

New Challenges in Fulfilling Tactical Tasks on the Modern Battlefield

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Abstract

The article analyzes new phenomena that in military tactics. The first part identifies new phenomena that have emerged in recent years. These phenomena are categorized according to their impact at the tactical level and their potential for utilization in the near future. The most important of these, with the greatest potential for future tactical use, are discussed in the second chapter. As a result, options for future utilization, protective measures, and possible procedural solutions are proposed, which could give us the advantage in battle. The article relates to the tactical level of command and control. The qualitative analytical methods for this character of an article are crucial. The methodical procedure starts with analysis of literature and comparative analysis and selection according to the most important phenomena, and what is the "theory of rational option," which is related to impact at the tactical level of command and control (C2), especially tactical tasks and missions. Some of the topics are discussed with experts from "Operation Community." The authors sort the phenomena using "warfighting function" and discuss them. All the findings can be in mutual relation, so the method of triangulation is also used.

KEY WORDS: *Adaptability; Battlefield; Development; Leader; Tactics, Warfighting function.*

Citation: Zahradnicek, P.; Hrdinka, J.; Flasar, Z. Artificial Intelligence in Higher Education: Safety, Reliability, and Risk Management in a Socio-Technical System. In Proceedings of the Challenges to National Defence in Contemporary Geopolitical Situation, Brno, Czech Republic, 7-10 September 2026. ISSN 2538-8959, <https://doi.org/10.47459/cndcgs.2026.151>

1. Introduction

Recent armed conflicts have shown several phenomena that directly influence the fulfilment of tactical tasks. Some of them are genuinely new, mainly because of technical development, digitalization, artificial intelligence, unmanned systems, sensor networks, and faster information flows. Others are not entirely new. They represent older tactical principles, methods, and procedures that have returned in a new technological and operational form. The wars in Ukraine and Israel are especially important for European armies, because they offer practical lessons for the development of equipment, command and control, training, and tactical procedures [1,4].

At the tactical level, these conflicts show that commanders and units must operate in a more transparent, dynamic, and dangerous battlefield. Reconnaissance, drones, electronic warfare, precision fires, rapid target acquisition, and the constant threat of observation make concealment, dispersion, deception, mobility, and protection more important than before [5, 6, 8]. At the same time, the growing role of unmanned aerial and ground systems creates new possibilities for reconnaissance, targeting, fire support, logistics, and force protection, but also brings new limits and risks [6, 7, 17]. The study of these phenomena is important, but it must be approached carefully. Not every lesson from a current conflict can be copied directly into another army or another operational environment. Some solutions may be useful only under specific conditions, while others may be temporary responses to a particular battlefield situation. The previous focus on counterinsurgency and stabilization operations, sometimes described as the "Afghanization" of armies, influenced doctrine, equipment, and training for many years. A similar risk may now arise with the "Ukrainization" of armies, where all lessons are interpreted mainly through the experience of one war. For this reason, lessons from current conflicts must be studied critically and compared with broader tactical theory and future battlefield trends [2, 3, 10].

This article focuses on new and renewed phenomena in military tactics and their impact on the tactical level of command and control. The aim is to identify selected phenomena that have appeared or gained importance in

recent years, categorize them according to their tactical impact, and assess their possible use in the near future. The article pays attention mainly to those phenomena that may provide a tactical advantage, influence the fulfilment of tasks and missions, or require changes in training, procedures, and protection measures [2, 9]. The methodological basis of the article is qualitative and analytical. The first step is a literature analysis focused on current military experience, military theory, and studies dealing with the future battlefield [1, 3, 10]. This is followed by a comparative analysis and selection of the most important phenomena according to their relevance for tactical tasks, command and control, and possible use by tactical units [2, 3]. The article also uses the logic of rational choice, understood here as the assessment of tactical options according to their expected benefit, cost, risk, and operational effect. This approach is especially relevant at the tactical level, where commanders must often choose between several possible courses of action under time pressure and uncertainty [9, 12].

Some topics were also discussed with experts from the operational community and used as inputs for qualitative assessment [4]. The identified phenomena are organized through the warfighting functions, which makes it possible to assess their impact on movement and manoeuvre, intelligence, fires, protection, sustainment, command and control, and information-related activities. Since many of the findings are connected and influence one another, the article also applies triangulation, comparing literature, expert views, and observed conflict trends. This approach allows the article to discuss not only individual phenomena, but also their mutual relations and possible consequences for tactical commanders and units.

2. Phenomena Influencing the Warfighting

Most analysts and military leaders acknowledge that the proliferation of drones, sensors, social media, and commercial imagery is making the battle space increasingly transparent, requiring militaries to change how they fight. General Valery Zaluzhny, the former Ukrainian Commander-in-Chief of the Armed Forces, emphasizes that “due to the absolute transparency, a 10-15 kilometer zone of absolute death” now exists along the front line. Some analysts have even gone so far as to say that operational maneuver is impossible in the face of battlefield transparency [5].

Swarms [6, 7] of UAVs and UGVs, in different categories and layers, will be adopted into future warfare [8]. The structure and organization of battle is necessary to adapt. These tools in specific conditions are enlarging the parameters of the battlefield. Despite this phenomenon, the terrain is still a crucial “tactical variable” [9].

Concentration of force makes the breakthrough; it does not mean that physical cumulation in one place at the same time is necessary.

The battlefield is preferably linear. It gives commanders an overview of the situation, makes organizing and commanding more effective, and saves the mass of units [11]. The non-linear battlefield looks sophisticated and modern, but it brings a number of related complications. A major tactical operation is working and will be used also by new technical solutions, for example, drones. The formations of infantry and vehicles are divided. The Israeli and Ukrainian conflicts show that combat vehicles are still important targets. They are protected by drones, and soldiers are operating at the forward edge, kilometers away. This can work in flatlands or deserts, not in Middle European terrain, where the land is more miscellaneous and indented.

The new and precise weapon systems are forcing vehicles to improve their armor. New vehicles, for. Ex. CV-90s are preferred because of their protective abilities and maneuver, fire, and C4 abilities. Alternative weapons, vehicles, and systems have been introduced, for example, motorbikes, quads, etc. They can be effective in specific conditions, but as a major toll, replacing the technique can't be used. The fact is that leaders must adopt some of these phenomena. It challenges training and educational institutions to give new generations of leaders adequate skills and sets of abilities to be effective during the fight [10].

3. Discussion and Implications of Selected Phenomena

A transparent battlefield is typical that observation, as it fits the stage of the OODA loop, is effectively “always on” for both sides. All the cycles are extremely quick, newly empowered by the artificial intelligence.

The high tempo of OODA, frequency of activities, and quick sequence of activities [2] are exhausting all the actors. These can create an opposite paradox, known as “cognitive fratricide,” leading into an operational break or temporary slowdown of operational tempo in order to “recharge” the combat effectiveness of opposing forces. Typical markers are visible when units are mentally and physically starving, decision quality decreased, and logistic operations are having delays. The physical limits were exceeded. The leaders solve the dilemma of which approach can bring more benefits. Speed up the OODA, beat the enemy with risk, and be exhausted sooner? Or keep the tempo more constant, try to identify weaknesses, and use advantages with more disposable sources? Who dictates the tempo? Usually, at the tactical level, the approach is modified by METT-TC (Mission-Enemy-Time-Terrain-Troops Available-Civilian consideration) [9]. In fact, current transparency changes the tactics. The units are finding new ways to create “corridors of non-transparency.” This term can be a way to enable the maneuver and, in the close future, will be part of operations. Units, who will be able to take advantage of “non-transparency,” can make decisive operations and win the battle. This means being able to operate in both conditions: in super-transparency and, on the other side, in “non-transparency.” These capabilities have to be

reflected in the approach to the training. Some "old times" systems have to be incorporated again as a secondary tool. Soldiers, especially small unit leaders, have to be equipped with a wide range of skillsets.

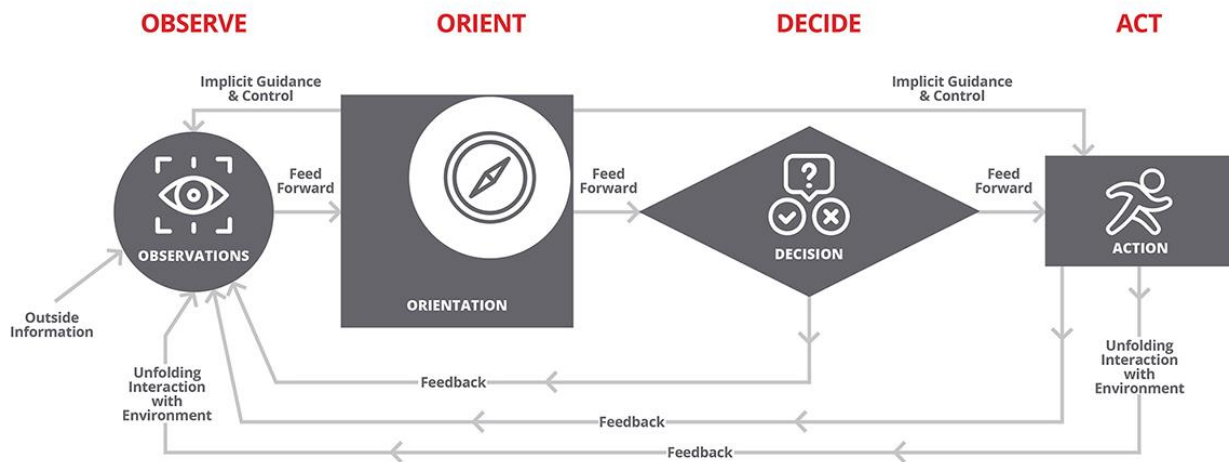


Fig. 1. Applying AI at the edge (AIAE) to the OODA loop speeds decision-making capabilities for improved decision superiority [12]

Swarms of unmanned systems are starting to be the reality. The operation of aerial drones successfully substitutes decisive operations led by ground combat units. For the theory of tactics arises the dilemma: are drones supporting combat units by their operations, or are drones conducting deceptive operations? The reality of the Ukrainian battlefield from last month supports the idea that the drones are conducting deceptive operations. On the other hand, massive utilization of drones is a phenomenon typical of the Ukrainian conflict but not typical for all conflicts. The comparison has been done, and the study was also found where the authors agree with Fox [13]. *Drones are tactically effective but strategically indecisive. They cannot control terrain, win wars, or generate the political outcomes necessary to terminate conflict on favorable terms. Despite their game-changing role on the battlefield, drones do not meet the basic requirements of land war: taking, retaking, holding ground, sealing borders, or protecting populations.*" These statements, based on the theory of land war [2, 14], are explained by the synthesized table.

Table1. Synthesis of abilities of drones and requirements of warfighting [13].

No.	Requirement according theory of Land War	Condition	Drones	Requirement fulfilled
1	Take territory	Defeat occupying army	Yes	No
		Control contested territory	No	
2	Retake territory	Defeat occupying land forces	Yes	No
		Control contested territory	No	
3	Clear threats from territory	Remove hostile force from difficult terrain	No	No
		Control contested territory	No	
4	Hold territory	Defeat counterattacks	Yes	No
		Control contested territory	No	
5	Seal boundaries	Control territory at the nexus contested land	No	No
		Defeat counterattacks	No	
6	Protect population	Prevent civilian harm and collateral damage	No	No
		Control contested territory	No	

Note: When meets yes + yes, requirement is fulfilled, otherwise not.

The table shows that only drones can't be decisive at operations but can fulfill tactical tasks or activities at a tactical level. Additionally, this statement also supports the idea of Murray [15], because "drones cannot replace systems like artillery because ground-based legacy systems provide 24-hour, all-weather solutions to tactical and operational problems in ways that drones are just not equipped. Without 24-hour, all-weather options, militaries become increasingly fragile and thus prone to surprise, shock, and being entirely overwhelmed."

The concentration of force at the same time in the same place is one of the cornerstones of military tactics. This statement is valid and newly added by drones. The physical concentration of units to the same area of origin is not necessary. Newly is used for the term "concentration of force without concentration of units." It is more important to deliver, at the same time, the effect than be, at the same time, in the same place, which creates high-value targets. This

approach is supported by command and control systems, which are crucial for synchronization. Eliminating these C2 systems or centers can limit the ability to deliver effect from dispersed positions. The "network focused" targeting would not work in this case. Remember, the Starling outage showed the military world's dependency on external civilian networks, which is a strong limitation. Smart solution on one side and weakness on the other side. From the perspective of infantry units, the concentration is still crucial. For controlling territory, the presence and concentration of manpower are crucial. The commanders have to divide the operation into phases, where the concentration lasts a minimum of time. Dispersion requires the terrain, where it is possible to move and hide. Dispersion without adequate terrain conditions does not work.

The commanders are trying to keep linearity, because it creates simplicity in command and control, overview, a safe amount of security forces, straightening supply chains, and limiting supply routes. The Gaza War is a good example of superiority, where commanders are shaping and utilizing most of the terrain for their own purpose, but in a fragmented urban area with a vertical land domain (from a tactical viewpoint). The Ukrainian Forward Edge of Battle Area (FEBA) is more or less generally linear but consists of "bundles". In military terminology, a system of separate strongpoints. A system of strongpoints enables defense, specifically a "wide defense area," what does not enable physical concentration for offense or counterattacks, which are crucial for effectively retaking territory (see Tab. 1 line 2). This wide defense is accompanied by significant depth, which creates "diluted" areas of operation by manpower and vehicles, filled by sensors and drones. The width of battalion defense is approx. 10 km wide. The typical structure valid to the end of 2025 and start of 2026 is presented in picture 2.

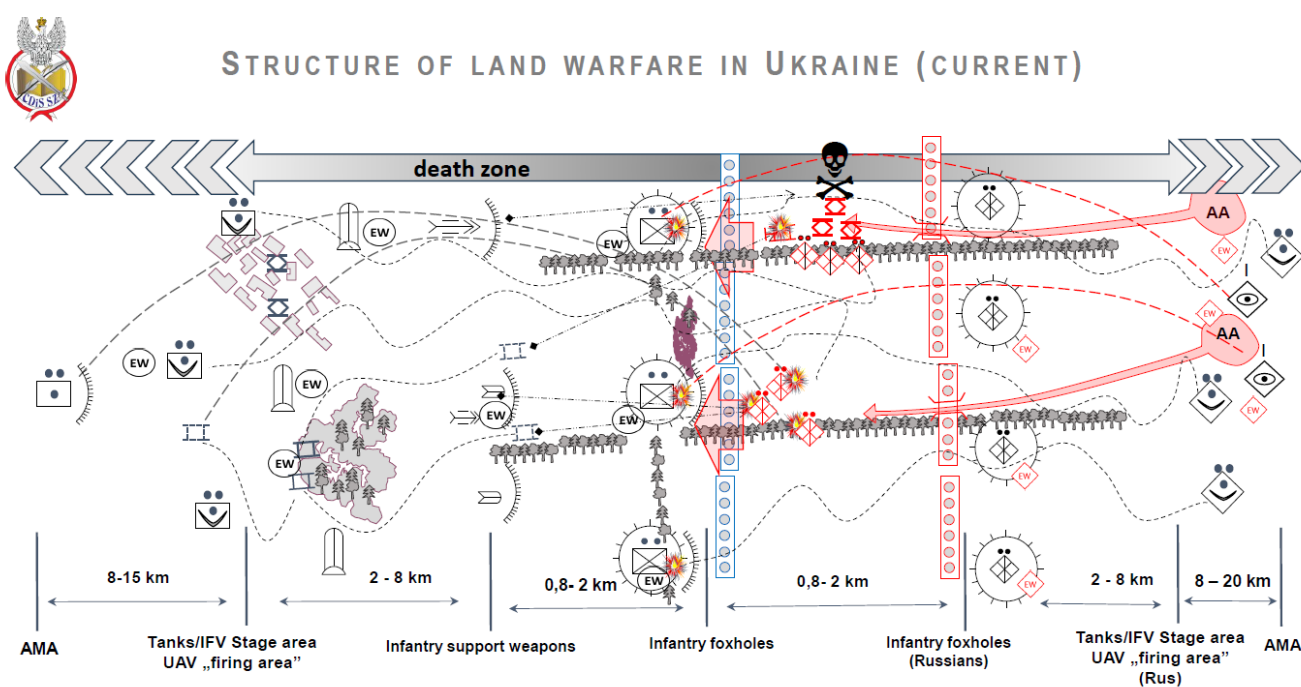


Fig. 2: Structure of land warfare Ukraine (current) [16, 17].

New weapon systems and technical solutions for maneuvering units can be observed. Civilian applications, like quads and motorbikes, are more alternative than a systematic approach. They lack firepower and protection. The advantage of trafficability and agility is only a selective parameter, valid for specific tasks and conditions. The rearming of Ukrainian forces by Western technique shows that the "iron trinity"—maneuver, firepower, and protection of infantry units—is still a valid parameter. The numbers are not precisely mentioned in open sources. From not confirmed open sources, it seems that survivability of the crew is high, comparing it to the old technique, like the BMP-2, when facing mines, drones, and anti-tank weapon attacks. Additional protection, not only conventional armor, is attached. "Cope cages" and electronic warfare jammers are typical solutions for infantry vehicles operating in a "death zone." Israeli forces adapted their mechanized units' structure to their specific conditions and enemy.

The cooperation highly protected the APC with a number of infantry and tanks and is unique and inspirational. The varied European environment does not support this solution; on the other hand, specific flatlands in Ukraine or Poland can be applicable. Unmanned ground vehicles are becoming an integral part of units. Manned-unmanned teaming seems to be the approach of European armies. Various types of unmanned vehicles and devices are deployed and tested for various types of tasks. More simple "logistic missions" are common. Manifold types of techniques and specifically equipped teams make apparent quality.

From the viewpoint of military art, we can observe paradox. A combination of tools, not a unified technique, related procedures, logistical requirements, and training standards undermine some of the principles of war: minimally

unity of command and simplicity. Equipping forces and creating a sophisticated operational picture centralizes information flow instead of decentralization, which creates highly valuable targets.

Conclusions

Results in context shows that based on principles of war, new tools and procedures must be deliberately adapted. During modernization, specifically “successful” solutions cannot limit the main aim of combat units and formations in various environments.

Nowadays conflicts, led by modern armies, have shown adaptability, development of instruments, and war fighting. Deliberately adapting organizations, processes, and tools is necessary and is a continuous process. The support of society is necessary. The authors are highlighting one final statement positively influencing the development of European armies; they see a valid lesson from Ukraine, mentioned in relation to Starlink. *Dependence on some device, technique, or solution gives us weakness and vulnerability*. Every enemy analyzes the strengths and weaknesses of the opposite side. And returning back to the start of the article, creating “non-transparency” eliminates technically sophisticated systems, which takes away our advantage. Favors simple mass. It is important to keep the balance, be adaptable, and not underestimate basic principles of warfighting and military training principles.

Studying conflict, their dynamic, parameters, and relations is a key topic for professional officers and military researchers. Unfortunately, Fields of Research and Development (FORD) classification does not include military science, what can popularise the military art as important field research interest.

Acknowledgements. The authors respectfully thank to leaders and participants of the “Land Operations Leadership - LANDOPS” project and the “Battlefield 2030+” project. Their support, inbreathing ideas and partial inputs enriched content of this paper.

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