal dialogue, building trust and collaborating at the lowest echelons. Understanding chaplains from other nations and getting to know them professionally and personally is fundamental to success in the human dimension of attaining interoperability.

In the procedural dimension, once relationships are built and collaboration has established shared understanding and mutual trust, operators can learn how to integrate — understanding how chaplains from other nations operate and learning their unit capabilities. This knowledge enables the provision of religious support across the formation, not just as a national responsibility.

During a past rotation at the Joint Multinational Readiness Center, a multinational brigade had operational control of a different nation's regiment, another different multinational battalion, and two U.S. battalions. The brigade chaplain did not have a reporting requirement in his nation's chaplaincy, so he adopted the U.S. reporting criteria provided by the U.S. higher headquarters. He took the report, made it his and sent it out to the units under his commander's operational control. The U.S. chaplains thought nothing about it and began sending reports as described in the religious support plan. However, the regimental chaplain quickly resisted reporting to another nation's chaplaincy, questioning why he would have to report. Doctrinally, a chaplain is not required to report to another nation's chaplain, nor does the chaplain assigned at the higher headquarters have authority over the chaplain. This resistance made it quite clear how interoperability can be a challenge within religious support. The regimental chaplain

resisted the report with good intentions and had the backing of his higher nation's chaplaincy. Interoperability of religious support was challenged and possibly damaged or unattainable. However, the chaplains attained interoperability because of intentional time in the human and procedural dimension of interoperability. Deliberate time of building relationships, trust, and understanding of how the other nation operated overcame this challenge to the technical dimension.

With the world's constant changes, our country has chosen to face future conflicts collaborating with other nations. As our leaders figure out the technical dimension of interoperability, chaplains and chaplain's assistants must help lead the way in addressing the human and procedural dimensions. This approach would provide religious support across all formations and assist our commanders within their overall goal of achieving effective multinational interoperability.

Chapter 10

After Action Review Considerations During Multinational Operations

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> "[A]fter the battle they bring this mobile theater and they do what they call an 'after action review' to teach you what you've done wrong. Sort of leadership by humiliation. They put a big screen up and they take you through everything and then, you didn't do this and you did do this, etc. I walked out feeling as low as a snake's belly in a wagon rut. And I saw my battalion commander, 'cause I had let him down. And I went up to apologize to him and he said, Stanley, I thought you did great. And in one sentence he lifted me, put me back on my feet and taught me that leaders can let you fail and yet, not let you be a failure."[1]
>
> — GEN (Ret.) Stanley McChrystal

The United States and its partners are increasingly focusing their efforts on an uncertain future against uncertain enemies. Consequently, combat training centers are exercising multinational interoperability. The after action review (AAR) is a ubiquitous tool within these training environments, yet many multinational forces are entirely unfamiliar with its use as an assessment tool. Further, AARs are not always adjusted appropriately to accommodate international audiences. This article is designed to introduce facilitators to AAR challenges in a multinational environment and to introduce our partners to the process.[2] In the spirit of interoperability — where trust is paramount — we do not want our coalition partners to walk away from our AARs feeling, "as low as a snake's belly in a wagon rut," as GEN McChrystal once did. In order to avoid that, we need to understand our training audience.

Even within the U.S. military — a generally homogenous organization — many unique subcultures exist: Marines, airborne infantry, mechanized infantry, armored, support, etc. We are made up of men and women from the north, the south, other countries, and virtually every ethnic origin. By all accounts, we are an organization with many cultures, but our U.S. military culture binds us. Our coalition partners have their own unique military cultures too, with their own subcultures. To be sure, creating one multinational military culture is difficult, but not impossible. Good AAR practice helps us to build the camaraderie and trust critical to interoperability.

AAR Purpose

The enduring principles and methods of an AAR have remained relatively unchanged over the years, having only changed terminology to match the vernacular of the most current doctrine. For example, what was once a "battlefield operating system" is now a "warfighting function."[3] At their core, AARs are tools to analyze a unit's performance in order to improve future performance.[4] They are professional discussions — guided by a facilitator — about a unit's strengths and weaknesses during a particular training event.[5] Conducted effectively, they develop a strategy and assign responsibility to solve those individual or collective tasks that require improvement.

AARs are very much a part of the Army's operations process in that they provide critical feedback to the commander so that he can assess his unit. They are necessarily part of the commander's assessment process. They help to build the common framework for exercising mission command.

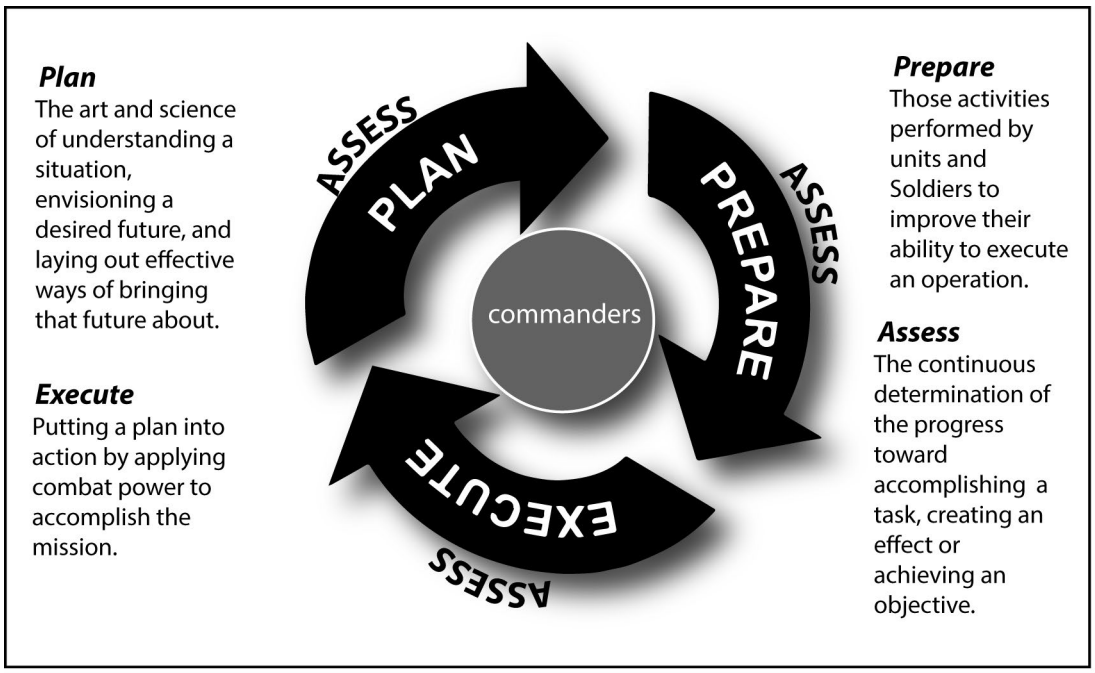

Figure 10-1. The four-step process for conducting an AAR.[6]

In the same vein, the best way to conduct an AAR (multinational or otherwise) is through the same mission command activities performed during operations — plan, prepare, execute, and continuously assess (see Figure 10-1).

Plan

AAR planning is absolutely critical to the effectiveness of AARs. All those providing input to the AAR must know and understand the commander's intent for the training event (i.e., the training objectives), the concept of the operations, and the tasks to be trained.[7] Successful AARs, therefore, have effective AAR plans for each training event, that include such factors as selecting appropriate observer coach/trainers (OC/Ts), scheduling, determining attendance, choosing training aids, and reviewing performance standards.

In a multinational environment, reviewing performance standards becomes exponentially more important in order to gain and maintain credibility. During multinational operations, U.S. Army units need to look to sources from outside of U.S. Army doctrine so that we can make meaningful and accurate observations and potentially compare and contrast methods and standards. In other words, we need to be learned facilitators rather than instructors. Where we would normally look to training and evaluation outlines to develop training objectives, a multinational AAR requires more research from North Atlantic Treaty Organization (NATO) sources and other country-specific sources so that feedback is meaningful. Despite our deference toward the familiar, not everybody does things the way the U.S. Army does, nor do they necessarily want to.

For example, during a recent training rotation at the Joint Multinational Readiness Center (JMRC) at Hohenfels, Germany, an Italian-led multinational brigade task force commanded and controlled several multinational (including U.S.) task-organized battalions. Among the Italian brigade's training objectives was to "plan operations." At first glance, one could have easily opened Army Doctrine Reference Publication (ADRP) 1-03, *The Army Universal Task List,* 2 OCT 2015, and identified multiple subsidiary training objectives with well-developed tasks, conditions, and standards. However, the Italians do not use Army design methodology or the military decisionmaking process (MDMP). Instead, they use something more akin to the NATO Comprehensive Operational Planning Directive. Further, one of the task force's subordinate battalions used the Great Britain Army Combat Estimate (i.e., "the 7 questions"), while the other battalion used the MDMP. In order to be effective in helping to assess this brigade's training, one must at least become conversant in the subtle differences in those processes and how they are interoperable with one another. In this example, the OC/T's working knowledge provided a foundation for the AAR as it pertained to "planning operations."

Prepare

AAR preparation is continuous and bridges the gap between planning and execution. During the preparation phase, AAR facilitators — whether internal, external OC/Ts, or both — should review all orders, training objectives, concepts, and tasks to ensure everything observed is relevant. In reality, preparing for the AAR consists of observing the training events and organizing the observations appropriately for the AAR. Regardless of the unit being trained, or the complexity of the training, training must be recorded with enough detail to make the AAR meaningful. Details should include events, actions, and observations with accurate date-time groups. At the earliest opportunity after the observed event, they should be integrated with other observations (OC/T, opposing force, and others as applicable) and refined into an appropriate medium to provide a complete picture of the event.

Depending on the size and structure of the OC/T network, preparation also requires that key events be identified so that resources can be applied to it. For example, if one of the unit's training objectives is to conduct a passage of lines, then resources have to be in place to observe and record the event as accurately and completely as possible. Perhaps that means observing the event from perspectives of both the moving and stationary unit, or at the planned and actual contact points.

Preparation can be slightly more multifaceted during multinational operations. Observing a passage of lines between two partnered forces, for example, presents an additional level of complexity — new tactical relationships, different languages, unique procedures, different and unfamiliar vehicles. All of these factors have to be identified prior to the key event so the most appropriate resources can be dedicated to observe and document it.

Finally, the AAR needs to be organized and rehearsed. The Leader's Guide to After Action Reviews identifies three ways to organize the AARs — chronologically, by warfighting function (WfF), or by key event/theme/issue.[8] It can be done on the hood of a high mobility multipurpose wheeled vehicle, on a terrain model, via PowerPoint presentation, etc. The AAR is flexible and can therefore be organized and conducted in any useful way imaginable.

Because the purpose of the AAR is for participants to self-discover strengths and weaknesses, solutions, and courses of actions to resolve weaknesses, the method should be the most appropriate method for the participants. Again, this takes research and understanding of the

audience. Although a PowerPoint presentation discussing issues through WfFs might work great for a U.S. battalion, it is likely inadequate for a formation that is unaccustomed to PowerPoint as a learning/teaching tool and does not fight by WfFs.

Execute

Rules should be set and expectations managed right up front, regardless of the training audience. Although most American Soldiers have been through countless AARs from the time they enlisted or were commissioned, the rules for each AAR might be different depending on facilitator or audience, and therefore should be clearly understood and expressed. As a baseline, every AAR should include the basic rule that everyone should participate with the understanding that the AAR is not a critique, evaluation, or grade.

Soldier participation is paramount to self-discovery. Among other things, Soldier participation during the AAR is directly related to the atmosphere created by the facilitator. Therefore, the facilitator must foster an environment where Soldiers feel comfortable and free to disagree with one another and give honest opinions. They need to know that it is an open forum, generally free from outside influences designed for candid input.

This is difficult for U.S. forces, and perhaps more so with multinational participants. How do we ensure group participation with such a diverse audience? Hopefully, by the time an AAR rolls around, there is relative familiarity and comfort-level among the participants. Regardless, group dynamics fails if we communicate poorly.

Facilitators should avoid idioms, axioms, colloquialisms, and especially acronyms. Despite how much they mean (or do not mean) to us, they often confuse, have no meaning, or mean completely different things to our coalition partners, regardless of whether or not they speak fluent English. Where an American facilitator might tell his audience to “have thick skins” in order to facilitate dialogue, a multinational partner might interpret that to mean, “This is going be harsh, I should deflect this or otherwise not absorb what is about to be said.”

Simple, seemingly unambiguous words also may have vastly different meanings influenced by culture. For example, U.S. service members tend to use the term “leaders” almost interchangeably with the term “Soldiers,” with only “commanders” enjoying a unique role within military leadership parlance. However, during at least one rotation at the JMRC, “leader” had unique meaning among the primary participants — it meant “decision-maker.” As a result, when the facilitator insisted that leaders provide the input to the AAR, the input came from only a select few. The point is to identify and understand these idiosyncrasies throughout the AAR planning process, and consciously execute the AAR around them.

Finally, facilitators have to execute the AAR according to the developed plan. Although it does not have to be scripted, having a general agenda to facilitate flow of information is a good thing. Typically, after a short introduction, the facilitator summarizes the events (what actually happened), identifies what went right or wrong, and guides the participants to determine how it could be done differently. At its conclusion, the facilitator should summarize and link the conclusions to future training.[9]

Assess

Retraining should be conducted immediately for the AAR to have its greatest effect. However, assessment is a continuous process, and the commander can use the lessons learned from the AAR long after the training event. Further, he can build on those lessons to create new challenges for his unit at each successive training event or operation.

To help the unit link the conclusions to future training or operations, facilitators often frame the challenge as questions:

- What do we want to fix? (What actually happened that could be done better?)
- How can we fix it?
- Who is going to fix it?

In keeping with the theme that AARs are an element of the operations process (assessment), facilitators also may consider asking the question, "How will we know if we fixed it? (How will we know if it is better?)"

Put in the U.S. operations process context, the former identifies a measure of performance, and the latter identifies a measure of effectiveness.[10] This is distinguishable from hindsight at the next AAR. This should be identified right up front — asking the hard questions that tie the AAR to the next training event or operation, and whether we achieved the intended results. It has to be clear and measureable. Once identified, one should be able to state unequivocally that the task has been accomplished (or not).

For example, during a recent mid-rotational AAR at the JMRC, a battalion command sergeant major referenced a casualty collection operation that he wanted to fix. He explained that he was going to "keep the plan simple" to fix it. He had therefore identified something he wanted to fix, and stated how he was going to fix it. But how does he know that he kept the plan simple? Simple according to him? Simple according to the medics? What is the metric? Linking his proposed solution to a measure of effectiveness would have provided that metric allowing him and his commander to more clearly assess the planning, preparation, and execution of the next training iteration.

Conclusion

AARs are important assessment tools — to us and to our multinational partners. Because commanders are conducting simultaneous offensive, defensive, and stability tasks (and increasingly as part of the multinational effort), AARs are as important now as they have ever been. But we have to do them right. AARs help to provide a common lens through which we can assess and improve our multinational interoperability. The conduct of AARs must acknowledge and be responsive to differences in culture and language to accomplish this. As a facilitator, the key is to know your audience, and conduct an AAR most useful to them — not necessarily what you might find most useful. Above all, be humble, be kind, and be adaptive.

November 1988	Field Manual (FM) 25-100, *Training the Force*	Considered revolutionary in the way the Army trains. Battle-focused, based on unit METL and nested with other doctrinal publications, such as FM 100-5, *Operations*, and FM 22-100, *Leadership*. Designed for brigade and higher.[11]
September 1990	FM 25-101, *Battle Focused Training*	Complemented FM 25-100. Designed to apply the doctrine of FM 25-100 and assist leaders in training program development. Designed for battalion and company organization/leadership.[12]
September 1993	Training Circular (TC) 25-20, *A Leader's Guide to After-Action Reviews*	Supplemented and expanded guidance in FM 25-100.[13]
Circa 2000 – GEN Eric Shinseki ordered extensive reviews of Army doctrine.		
October 2002	FM 7-0, *Training the Force*	Updated and superseded FM 25-100. Integrated lessons learned from recent military operations.
September 2003	FM 7-1, *Battle Focused Training*	Updated and superseded FM 25-101. Integrated lessons learned from recent military operations.
December 2008	FM 7-0, *Training for Full Spectrum Operations*	Further developed the concepts of the 2002 version. Incorporated new training for modular organizations.
GEN Raymond Odierno's Vision for the Future: "Doctrine 2015" Concept published.		
August 2012	Army Doctrine Publication (ADP) 7-0, *Training Units and Developing Leaders*	Superseded FM 7-0. Re-established fundamental training and leader development concepts/processes.
August 2012	Army Doctrine Reference Publication (ADRP) 7-0, *Training Units and Developing Leaders*	Augments principles discussed in ADP 7-0. Refers to Leader's Guide for further discussion of AARs.
August 2012	The Leader's Guide to After-Action Reviews (AARs) (Training Management Directorate)	Updates terminology from TC 25-20; supports ADP 7-0 and ADRP 7-0.
December 2013	The Leader's Guide to After-Action Reviews (AARs) (Training Management Directorate)	Update of August 2012 version.
May 2014	FM 6-0, *Commander and Staff Organization and Operations*	As part of Doctrine 2015, FMs reduced to total of 50. Most knowledge transitioned to ATPs, but not AAR concepts (see Chapter 16).

Figure 10-2. Regulatory history of the Army after action review.

Endnotes

1. GEN Stanley McChrystal, recalling an experience as a company commander at an AAR at the National Training Center during Part 1 of the TED Talks Radio Hour episode, *Disruptive Leadership,* 17 JAN 2016. Transcript available at http://www.npr.org/templates/transcript/transcript.php?storyId=261084625 (last accessed 10 MAR 2016).

2. This chapter is meant to supplement The Leader's Guide to After Action Reviews (AARs), not replace it. It also should be noted, The Leader's Guide is based on Army doctrine, not Joint, NATO, or partner doctrine. Regardless, applying critical analysis to its core still yields results across formations.

3. See Figure 10-2 of this newsletter for a brief history of regulatory AAR guidance.

4. ADRP 7-0, *Training Units and Developing Leaders,* 23 AUG 2012, paragraph 3-73, page 3-12. "An AAR is a guided analysis of an organization's performance, conducted at appropriate times during and at the conclusion of a training event or operation with the objective of improving future performance."

5. The Leader's Guide to After Action Reviews, Combined Arms Center-Training, Training Management Directorate, Fort Leavenworth, KS. (December 2013). Hereinafter referred to as The Leader's Guide to AARs.

6. ADP 5-0, *The Operations Process,* 17 MAY 2012, Figure 1, page iv.

7. The Leader's Guide to AARs, page 7-4.

8. Ibid, page 13.

9. Ibid, page 16.

10. ADRP 5-0, *The Operations Process,* 17 MAY 2012, pages 5-2 to 5-3.

11. Chapman, Anne W., *The Army's Training Revolution, 1973-1990,* TRADOC Historical Study Series, Office of the Command Historian, U.S. Army Training and Doctrine Command and Center of Military History, U.S. Army, Washington, D.C. (1994), pages 29-39.

12. Ibid, pages 44-45.

13. TC 25-20, *A Leader's Guide to After-Action Reviews,* 30 SEP 1993; preface.

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