



Cadets participate in the Basic Combat Training Course on 9 September 2020 at the Great Lithuanian Hetman Jonušas Radvila Training Regiment, Rukla, Lithuania. Completion of the course signifies the transition from civilian to cadet and formalizes their acceptance into the institutional family—the Military Academy of Lithuania. (Photo by Eimantas Genys)

A New Combat Analysis Framework

Maj. Gintautas Razma, Military Academy of Lithuania

Few would disagree with the assertion that management, when combined with leadership and command and control, is one of the core combat competencies of commanders, whatever their rank.¹ The general expectation is that a commander should manage combat dynamics effectively, lead troops in the face of

uncertainty, give clear orders, and ensure they are carried out. Yet, as the institutionalized practice of a “regular, repetitive, and clearly evident” problem-solving process, management is highly dependent on the impact of evaluation and assessment.² It follows that commanders need to possess and have mastered advanced combat analysis

tools (including conceptual tools) to make the most appropriate decisions in any circumstance.³

Today, under the name of mission variables, “mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and informational considerations, served by the mnemonic METT-TC (I)” are recognized as an advanced tool of analysis.⁴ As the newest Field Manual (FM) 5-0, *Planning and Orders Production*, puts it, “Commanders and staffs (emphasis added) use the operational and mission variables [METT-TC (I), METT-TC for short] to help build their situational understanding.”⁵ Specifically, “mission variables are fundamental in analyzing the *combat* (emphasis added) situation and developing a course of action (COA) for a given operation. Mission variables describe characteristics of an area of operations (AO), focusing on how they might affect a mission.”⁶ Hence, is METT-TC nothing more than a well-known tool for combat analysis?⁷

METT-TC reflects U.S. military institutional memory and clarifies what and how to measure so commanders and their staffs can make decisions that are field relevant. Further, according to FM 5-0, METT-TC is of great importance regardless of the methodology used; for example, the military decision-making process, troop-leading procedures (TLP), etc.⁸ Accordingly, the METT-TC combat analysis framework is about problem solving in decision-making in order to meet specific combat needs.⁹ However, our experience in teaching TLP to cadets suggests that METT-TC may not be the best available option. Based on this premise we question the framework’s suitability.

Clearly, we need to know when, how, and why METT-TC (I) appears in its current form. This is no easy task because our attempt to trace its origins uncovered very little information. It is known that the METT (mission, enemy, terrain, and troops available) framework can be traced back to articles published in *Military Review* in the 1980s.¹⁰ Unfortunately, scholarly articles fail to provide sources for the appearance of the METT. In August 1982, a new official METT-T (mission, enemy, terrain, troops, and time available) framework emerged, though it was fragmented and seemingly from nowhere.¹¹ Lawrence Jackson’s article, which was intended to support the content provisions of FM 100-5, *Operations* (1982), contributed to institutionalizing (rather than explaining) the origin

of METT-T.¹² Later, several authors used METT-T/ METT-TC as the basis for their analysis but never questioned the framework’s validity.¹³ One exception was an article by James Powers and Thomas Knight, who recognized this anomaly and, for the first time, explained the significance of the “C” (civilian considerations) factor for combat analysis.¹⁴ Casey Haskins was almost alone in his criticism. Using the analogy of “Christmas tree disease,” he explained the institutional change of METT-TC.¹⁵ This close analysis of *Military Review* articles and FMs suggests that METT-TC remains unchallenged. This makes it difficult to justify whether the current framework of the METT-TC (I) is relevant or not. By contesting METT-TC relevance we aim to introduce a possible substitute for the combat analysis framework.

First, a brief note about the methodology. Here, reflective critical analysis is used, so that part 1 uses firsthand observations of the author’s teaching practice at the General Jonas Žemaitis Military Academy of Lithuania (MAL). Experience gained over five years in the teaching of cadets in TLP (or more broadly, tactical management) provide meaningful insights about METT-TC.¹⁶ Part 2 uses a combination of interpretation and logical reasoning, while part 3 uses the knowledge-mapping technique to compile an alternative framework of combat analysis.

There are limitations, namely that this article is heavily based on the author’s observations and personal interpretations. As a result, logical reasoning plays a significant role in this study. In judging deliveries, keep in mind the different approach of MAL in teaching TLP. Results were also obtained through cadet teaching practices at the small-unit level. Additionally,

Maj. Gintautas Razma is a senior instructor in military studies at the General Jonas Žemaitis Military Academy of Lithuania. His fifteen-year career in the Lithuanian armed forces has laid a solid foundation in management, leadership, and warfare. Recognition of his various practical and research achievements and innovations in the military establishment has encouraged him to enter the academic community. The author’s principal research interest is to explain the development processes that pertain to military and paramilitary structures.



Special instructor *Oberstleutnant* (Lieutenant Colonel) Oliver Fischer teaches a class on joint fire support to cadets participating in the Tactical Basics Course on 23 June 2022 at the German Army Officers School in Dresden, Germany. (Photo by Gintautas Razma)

the influence of Lithuanian strategic and military culture should not be underestimated. Finally, it is fair to say that relevant information or some data sources may not have been available for this study; however, despite some potential shortcomings, we believe this article can help point the way forward to the development of useful analytical instruments.

Experience in Teaching TLP

Historically, U.S. military institutions have a great deal of influence, and it is hardly surprising that METT-TC has been adopted by NATO.¹⁷ As a natural extension of U.S. influence, Lithuania's armed forces also use the METT-TC framework. The same applies to the training of TLP to MAL cadets. Despite this, we encountered difficulties in teaching the application of METT-TC due to several contradictions and problems.

The first problem is the constant difficulty of explaining the construction logic of the METT-TC

sequence. Despite what the textbooks say—that “time analysis is often the first thing a leader does”—they present few arguments to explain why the “M” (mission) factor is not followed by “T” (time available).¹⁸ This would be a logical next step. In another case, it is hard to justify why the TLP substep “mission analysis” does not follow the METT-TC sequence. According to the platoon-level textbook, commanders typically “would, but need not, analyze mission first; followed by terrain and weather; enemy; troops and support available; time available; and finally civil considerations.”¹⁹ The same is true for company-level TLP.²⁰ Finally, given its current importance, it is difficult to substantiate why analysis of the factor “C” (civil considerations) should be left to last. The war in Afghanistan (2001–2021) showed that the civilian factor was perhaps the most significant in determining the results of asymmetric conflict.²¹ The same is true in the case of a recent symmetric conflict, the

fighting in Ukraine. Ukraine's response to Russian aggression shows just how much social mobilization for war can be used in combat to undermine the aggressor's military progress.²² The same goes for the combat performance of small units.²³ Thus, "while it is true that METT-TC is incomplete, we often lose sight of the fact that a *framework's* (emphasis added) usefulness can stem as much from what it omits as what it includes."²⁴ Therefore, we can conclude that the METT-TC framework probably does not reflect a proper sequence of combat analysis.

The second problem is related more to morphological issues. Here, cadets find it confusing to distinguish between the concepts of METT-TC and its essential element, "M." This is because we call METT-TC "mission variables," where an essential element of the framework, "M," can also be called a "mission variable" or a "mission factor." The contradiction is particularly pronounced in the "mission analysis" phase. The TLP substep "mission analysis" is intended to explore only the "M" factor character.²⁵ As a result, it is not clear which concept is considered. Further, cadets find it hard to escape the bias of the "mission" and, consequently, escape this strong tendency during their COA development. Although the fulfillment of the mission is essential, METT-TC is not only about a clear understanding of the given mission but also about finding and exploiting combat opportunities. Unfortunately, the names have a significant impact on behavior.²⁶

Finally, further problems arise with the need to harmoniously align frameworks of operational and mission variables with levels of war.²⁷ Brian Hildebrand tells us that the METT-TC framework falls under the tactical level.²⁸ The same is true when we study the content of recent FMs, though in this case, there is no valid argument why only operational variables enjoy the privilege of connection conceptually to the levels of war. Hence, we find it difficult to accept that METT-TC is only intended to describe the tactical level of war. Instead, we argue that combat analysis is significant at all levels of war. Our reasoning leads us to believe that the name, "mission variables" is probably misleading in defining the METT-TC framework.

In conclusion, the mnemonic framework of METT-TC is there to help us easily recall important information and suggest the appropriate order for using such information. However, our teaching experience

together with supporting arguments shows that neither the METT-TC sequence nor the name of the "mission variables" are cases of conceptual discipline. We must first understand the character of combat before proceeding to combat analysis.

The Character of Combat Analysis

Put simply, combat is a violent clash of two or more opposing forces that use physical force to solve their problems.²⁹ Surprisingly, problems associated with combat are addressed in the domains of time, geography, demography, and economy, which do not necessarily have a military origin.³⁰ As a result, the ability to tilt the nonmilitary bases of combat power in favor of someone becomes vital if we are to use military power effectively. In this section we will briefly elaborate on each nonmilitary domain of combat in a logical sequence.

According to John Boyd's OODA (observe-orient-decide-act) loop concept, combat takes place primarily in the *time domain*.³¹ The main idea is to "get your opponent in a position where he was already reacting one or more moves behind."³² Or, in short, to overcome the enemy by responding with greater speed and accuracy. This is nothing less than a close interplay of the factors of *mission* and *time available*, (M+T) which are particularly relevant in the first stages of combat analysis.³³

Competition in the time realm is significant. However, by its nature, combat happens mainly in the physical realm. This is so because combat must take place on a physical "combat playground" if it is to occur. From a military perspective, we refer to these geographical areas using many names such as battlefield, battlespace, combat zone, or just AO in the practical sense. Therefore, it is reasonable to argue that terrain is the basis of the first physical, nonmilitary, combat realm.³⁴

An assessment of terrain should be accompanied by the AO weather assessment, albeit from a modern perspective.³⁵ The same applies to other modern factors closely related to a particular geographic area, such as electromagnetic space and cyberspace, etc. There is good reason to embrace the concept of geospatial evaluation used by German military institutions and to insist that the evaluation of *geospace* (GEO) should be done first in the sequence of combat analysis.³⁶

Next, if following the modified logic of Robert Ayson, we notice that people have a great deal of influence on combat when they occupy the specific AO.³⁷ The U.S. military experience with counterinsurgency also supports this argument.³⁸ Powers and Knight's article supports this assertion, that is, that people have a profound influence on the outcome of a modern struggle.³⁹ Support for this view can also be found in the various arguments made in the German army's evaluation of its combat practices.⁴⁰ This author believes that people naturally emerge as a nonmilitary (though physical) factor with a significant influence over the plans of both the *enemy forces* (ENY) and *own friendly forces* (OWN).

However, unlike traditional attention paid to civil considerations, we emphasize the significance of the *local* (LOC) factor. First, the morphological designation of the LOC factor implies that not all civilian considerations need to be considered.⁴¹ Such considerations oblige us to focus on the contextual locality issues exclusively related to the unit's combat problems in the specific AO. Second, the notion of "locals" suggests that local people include more than just civilians. People can be passive observers, influential actors, proactive adversaries, or even active enemies if they take up arms and join the fight.⁴² Therefore, the logical choice is to examine the LOC factor immediately after the GEO factor.

Finally, Ayson suggests paying attention to the last, but no less critical, nonmilitary material base of power, that is, the economic domain.⁴³ According to the author, economics, together with demography, will shape "*what scale of that struggle* (emphasis added) undertaking would be possible."⁴⁴ As history shows, the economic aspect has always had a significant impact on the course of the struggle.⁴⁵ From a modern perspective, closer economic interaction between the nonmilitary and military spheres is gaining more relevance, at least in the combat innovation area.⁴⁶ Therefore, we can agree that analysis of the economic factor is significant to the outcomes of the struggle, especially when encompassing operational variables.⁴⁷

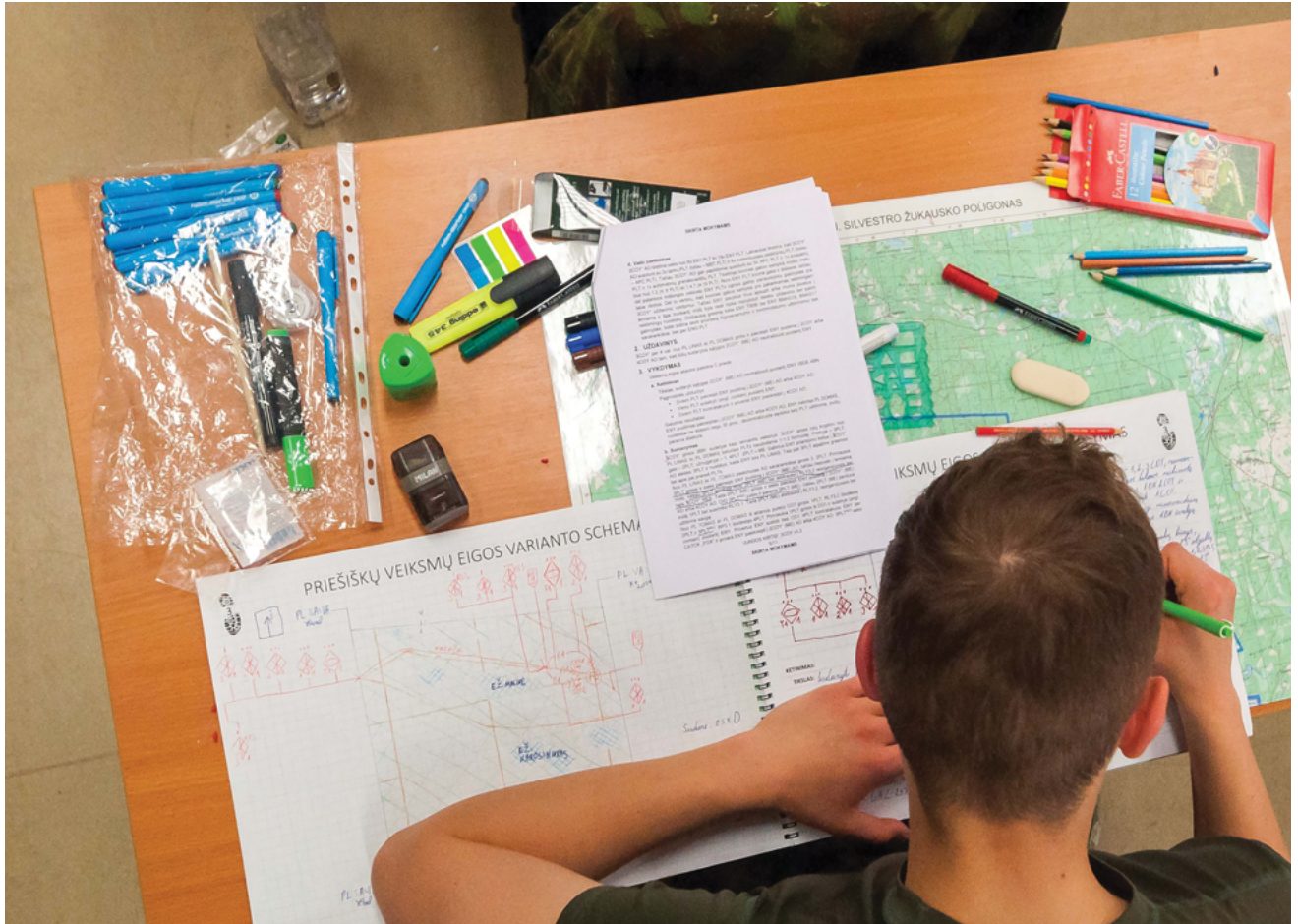
Nevertheless, we argue that in the case of combat analysis, the economic factor can be put to the best practical use when analyzed contextually. Specifically, economical options should be relevant when analyzing the LOC, ENY, and then OWN factors. This is because in the case of combat the adjective "economical"

is best described as the inability to use a lot of energy, resources and, ultimately, units for combat purposes.⁴⁸ In this respect, we should understand that the field of economics includes questions about the efficient use of force in combat and its effectiveness. Let us suppose that "efficiency" describes the capability of "*the good use of something* (emphasis added) in a way that does not waste any."⁴⁹ In this case, the adjective "effective" describes somebody who is "successful or achieving the results that you want."⁵⁰ As a result, these morphological arrangements suggest that, for example, in the case of ENY factor assessment, economic considerations should answer what capabilities and supplies ENY has, what benefits ENY has from them, and how ENY can best exploit them against OWN. In using substitution, the same logic can also apply to the assessment of the OWN factor. Likewise, this logic can also apply to the evaluation of the LOC factor. Therefore, we tend to agree that economic considerations should be included in the images of LOC, ENY, and OWN combat factors as the best possible choice.

Before summarizing, it is important to emphasize another conceptual feature relevant to combat analysis—specifically, the conceptual difference between combat variables, givens, and factors. According to a definition found in *Cambridge Academic Content Dictionary*, the word "variable" describes "something that can change, especially in a way that cannot be known in advance."⁵¹ The concern is whether factors of "mission" and "time available" can be considered variables as is the case with the METT-TC framework.

Thus, if mission was a variable, then we can assume that it can be changed frequently during combat, but we know this is not true. In general military practice, tasks and missions are given by superiors and are not changed by the units during combat. A change in mission means nothing more than a new mission issued for the unit. Therefore, we cannot agree that the mission is variable because it is a given combat factor and can only be replaced to fit a radical change in the combat situation.

Perhaps if we enter a debate with detractors as to whether "mission" is a variable, then the "time available" factor is by no means the object of such a discussion. Time is "the part of existence ... considered as a whole."⁵² Time is an objective dimension free from human will and that cannot be stopped, slowed down, or accelerated. In a practical sense, time available



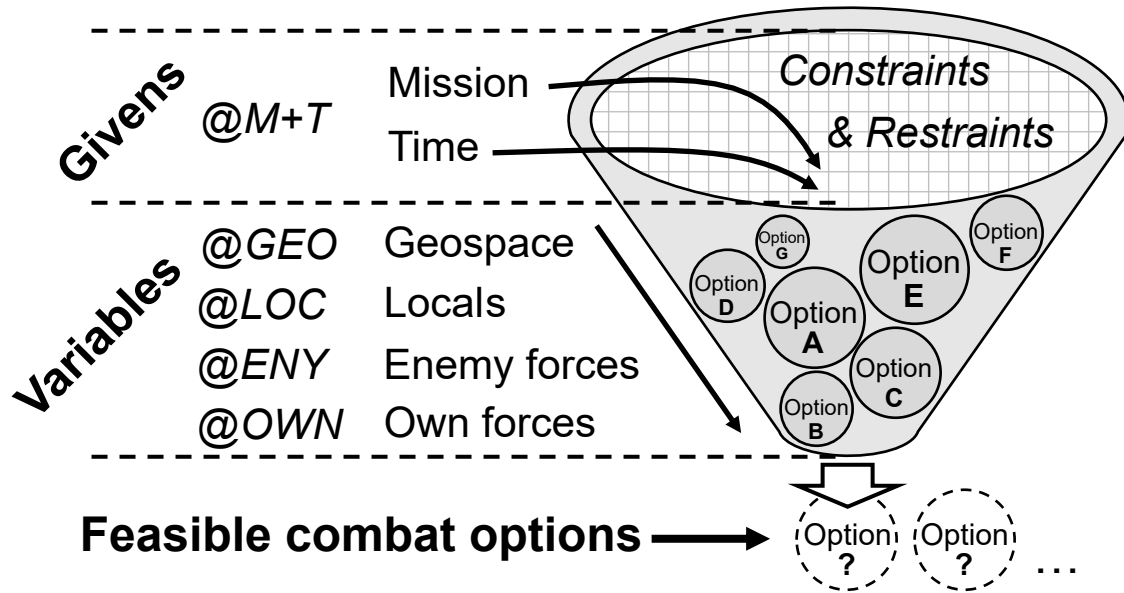
A cadet takes the Qualification Examination of Troop Leading Procedures on 29 June 2020 in Vilnius, Lithuania. In the final examination, cadets must demonstrate sufficient analytical ability by effectively solving combat problems to qualify for the first officer rank—lieutenant. (Photo by Eimantas Genys)

describes “an amount of time that we have available to do something.”⁵³ Yet, from a scientific perspective, time can be considered an independent variable and sometimes a dependent variable. That said, combat today does not reside in the domain of modern physics. Therefore, we cannot also accept that the “time available” factor is variable. The latter is a natural constraint, an objective determinant, and ultimately a combat factor given to us by superiors who instruct us to take action to solve designated combat problems.

Here, the reader may question why conceptual separation is necessary, and what it does for the larger picture. In this regard, Peter Senge’s argument is useful: “The essence of leadership—what we do with 98 percent of our time—is communication. To master any management practice, we must start by bringing discipline to the domain in which we spend most of our time, the domain of words.”⁵⁴ So, discipline in our

choice of words gives clarity to our understanding of the surrounding social world, not confusion.⁵⁵ Hence, it expands our cognitive capacity to think and to act faster and more accurately. The same is true in the case of modern command and control.⁵⁶ Therefore, we have many reasons to enhance the discipline of relevant combat analysis concepts.

If we take a broader perspective, the conceptual separation of relevant concepts clarifies what commanders need to know, what to understand, and what to evaluate when conducting combat analysis. For example, the concept of “factor” describes “a fact or situation that influences the result of something.”⁵⁷ Therefore, when we use the concept of “combat factors,” we understand immediately that there are discussions about facts that significantly impact combat outcomes. Another relevant example is the concept of “given” that describes something that is “already decided, arranged,



(Figure by author)

Figure. MT-GLEO Combat Analysis Framework

or agreed.”⁵⁸ On the contrary, the concept of “variable” describes something “likely to change often.”⁵⁹ Thus, when we use the term “combat givens,” we recognize that the issues at hand relate to combat factors that have already been decided or objectively articulated and therefore must be understood clearly and precisely. At the same time, as we use the term “combat variables,” we identify that we must deal with uncertainties that can present both opportunities and dangers in combat. This recognition implies that the combat variables under consideration must be perceived as correctly as possible in a particular situation. Only then can nonmilitary domains be tilted to their advantage by reaping the best possible options and minimizing the potential impact of existing threats. Thus, the introduction of discipline between the relevant concepts of combat analysis clarifies what needs to be, or should not be, done simultaneously.

In summary, we have explored the character of combat analysis by interpretation. As a result, we have made a precise arrangement for combat analysis. Next, we recognize that the combat factors of “mission,” “time available,” “geospace,” “locals,” “enemy forces,” and “own forces” are relevant. Also, we emphasize that typical combat analysis follows a particular

sequence. Finally, we made the conceptual separation and arrangement between combat factors, combat givens, and combat variables. This feature allows us to justify why the separating dash in the acronym is placed in a particular position. On the contrary, the METT-TC cannot offer such clarity. Thus, the sum of these achievements allows us to outline an alternative combat analysis framework.

The MT-GLEO Combat Analysis Framework

By reference to teaching experience and the previous discussion of combat character, we argue that METT-TC is not the best example of its kind. Instead, we explore an alternative framework, the MT-GLEO (mission, time available, geospace, locals, enemy forces, own forces), which can be found in the figure. We assert that MT-GLEO could promote speed and accuracy in combat analysis.

First, we describe MT-GLEO as a *combat analysis framework* and present a conceptual outline for the framework’s *raison d’être*: to present the reader with adequate *combat situational understanding*. This helps us to promote impartiality and a clear focus on combat, not just mission. We also explain to commanders that the



Cadets participate in a ceremony commemorating the thirtieth anniversary of the General Jonas Žemaitis Military Academy of Lithuania on 16 June 2022 in Vilnius, Lithuania. The newly established JŽ insignia on the cadets' epaulets represents Gen. Jonas Žemaitis' unconditional will, determination, and honor in the fight for the freedom of Lithuania. (Photo by Eimantas Genys)

mission factor accounts for only one-sixth of all combat analysis work. As a result, we eliminate any possible confusion in the combat analysis process.

Second, we refer to the six elements of the MT-GLEO as *combat factors*, which clarifies our understanding that all MT-GLEO factors are essential determinants of combat outcomes. Then, we divide combat factors into two categories: *combat givens* and *combat variables*. Let us suppose that combat givens are more objective determinants dictating the character of possible combat options and further direction of the combat analysis. If this is true, then combat variables are more subjective determinants, which narrow the available options from which commanders can choose. In this regard, the analysis of combat givens provides the basis for the use of combat variables. Finally, we highlight that each combat factor implies specific constraints and restraints (C&R) on the combat options considered. In this way we unambiguously explain the logic of the combat analysis process.

Third, because the essence of combat analysis is to generate accurate combat options as quickly as possible, we suggest following the sequence of MT-GLEO. We argue that the M+T, GEO, LOC, ENY, and then OWN factors sequence meets this aim. The main argument is that the MT-GLEO sequence is

in line with the character of the combat analysis explained. The outcome would be that commanders will be directed to start their assessment with an understanding of the shape of M+T factors. M+T factors, because of their conceptual origin, equip commanders with a clear understanding of the designated mission to the unit they command (including relevant tasks) and the time available for their fulfillment. Unlike the METT-TC framework, M+T factors will also allow commanders to fully understand the ENY's possible mission and the time available for ENY's actions. All this is done by means of juxtaposition (OWN versus ENY).

Next, after the given combat analysis, commanders will be directed to the field of combat variables. Starting with the GEO factor assessment, they must then analyze

the map for options it can suggest to OWN and ENY to fulfill their missions in the time available. Also, in this process, C&R will arise that will hinder the ability to use specific options. The same logic applies when commanders perform a LOC factor assessment by searching for what local people can tell them about imminent combat. As a result, the possible combat options will also likely shrink for OWN and ENY actions. Later, commanders will analyze the ENY factor under C&R suggested by M+T, GEO and LOC. ENY COA (or several COAs) will be followed as the outcome. Again, the ENY factor will create C&R for OWN available options. Finally, commanders will analyze the OWN factor under C&R suggested by M+T, GEO, LOC and ENY. Ultimately, the available OWN COAs will be used as end products for the commander to make their decision. In this way, we justify the typical sequence of analysis and the focus of each factor in the combat analysis process.

Conclusions

This article sought to provide better conceptual and analytical clarity resulting from using the MT-GLEO framework rather than say anything new about combat analysis. First, we shared the experience of teaching cadets to apply METT-TC in the TLP. Here, we exposed problems that may be relevant in

other contexts as well. Then, to improve the METT-TC framework, we explored the character of combat analysis, followed by logical, conceptual, and analytical arguments as to how we might arrange the MT-GLEO combat analysis framework. Finally, we outlined and briefly explained the practical use of MT-GLEO, which led us to demonstrate the practical power of the framework we propose. The outcome is that we recommend adopting the newly introduced MT-GLEO concept.

From a broader perspective, the MT-GLEO combat analysis framework is compatible with U.S. strategic and military institutions. This is because various analytical frameworks expressed in acronyms are standard in American practice. Therefore,

MT-GLEO would easily find a home in U.S. military institutions. The MT-GLEO has much in common with the evaluation factors used by the German army.⁶⁰ MT-GLEO can enhance the compatibility of U.S. and German military institutions without blurring the distinction between different military cultures. Other allied armed forces are also likely to find benefits. Finally, from a scientific perspective, the MT-GLEO framework could also find a place in war studies, defense studies, or strategic studies, analyzing various features of armed conflicts that have already taken place or are maturing. As a result, we favor adopting the MT-GLEO alternative as a general framework, although our viewpoint invites further discussion. ■

Notes

1. Army Doctrine Publication (ADP) 5-0, *The Operations Process* (Washington, DC: U.S. Government Publishing Office [GPO], 2019); Field Manual (FM) 5-0, *Planning and Orders Production* (Washington, DC: U.S. GPO, 2022); ADP 6-22, *Army Leadership and the Profession* (Washington, DC: U.S. GPO, 2019); ADP 6-0, *Mission Command: Command and Control of Army Forces* (Washington, DC: U.S. GPO, 2019); FM 6-0, *Commander and Staff Organization and Operations* (Washington, DC: U.S. GPO, 2022).
2. Douglass C. North, *Institutions, Institutional Change and Economic Performance* (Cambridge: Cambridge University Press, 1990), 22; Henri Fayol, *General and Industrial Management*, trans. Constance Storrs (1916; repr., London: Sir Isaac Pitman & Sons, 1949); *Command and Control on Operations: Training Guide*, 4th ed. (Dresden: German Army Officer School, 2018), 5; FM 5-0, *Planning and Orders Production*, chap. 8.
3. We intentionally use the concept of *combat analysis* rather than *decision analysis*. Peter F. Drucker, *Management: Tasks, Responsibilities, Practices* (New York: Harper & Row, 1974), 546.
4. FM 5-0, *Planning and Orders Production*, Appendix A.
5. *Ibid.*, A-1.
6. *Ibid.*, A-2.
7. We deliberately use the concept of *combat analysis* rather than *mission analysis*.
8. FM 5-0, *Planning and Orders Production*, chaps. 3–7.
9. *Ibid.*, pp. 1–5.
10. Richard P. Geier, "Gain the Initiative with an Armored Raid," *Military Review* 60, no. 6 (June 1980): 48–57; Igor D. Gerhardt, "Active Defense and All That," *Military Review* 60, no. 8 (August 1980): 4–13; Clyde J. Tate and L. D. Holder, "New Doctrine for the Defense," *Military Review* 61, no. 3 (March 1981): 2–9; Huba Wass de Czege and L. D. Holder, "The New FM 100-5," *Military Review* 62, no. 7 (July 1982): 53–70.
11. FM 100-5, *Operations* (Washington, DC: U.S. GPO, 1982 [obsolete]), 2-2; Lawrence M. Jackson II, "Force Modernization—Doctrine, Organization and Equipment," *Military Review* 62, no. 12 (December 1982): 2–12.
12. Jackson, "Force Modernization," 4, 9.
13. John J. Yeosock, "Army Operations in the Gulf Theater," *Military Review* 71, no. 9 (September 1991): 2–15; William W. Hartzog and James G. Diehl, "Building the 21st-Century Heavy Division," *Military Review* 78, no. 2 (March–April 1998): 91–99; John R. Surdu and Udo W. Pooch, "Simulations During Operations," *Military Review* 81, no. 2 (March–April 2001): 38–45; Thomas M. Cook et al., "Cognitive Representations of Battlespace Complexity: Six Fundamental Variables of Combat" (Aberdeen Proving Ground, MD: Army Research Laboratory, February 2000), accessed 7 September 2022, <https://apps.dtic.mil/sti/pdfs/ADA374570.pdf>.
14. James F. Powers Jr. and Thomas G. Knight Jr., "Civil Affairs: A Command Function," *Military Review* 75, no. 5 (September–October 1995): 63–68.
15. Casey Haskins, "A Practical Approach to Cultural Insight," *Military Review* 90, no. 5 (September–October 2010): 87.
16. Jennifer Osmond and Yvonne Darlington, "Reflective Analysis: Techniques for Facilitating Reflection," *Australian Social Work* 58, no. 1 (March 2005): 3–14, <https://doi.org/10.1111/j.0312-407X.2005.00179.x>.
17. Allied Technical Publication 3.2.2(B), *Command and Control of Allied Land Forces* (Brussels: NATO Standardization Office, 2016), 3-7–3-9.
18. Army Techniques Publication (ATP) 3-21.8, *Infantry Platoon and Squad* (Washington, DC: U.S. GPO, 2016), A-22; ATP 3-21.10, *Infantry Rifle Company* (Washington, DC: U.S. GPO, 2018), B-21.
19. ATP 3-21.8, *Infantry Platoon and Squad*, A-7.
20. ATP 3-21.10, *Infantry Rifle Company*, B-8.
21. Carter Malkasian, *The American War in Afghanistan: A History* (Oxford: Oxford University Press, 2021), <https://doi.org/10.1093/oso/9780197550779.001.0001>.
22. Nataliia Stepaniuk, "Wartime Civilian Mobilization: Demographic Profile, Motivations, and Pathways to Volunteer Engagement Amidst the Donbas War in Ukraine," *Nationalities Papers* (2022): 1–18, <https://doi.org/10.1017/nps.2021.82>.
23. Powers and Knight, "Civil Affairs."
24. Haskins, "A Practical Approach to Cultural Insight," 87.

25. ATP 3-21.8, *Infantry Platoon and Squad*, A-7–A-9; ATP 3-21.10, *Infantry Rifle Company*, B-10–B-11.
26. Peter M. Senge, "The Practice of Innovation," *Leader to Leader* 9 (June 1998): 17, <https://doi.org/10.1002/tl.40619980907>; Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1989), 132; Émile Durkheim, *The Rules of Sociological Method* (1895; repr., New York: The Free Press, 1982), 57–58; *Truppenführung* (German Army, 2018), 44.
27. FM 5-0, *Planning and Orders Production*, Appendix A.
28. Brian Hildebrand, "Social Factors and the Human Domain," *Military Review* 96, no. 3 (May-June 2016): 90.
29. Thomas G. Mahnken, "Strategy," in *Routledge Handbook of Defence Studies*, ed. David J. Galbreath and John R. Deni (London: Routledge, 2018), 136–46, <https://doi.org/10.4324/9781315650463-12>; ADP 3-0, *Operations* (Washington, DC: U.S. GPO, 2019), 5-1.
30. Robert Ayson, "The Importance of Geography," in *Geography, Power, Strategy and Defence Policy: Essays in Honour of Paul Dibb*, ed. Desmond Ball and Sheryn Lee (Acton: Australian National University Press, 2016), Scott E. McIntosh, "The Wingman-Philosopher of MiG Alley: John Boyd and the OODA Loop," *Air Power History* 58, no. 4 (2011): 24–33, accessed 7 September 2022, <https://www.jstor.org/stable/10.2307/26276108>.
31. McIntosh, "The Wingman-Philosopher of MiG Alley."
32. *Ibid.*, 26.
33. ATP 3-21.8, *Infantry Platoon and Squad*, A-22; ATP 3-21.10, *Infantry Rifle Company*, B-21.
34. Ayson, "The Importance of Geography," 81–82; John C. Gazlay, "An Open Book," *Military Review* 58, no. 10 (October 1978): 47–49.
35. ATP 3-21.8, *Infantry Platoon and Squad*, A-9–A-17; ATP 3-21.10, *Infantry Rifle Company*, B-11–B-16.
36. *Command and Control on Operations*, 5.
37. Ayson, "The Importance of Geography," 81–82.
38. See, e.g., "Counterinsurgency Reader," *Military Review* 86, special issue (October 2006); and "Counterinsurgency Reader II," *Military Review* 88, special issue (August 2008).
39. Powers and Knight, "Civil Affairs."
40. *Command and Control on Operations*, 5.
41. ATP 3-21.8, *Infantry Platoon and Squad*, A-22–A-25; ATP 3-21.10, *Infantry Rifle Company*, B-22–B-24.
42. Joint Doctrine Publication 0-20, *UK Land Power* (Bristol, UK: Ministry of Defence, 2017), 51.
43. Ayson, "The Importance of Geography," 81–82.
44. *Ibid.*, 82.
45. Martin van Creveld, *Supplying War: Logistics from Wallenstein to Patton* (Cambridge: Cambridge University Press, 1977).
46. Magnus Christiansson, "Defense Planning beyond Rationalism: The Third Offset Strategy as a Case of Metagovernance," *Defence Studies* 18, no. 3 (2018): 262–78, <https://doi.org/10.1080/14702436.2017.1335581>.
47. FM 5-0, *Planning and Orders Production*, A-2.
48. *Cambridge Advanced Learner's Dictionary & Thesaurus*, s.v. "economical," accessed 7 September 2022, <https://dictionary.cambridge.org/dictionary/english/economical>.
49. *Cambridge Advanced Learner's Dictionary & Thesaurus*, s.v. "efficiency," accessed 7 September 2022, <https://dictionary.cambridge.org/dictionary/english/efficiency>.
50. *Cambridge Advanced Learner's Dictionary & Thesaurus*, s.v. "effective," accessed 7 September 2022, <https://dictionary.cambridge.org/dictionary/english/effective>.
51. *Cambridge Academic Content Dictionary*, s.v. "variable," accessed 7 September 2022, <https://dictionary.cambridge.org/dictionary/english/variable>.
52. *Cambridge Advanced Learner's Dictionary, & Thesaurus*, s.v. "time," accessed 7 September 2022, <https://dictionary.cambridge.org/dictionary/english/time>.
53. *Ibid.*
54. Senge, "The Practice of Innovation," 17.
55. Clausewitz, *On War*, 132; Durkheim, *The Rules of Sociological Method*, 57–58.
56. *Truppenführung*, 44.
57. *Cambridge Advanced Learner's Dictionary & Thesaurus*, s.v. "factor," accessed 7 September 2022, <https://dictionary.cambridge.org/dictionary/english/factor>.
58. *Cambridge Advanced Learner's Dictionary & Thesaurus*, s.v. "given," accessed 7 September 2022, <https://dictionary.cambridge.org/dictionary/english/given>.
59. *Cambridge Academic Content Dictionary*, s.v. "variable," accessed 7 September 2022, <https://dictionary.cambridge.org/dictionary/english/variable>.
60. *Command and Control on Operations*, 5.