Striking the Balance between Contiguous and Noncontiguous Areas of Operation at the Division and Corps Levels

Maj. Graham Williams, U.S. Army

For Army planners, conducting the military decision-making process (MDMP) is often an exercise in chaos. Planners simultaneously gather tools, dissect orders, update running estimates, and conduct numerous briefs. One of the most important, and often overlooked, steps of MDMP is the method planners use to divide areas of operation (AO). Corps and division planners receive a tract of land from their higher command and are asked to plan within the confines of specified boundaries. As planners progress through course-of-action development, they begin to parcel out this land into seemingly logical slices. Simply put, dividing AOs becomes a form of terrain management whereby planners must consider, in time and space, how the battle will progress within their assigned AO.

While lines on maps have meaning for planners and subordinate units, they are not immovable objects set in stone. Parceling AOs must be a dynamic and rapidly changing process that reflects the tempo of large-scale combat. Although a simple task, the way in which planners conduct terrain management could have significant implications on the conduct of warfighting. Planners must understand that managing terrain is a dynamic and ever-changing process that can both enable and hinder how units conduct large-scale ground combat. Doctrine helps us understand when linear and nonlinear or contiguous and noncontiguous AOs are optimal. Psychological concepts illuminate why planners might take a simplistic approach when creating AOs, and history illuminates some examples of terrain management during large-scale combat.

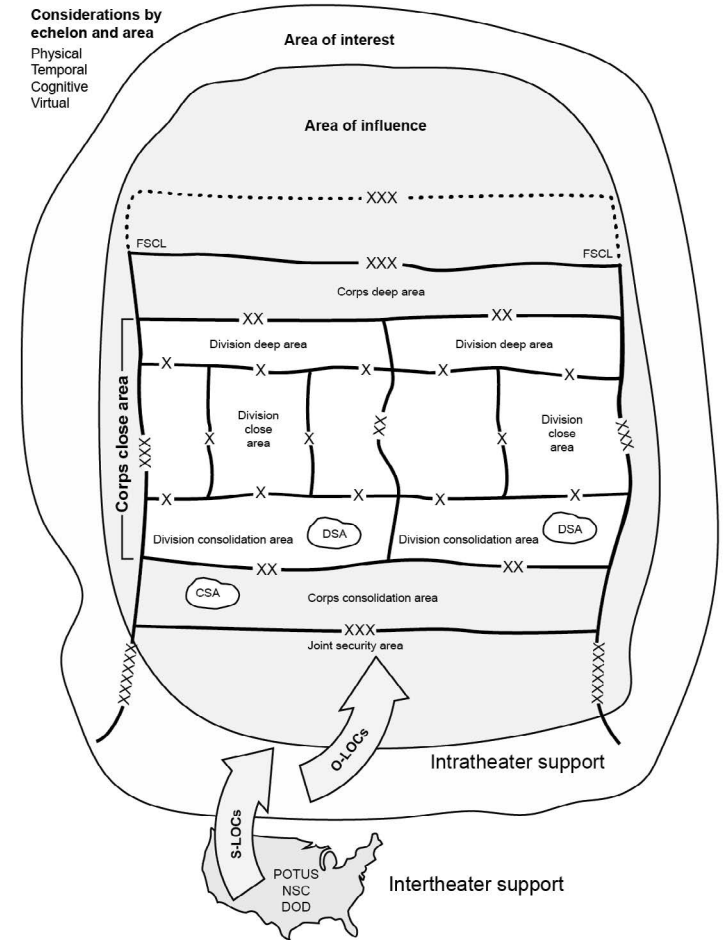
Maj. Graham Williams, U.S. Army, is a G-5 maneuver planner in the 101st Airborne Division (Air Assault). He holds a Master of Science in industrial-organizational psychology from Southern New Hampshire University and a Master of Arts in military operations from the School of Advanced Military Studies. His assignments include company grade time in the 4th Infantry Division and 10th Mountain Division, and he also served as a cyber planner at the United States Cyber Command.

Contiguous and Noncontiguous Framework Doctrine

The definition of a contiguous framework from Field Manual (FM) 3-0, *Operations*, highlights the propensity for planners to think linearly (see figure 1, page 105).[1] The contiguous framework focuses on the retention of terrain when there are linear obstacles along the forward edge of the battle area. The example given in FM 3-0 is a river. A river acts as a natural obstacle between friendly and hostile forces that restricts the movement of combatants. Logically, this makes sense for the deep and close fight. If the enemy is on the other side of the river, the friendly force's security area is on the near side and the fire support coordination line is tied to the terrain. But the way in which planners divide the AO for the deep and close

fight might not make sense for the remainder of the AO. How each unit's AO is crafted should be dictated by other factors such as threat, physical terrain, and human terrain (e.g., large population areas).

Army Doctrine Publication 3-0, *Operations*, expounds on contiguous and noncontiguous AOs. Simply put, when a boundary separates units, they are contiguous. If subordinate commands do not share a boundary, they are noncontiguous.[2] One of the most important characteristics of noncontiguous AOs is that the higher headquarters retains responsibility for areas not assigned to subordinate units.[3] Originally from FM 3-0, figure 2 (on page 106) is an example of corps planners partitioning their AO and assigned division AOs based on the noncontiguous framework. In this representation, corps planners have accepted that they are responsible for the land in and around the division and around the consolidation area. Therefore, if a threat developed in these areas, the corps would have to dedicate information collection assets, fires, or combat power against it.



CSA–Corps support area
DOD–Department of Defense
DSA–Division support area
FSCL–Fire support coordination line
NSC–National Security Council
O-LOC–Operational line of communications
POTUS–President of the United States
S-LOC–Strategic line of communications

(Figure from Field Manual 3-0, *Operations*)

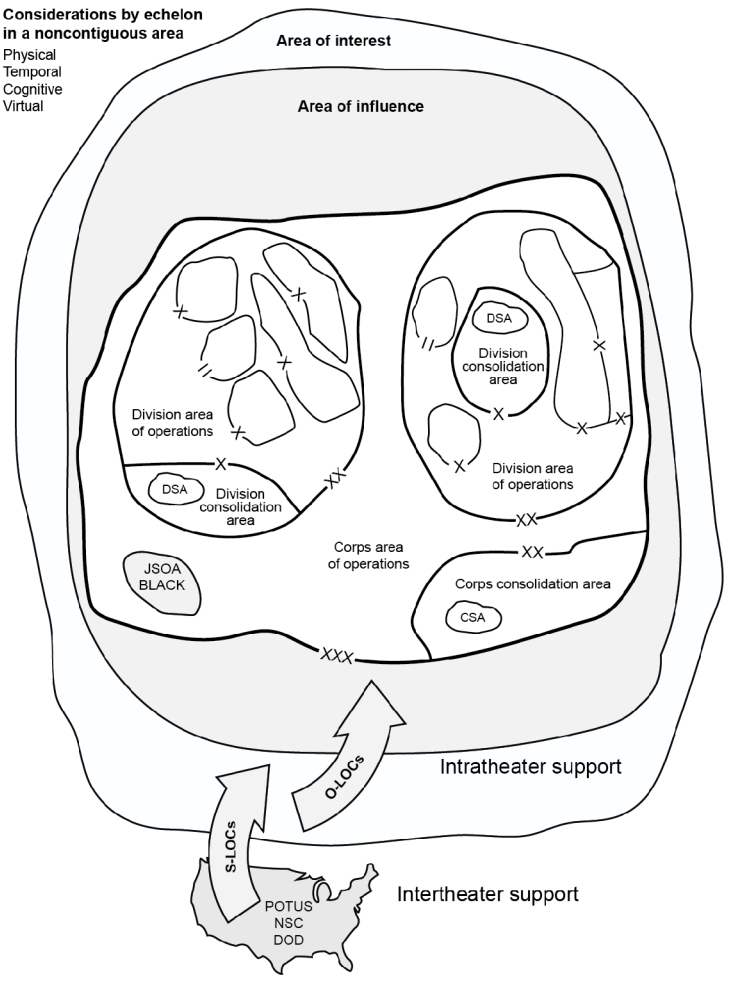
Figure 1. Contiguous Corps Area of Operations

At the corps and division levels, there is a propensity to think linearly when assigning AOs. As planners begin to understand the problem during MDMP, they take a reductionist and linear approach, using contiguous boundaries when drawing lines on a map to separate AOs. Typically, the division reconnaissance elements own a large swath of land closest to the enemy, followed by maneuver units responsible for AOs around population or key terrain-focused objectives. More times than not, these boundaries rarely change through the conduct of operations during the combat phases, or the boundaries that change are those that have units engaged in the deep and close fight (e.g., during Phase III, Dominate).[4] While the lead elements go on the offensive to conduct wet-gap crossings, the maneuver enhancement brigade is tasked to secure a tract of terrain in the division rear.

According to the Center for the Army Lessons Learned, the division's plan for the rear area is generally a fait accompli. When corps and division planners array forces in a linear fashion (contiguous), they relinquish control of that land and attempt to manage it through the subordinate headquarters.[5] While the maneuver enhancement brigade might be able to control operations in an assigned AO, there are

certain tasks associated with the rear area that require division or corps execution.[6]

There could be any number of reasons why divisions make these planning pitfalls. First is the propensity to think linearly as planners conduct mission analysis and course-of-action development. Second is that the greatest threat is in the deep and close fight. The corps and division focus resources on the greatest threat and contribute to facilitating the next maneuver action. The division does this with fires, information collection, and combat power.



CSA–Corps support area
DOD–Department of Defense
DSA–Division support area
JSOA–Joint special operations area
NSC–National Security Council
O-LOC–Operational line of communications
POTUS–President of the United States
S-LOC–Strategic line of communications

(Figure from Field Manual 3-0, *Operations*)

Figure 2. Noncontiguous Corps Area of Operations

Applicable Theories

Planners are problem solvers guided by doctrine, experience, and collaboration. When planners begin MDMP, they try to "make sense of the mess," or manage the tremendous amount of information provided by their higher command. There are challenges planners have with managing the deluge of information and turning it into a coherent and cogent order. There are several cognitive factors that influence how planners solve the problem of terrain management. Three important principles are system thinking, multifaceted problems, and reductionism.

System thinking. Cognitively, planners are at odds with themselves. They try to reduce information to its simplest form and find ways to relay it to others while attempting to understand it themselves. During mission analysis, planners tend to compartmentalize small problems causing them to lose sight of larger problems; for example, dividing planning efforts by warfighting function.[7] Engineers concern themselves with terrain, the maneuver planner focuses on friendly maneuver elements, the intelligence planner immerses himself or herself with the enemy, and so on. This could result in planners unaware of a system's combined properties that are more distinct than its parts.[8]

Nowhere is this more evident than with AOs. Planners tend to view AOs as linear uncomplicated problems. But planners should consider an AO as a system and a combination of multiple nonlinear relationships that should not be overlooked. Nonlinear relationships are difficult for the brain to comprehend; therefore, planners tend to shy away from them.[9] Dividing the AO for terrain management is one of the most critical steps

that shapes how the battle will progress. By not viewing an AO as a system and understanding its interrelations, planners are placing arbitrary lines on a map that lack context.

Multifaceted problems. When planners examine the orders from their higher headquarters, they wrestle with multifaceted problems. According to Dietrich Dorner, there are certain ways humans deal with multifaceted problems that apply to planners. These include organizing a list of problems, deconstructing complex situations, focusing on solving central problems, ranking ordering problems in terms of importance and urgency, and delegating.[10]

> Areas of operation (AO) involve human terrain, physical terrain, weather, and the interaction between all elements within. But when planners struggle to understand multifaceted problems, they tend to think of AOs in a linear and undynamic manner.

A unit's AO is also a multifaceted problem. AOs involve human terrain, physical terrain, weather, and the interaction between all elements within. But when planners struggle to understand multifaceted problems, they tend to think of AOs in a linear and undynamic manner. The unit is given a portion of land to manage and planners begin to segment off sections for subordinate units. Generally, planners segment AOs based on easily recognizable terrain. For example, a main service route is a clear and present dividing line between units. Furthermore, while the boundaries in the deep might change, the rear area hardly changes.

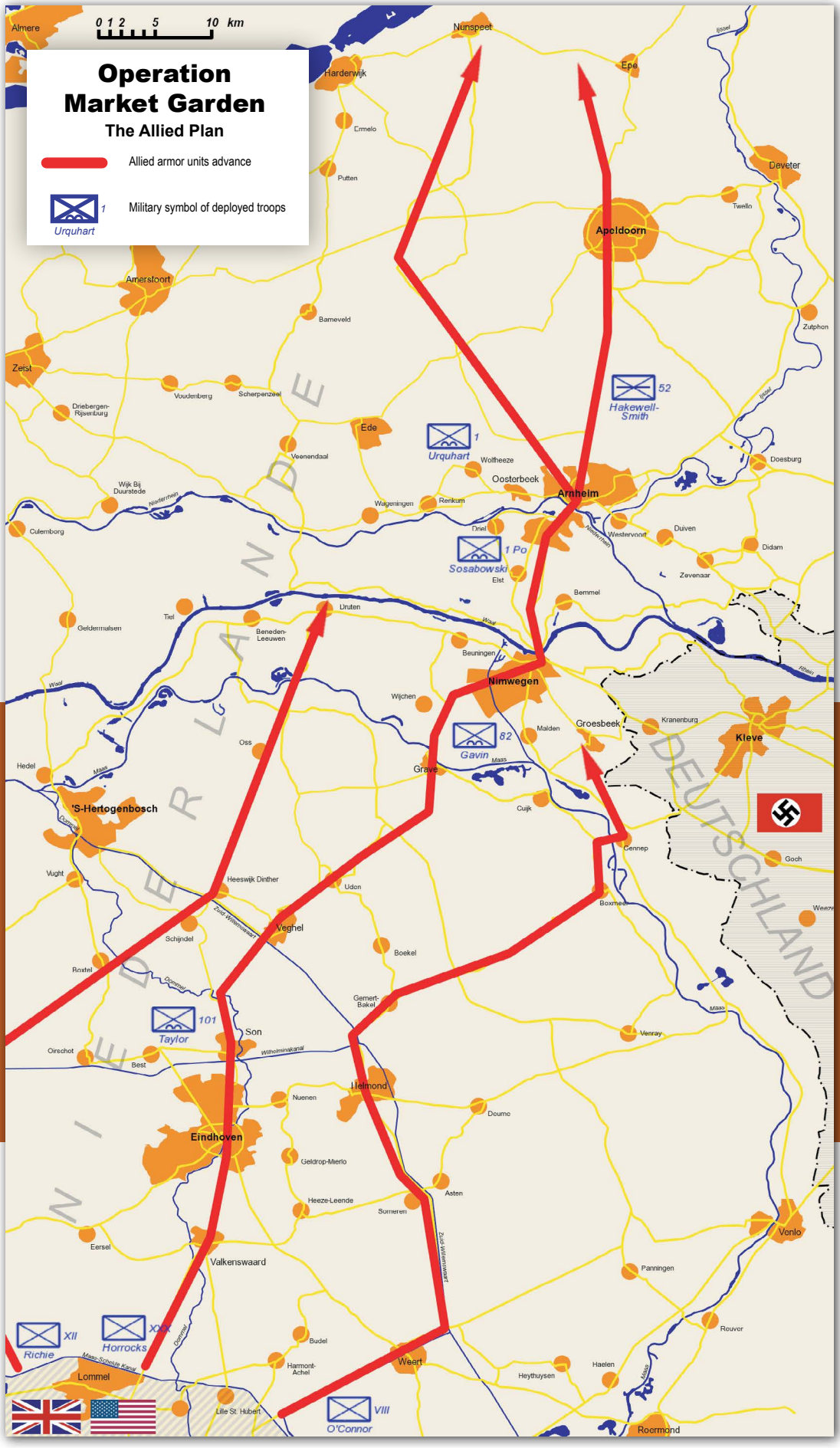
During MDMP, examples from Dorner's ways humans deal with multifaceted problems emerge. Regarding terrain management as a simple and "low-threat" problem is evidence of deconstructing a complex situation. Other examples are the division focusing on solving central problems by tasking a subordinate unit to manage the land. Planners also rank order effort by assigning main and supporting efforts.

Reductionism. Reductionism is another way in which planners seek to understand systems and multifaceted problems. Reductionism equates the rules humans use to discern objects, people, and things to better understand perspective, reduce ambiguity, and construct visual worlds.[11] The goal of reductionism is to allow individuals to extract the same essential information from the environment.[12] When planners conduct terrain management, it is an attempt to reduce the terrain to a simplistic form that is intended for a wider audience such as commanders and subordinate units. These audience members do not have the same level of understanding of the problem that the planners do, so they focus on the importance of the reduced parts. By reducing an AO into parts, there is the potential that planners, and the wider audience, lose the understanding of the part's additive relations with one another. Therefore, each section of the AO loses its significance in its own right.[13] The doctrinal contiguous AO framework is an example of this. When planners reduce AOs into contiguous sections, there is a greater potential to lose perspective across the division's AO. It is not until combat commences (e.g., current operations) that planners are able to reconstruct the AO based on actions that transpire in the subordinate's areas. It is also here where the dynamic nature of the AO presents itself.

Historical Examples

While it is difficult to find historical examples that exemplify these points, other examples show the dynamic nature of AOs and the ability of units to adapt to the changing operational environment. These include Operation Market Garden, the German army's actions in the eastern front during World War II, and the conflict in Afghanistan.

In the article "Reconsidering Rear Area Security," Mark Gilchrist claims that Operation Market Garden is a lens for how planners must reconsider concepts of rear area security that exist in modern war.[14] Gilchrist


Operation
Market Garden
The Allied Plan
Allied armor units advance
Military symbol of deployed troops
Urquhart
0 1 2 5 10 km
Almere
Nunspeet
Harderwijk
Epe
Ermelo
Putten
Deveter
Twello
Apeldoorn
Amersfoort
Barneveld
Zutphen
Zeist
Voudenberg
Scherpenzeel
Driebergen-Rijsenburg
52
Hakewell-Smith
Ede
1
Urquhart
Veenendaal
Wolfheeze
Doesburg
Oosterbeek
Arnhem
Wijk Bij Duurstede
Wageningen
Renkum
Culemborg
Driel
Duiven
Westervoort
Didam
1 Po
Sosabowski
Elst
Zevenaar
Bemmel
Tiel
Geldermalsen
Beneden-Leeuwen
Beuningen
Nimwegen
Wijchen
Groesbeek
Kranenburg
Kleve
Oss
62
Gavin
Malden
Hedel
Grave
Cuijk
'S-Hertogenbosch
Gennep
Gooh
Vught
Heeswijk Dinther
Udon
Veghel
Schijndel
Boekel
Boxmeer
Boxtel
Gemert-Bakel
101
Taylor
Son
Venray
Oirschot
Best
Helmond
Nuenen
Douma
Eindhoven
Geldrop-Mierlo
Asten
Heeze-Leende
Someren
Venlo
Eersel
Valkenswaard
Panningen
Rouver
XII
Richie
XXX
Horrocks
Budel
Harmont-Achel
Weert
Heythuysen
Haelen
Lommel
Lille St. Hubert
VIII
O'Connor
Roermond
NIEDERLANDE
DEUTSCHLAND

argues that nonlinear and noncontiguous concepts resonate with "great captains of history."[15] What is often lacking is a concept that connects the fighting echelon, the logistics, and the command-and-control nodes that enable nonlinear and noncontiguous battlespace.[16] The operators who planned Operation Market Garden made significant assumptions about the flaws in how the Wehrmacht operated in its rear area. What Allied planners did not expect was the rapid response of German army with the emerging airborne threat in its rear. The German rear was not a static and separate combat operation occurring in forward areas.[17] Gilchrist explains that Gen. Matthew Ridgeway acknowledged that the Allied assumptions about how the Wehrmacht operated during previous withdrawals proved to be incorrect.[18] Gilchrist also warned that planners must understand the gaps and implications of noncontiguous battle spaces if they hope to mitigate vulnerabilities in the future.[19]

The German army in the eastern front is an example of how elements balance contiguous and noncontiguous boundaries while operating. By October 1942, the Wehrmacht penetrated 1,075 miles into the Soviet Union and attempted to control a front from the Barents Sea to the Caucasus Mountains.[20] The German army occupied contiguous positions along a broad and linear front until the Soviet's counteroffensives in the winter of 1941–1942.[21] As Soviet elements advanced westward, German planners had to adapt and adjust to the rapidly changing AOs. In some areas, German elements transitioned to noncontiguous defensive pockets. In the Demyansk Pocket, one hundred thousand German soldiers were sustained for several months during the winter.[22] Higher headquarters planners were able to allocate Luftwaffe support via bombers and transport planes from airfields both in and outside of defensive positions.[23] The German high command assumed responsibility for the land around the Demyansk Pocket and sustained operations by dedicating assets to support subordinate units.

One final historical point about contiguous and noncontiguous AOs is with recent wars in Afghanistan. These Afghan wars are clearly examples of nonlinear and noncontiguous combat. However, they display the challenges planners and maneuver elements face with terrain management. If we examine the Afghanistan operating environment for both the Soviet and U.S. armies, we can better understand potential challenges for planners who manage an AO. Like the challenges the Soviets faced in World War II, the United States' struggle in Afghanistan was for control of lines of communication.[24] Units operated in and around some form of base and attempted to control the service routes between these bases. Each of these units had an assigned contiguous AO and tactical tasks associated with it. However, the units' ability to effectively control or secure their AOs was

Operation Market Garden: The Allied Plan

Operation Market Garden was a hastily prepared plan that lacked detailed planning, especially with regard to logistics and communications. Additionally, intelligence reports of German armored divisions in the area were disregarded. The operation made assumptions that were overly dependent on meeting tight timelines over unfamiliar territory and consequently lacked flexibility. The result was most aspects of the plan went wrong. Airdrops were miles from the objective, underpowered radios could not communicate in the terrain, cutoff British elements around Arnhem ran out of ammunition and supplies, and tank formations that were supposed to relieve Arnhem before the Germans could react were slowed by crowds of euphoric Dutch townspeople and by having to move over treacherously narrow road systems that made them especially vulnerable to German antiarmor. As a consequence, the ambitious and costly operation is generally regarded as a failure, having both failed in its objectives while also stalling the momentum of the Allies on the western front from reaching Berlin ahead of the Russians. It is a good historical example of stovepiped thinking among staff planners who were unable to anticipate the impact of their own planning within the context of broader awareness of overall staff challenges imposed by the situation. (Map by W.wolny via Wikimedia Commons)

overestimated. Units dedicated resources to support convoys, patrols, and limited operations that temporarily extended their security bubble. Therefore, planners must challenge the assumptions made when providing a tactical task to a unit and be comfortable using a noncontiguous framework in the rear area.

Considerations for Future Planning

This article aims to present psychological, doctrinal, and historical factors that influence how planners view terrain management. The following are some recommendations for planners when considering how to develop AOs:

- AOs are multifaceted problems that require attention throughout operations. Planners cannot focus all their cognitive effort on fighting the close fight.
- Planners must avoid taking a reductionist or simplistic approach when dividing AOs. Planners should strive to understand the additive relationship each AO has with one another.
- Planners should not consider contiguous or noncontiguous AOs as a dichotomous relationship. Rather, if the nature of the AO warrants it, allow the rear area security element to operate in a noncontiguous manner while maneuvering elements in the close fight operate in a contiguous one.
- AOs must be able to shift rapidly to a noncontiguous framework, allowing divisions and corps to commit resources to maintain tempo.
- Planners should provide subordinate units a tactical task that correlates to the scope and scale of their assigned AO.

When conducting MDMP, planners must remember doctrine can guide staff through the process. It must also be acknowledged that doctrine is open to interpretation and should not be rigidly applied to operations. Planners must also be cognizant that seemingly simple tasks, like terrain management, might have significant impacts on how divisions and corps conduct large-scale ground combat. ■

German *Flakpanzer* IV *Möbelwagen*, or self-propelled antiaircraft guns, of the 9th SS Panzer Division move to help halt the Allied attempt to seize the bridge over the Lower Rhine River during the Battle for Arnhem, Netherlands, September 1944. The presence of German armor had a decisive effect on the outcome of the battle. (Photo by Willi Höppner, courtesy of Bundesarchiv via Wikimedia Commons)

Notes

1. Field Manual 3-0, *Operations* (Washington, DC: U.S. Government Publishing Office [GPO], 2017), 6-28.
2. Army Doctrine Publication 3-0, *Operations* (Washington, DC: U.S. GPO, 2019), 4-4.
3. Ibid.
4. Ibid., 1-12. Joint doctrine identifies five phases of an operation.
5. Center for Army Lessons Learned (CALL) Handbook 18-04, *Mission Command in the Division and Corps Support Area* (Fort Leavenworth, KS: CALL, December 2017) accessed 3 June 2021, https://usacac.army.mil/organizations/mccoe/call/publication/18-04.
6. Ibid.
7. Robert Jervis, *System Effects: Complexity in Political and Social Life* (Princeton, NJ: Princeton University Press, 1998).
8. Ibid.
9. Ibid.
10. Dietrich Dorner, *The Logic Of Failure: Recognizing and Avoiding Error In Complex Situations* (New York: Basic Books, 1989).
11. Eric R. Kandel, *Reductionism in Art and Brain Science: Bridging the Two Cultures* (New York: Columbia University Press, 2016), 61–76.
12. Ibid.
13. David C. Witherington, "Self-Organization and Explanatory Pluralism: Avoiding the Snares of Reductionism in Developmental Science," *Research in Human Development* 11, no. 1 (January 2014): 22–36, https://doi.org/10.1080/15427609.2014.874763.
14. Mark Gilchrist, "Reconsidering Rear Area Security," The Strategy Bridge, 17 September 2017, accessed 8 June 2021, https://thestrategybridge.org/the-bridge/2017/9/17/reconsidering-rear-area-security.
15. Ibid.
16. Ibid.
17. Ibid.
18. Ibid.
19. Ibid.
20. David M. Glantz, "The Soviet-German War 1941-1945: Myths and Realities: A Survey Essay, 2001 October 11" (paper presentation, 20th Anniversary Distinguished Lecture, Clemson University, SC, 11 October 2001), 8, accessed 3 June 2021, https://tigerprints.clemson.edu/cgi/viewcontent.cgi?article=1216&context=sti_pubs.
21. Ibid., 11.
22. Joel S. A. Heyward, "Stalingrad: An Examination of Hitler's Decision to Airlift," *Airpower Journal* (Spring 1997): 24, accessed 3 June 2021, https://apps.dtic.mil/sti/pdfs/ADA529777.pdf.
23. Ibid.
24. Julian Thompson, *The Lifeblood of War: Logistics in Armed Conflict* (Oxford, UK: Brassey's, 1991).