

Disciplined Disobedience: on the Psychology of Junior-level Leadership during Operations in Competitive Electromagnetic and Aerial Environments

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Abstract

In this paper, we argue that disciplined disobedience, a more pronounced interpretation of mission command, is a function of battlefield realities and force composition, rather than preconceived tactics or doctrine. Although theoretically sound, its effective implementation depends, in large part, on real-world battlefield limitations such as the obstruction of effective communication, limitations to force concentration, and external pressures such as an overwhelming enemy advantage in manpower or equipment, and the composition of the Army's source population. However, even under ideal circumstances, disciplined disobedience can still be hampered by a military that does not sufficiently differentiate between responsibility and blame.

KEY WORDS: *disciplined disobedience, small-unit leadership, social psychology.*

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1. Introduction

One of the most important lessons from the Russian-Ukrainian war is that modern warfare has expanded into various domains that were previously dominated by an overwhelming Western technological advantage, including cyberspace and the electromagnetic spectrum [1-4]. Consequently, these domains have received relatively little attention in Western military thinking, and command structures are often poorly equipped to accommodate practical solutions to new technological challenges [2], [4]. One area in which this has become abundantly clear is small-unit leadership. Although the need for 'Freedom of Action' for junior leaders has been recognised since at least the early 1930s, [5] and has recently been elevated from a joint command to an overarching command philosophy in NATO's AJP-01 Allied Joint Doctrine 2022 update, [6] it has proved difficult to implement mission control philosophies in practice [7], [8]. In part, this difficulty arises from the nature of leadership dynamics. On the one hand, people in leadership positions naturally tend towards more authoritarian leadership styles under highly stressful conditions; [14-16] a tendency that has been used to explain the observed higher-than-average prevalence of toxic leader behaviours in the military [17,18]. On the other hand, followers tend to gravitate towards more decisive leaders under stressful conditions, [19,20] as long as they believe those leaders to be competent, stress-resilient and generally fair [21-25]. Moreover, the willingness of junior leaders to take initiative and thus responsibility is further reduced by the common conflation of blame and responsibility, where the two are, in reality, distinctly different. [9], [10,11]. One can be responsible for a negative outcome (the decision made, turned out in hindsight to be suboptimal) while not to blame for the poor outcome (at the time, and based on the available information, the decision was reasonable). This distinction is, however, often blurred and can easily lead to operational inertia – if you do not take initiative, you cannot be blamed for the consequences because you defer the decision and thus the responsibility to someone else [12-14]. As such, mission control-inspired leadership philosophies, especially under extremely stressful conditions, struggle against human cognitive evolution.

However, although we do not aim to diminish the importance of training (i.e. learning how to act against our nature) and institutional support for developing devolved leadership styles, and we will come back to the issue of blame and responsibility below, it is often overlooked that, rather than a natural outflow of doctrine or preconceived tactics, the actual

implementation of mission control style philosophies of leadership is a function of battlefield realities (i.e. the quality and reliability of communication technologies and the extent to which a force can concentrate) and external factors (i.e. the level of parity between warring parties and the composition of the military's source population). Every military has to find a balance between Freedom of Action and Cohesion of Action. Too much freedom and units lose internal cohesion, too little and one risks operational inertia. However, we argue, that this balance is dictated more by the context than military planners, failure to adapt to said context can seriously affect operational effectiveness. As such, training of, and institutional support for, junior leader Freedom of Action is important, but ultimately pointless, if the context requires higher levels of large formation cohesion or

Disciplined disobedience refers to a more pronounced interpretation of mission command that aims specifically to empower of junior leaders *'[...] to accomplish a mission to achieve the commander's intended purpose – even if they must disobey a specific order or task to do so.'* [2]. The extension of warfare into cyberspace and the electromagnetic spectrum has, especially in conjunction with the emergence of drone warfare, made it increasingly difficult, if not impossible, to establish reliable and secure communications [2, 9, 10]. Communication devices, such as radios and telephone connections, can be jammed, interrupted or tapped into with relative ease, while the prevalence of first-person view (FPV) drones makes physical movement on the battlefield (i.e. sending runners) all but impossible. Consequently, units at the tactical level are highly likely to find themselves in rapidly changing combat environments without reliable directives from supporting operational centres, while the latter often lack accurate and up-to-date intelligence about conditions on the ground. Although this gap in reliable communication solutions has, in part, been filled by civilian technologies such as mobile phones and Elon Musk's Starlink, there remain significant limitations to overcome [10,11]. Moreover, due to drone and satellite surveillance, warring parties have, more than ever before, ready access to reasonably good information about enemy movements and the means to respond reliably with lethal force to any buildup of forces [9]. Operations are consequently limited to relatively small unit manoeuvres until effective countermeasures can be developed, while traditional command-and-control dynamics have proved unable to accommodate disrupted communication channels [3]. This accelerates trends toward smaller, highly trained and relatively independent combat units, supported by large logistical tails [12]. These units have to operate autonomously in highly variable and contested environments; if secure communications cannot be guaranteed, junior leaders will therefore need the authority to make decisions on the spot, even when those decisions conflict with previous orders [2, 13].

Ironically, this level of decision-making autonomy is exemplified by the success the Armed Forces of Ukraine (AFU) have had with implementing a system that tolerates and, at times, even stimulates disciplined disobedience. Compared to most Western militaries, the average age of AFU personnel is relatively high (around 40 years), with the majority signing up for military service only after the start of the full-scale invasion [32]. Consequently, a large cohort of currently serving military personnel in Ukraine had a civilian career before joining the military. These are not people who have been trained from a young age to function within a military hierarchy and follow official doctrine. On the contrary, they come from all walks of life in Ukrainian society and bring unique skillsets, which have allowed them to consistently seek solutions to battlefield problems outside of doctrinal frameworks. By now, individual units drive the requirements for drone development, rather than centralised procurement offices,[14-16] while available technologies are routinely employed for tasks far beyond their intended use. Portable anti-tank guided missiles like the NLAW and the Javelin have, for instance, been successfully deployed against drones, ships and bunkers, while drones have been used to airlift anything from medical supplies and instructions, to bicycles to speed up evacuations. On a battlefield that has quickly become unrecognisable, established military thinking has become, at least partially, obsolete, and the development of novel tactics for the modern age begins with the recognition that those on the ground are probably best positioned to drive this development. Paradoxically, we thus find ourselves in a situation where our psychology calls for senior military leaders to take more direct control over their subordinates, whereas the situation calls for the empowerment of junior leaders to take that control instead.

Finally, although we recognise the institutional complexities in integrating space for junior officers to amend or ignore orders when the situation calls for them to do so (i.e. realities on the ground do not permit them to carry out their orders as given without risking excessive casualties, mission failure, etc.), in this paper we will concentrate primarily on the challenges of disciplined disobedience for junior officers within command structure. We will not, in this paper, address institutional inertia or the challenges disciplined disobedience poses to coping among officers at the operational or strategic levels. Although these aspects of disciplined disobedience are undoubtedly important, they lay beyond the scope of the current paper.

2. Disciplined disobedience: an adaptation of an old Prussian ideal

In 1933, the German Wehrmacht published the first half of its new field manual, 'H.Dv. 300/1 Truppenführung', developed under the supervision of Colonel General Ludwig Beck [17]. The second half would follow a year later. Although the ideas in the manual go back to 19th-century Prussian military thinking, they had not yet been brought together and articulated quite so clearly. [17] In *Truppenführung*, the authors break with traditional perspectives of hierarchy and obedience within military structures and state in point 37 that *'The art of leadership lies in the timely recognition of the circumstances and the moment that call for a new decision'*[5]. The document continues by recognising that, although an officer who changes a mission or does not carry it out, assumes responsibility for the consequences, *'A commander must allow [junior] leaders freedom of action, provided this does not jeopardise his [the commander's] intentions'* [5]. Although the Wehrmacht never fully

implemented these ideas and, especially towards the end of the Second World War, [18] reverted back to a strict adherence to orders, the seeds of disciplined disobedience are already present in *Truppenführung*; a commander must provide their intent, but ultimately it is up to the judgment of junior leaders to decide how to achieve those aims. However, whereas *Truppenführung*, and the field manuals it inspired focus on Freedom of Action within the intent of the commander, disciplined disobedience takes this concept a step further and requires commanders to actively empower their junior officers, up to the point where they can not only understand but also inform the commander's intent [2].

There is, however, a major difference of importance for this paper between the battlefield realities of the Second World War and the current drone-infested combat landscape. The introduction of large-scale mechanised warfare tactics during the former conflict called for the concentration of large, mobile formations to force a breakthrough of enemy lines. As such, although Freedom of Action in theory expanded to all positions of leadership (or at least to all officers), in practice, it was often limited to the confines of large formation manoeuvres and thus expanded predominantly to just higher-ranking commanders. In fact, in his 1937 book on tank warfare, German Major-General Heinz Guderian, already argued that panzer commanders should lead from the front, so they can always keep their units in view and direct them personally with minimal delay [19]. Clearly, for Guderian, Freedom of Action might have been great for the rest of the army, but for Panzer divisions to be successful, leadership authority could only rest with the commander. This mindset is exemplified by the actions of Lieutenant-General Erwin Rommel during Operation Crusader. Rommel was infamous for taking risks and personal initiative, even if this went against his orders. During 'Fall Gelb' (Case Yellow), the initial invasion of France and the Low Countries in 1940, for instance, Rommel ignored orders to halt at Avesnes and pushed on towards Chateau, leaving his division strung out over 30 kilometres without adequate means of communication between forward elements (which included Rommel) and the rest of his units. [20] Rommel had recognised the crisis in French morale and acted upon his personal belief that a strong push could help knock the French off balance. However, this decision would dangerously expose him, as he could concentrate his forces, establish effective communication, and was running low on supplies. In this case, the French failed to mount a serious counterattack, and Rommel's gamble paid off. However, for all the Freedom of Action Rommel claimed for himself, he was scarcely willing to extend the courtesy to his subordinate generals during the Afrika Campaign. When the British launched Operation Crusader (1941), fierce German and Italian resistance made the British commander, General Allen Cunningham, began to waver. In an attempt to force the British into a retreat, Rommel took personal control over the Afrika Korps, sidelining his subordinate, General Ludwig Crüwell, the commander of the corpse, and sped off eastwards towards the Egyptian border. Unfortunately, this time Rommel's luck did not hold: the British did not retreat, and, to add insult to injury, his command vehicle broke down, leaving him briefly stranded behind enemy lines [27,28]. As the commander of Panzer Army Afrika, Rommel had, of course, no business racing off into the sunrise and leaving the bulk of his army (consisting of both German and Italian units) without leadership in the middle of a raging battle for several days. To Rommel, Freedom of Action was very much limited to Rommel.

Today, in the Russo-Ukrainian war, drones and satellite surveillance have made it virtually impossible to concentrate forces, while mechanised warfare tactics have lost their predominance on the battlefield; a tank or an armoured vehicle has become a relatively easy target for drone operators. In combination with challenges in communication, this *de facto* forces missions to be shorter, limited in scope and undertaken by much smaller, less visible formations and, crucially, therefore, led by officers further down the ranks. The risk of Freedom of Action to unit cohesion somewhat evaporates, when you do not manoeuvre in large units, while its benefits (real-time battlefield assessment and decision-making) remain stable. As such, although a theoretically sound idea, Freedom of Action, as described in *Truppenführung*, and in many subsequent mission control philosophies, is in practice closely tied to the size of formations dedicated to specific missions and can thus only be understood in light of the war in which it is implemented. Rather than a command philosophy, as it is described in NATO's AJP-01 Allied Joint Doctrine 2022 update, Freedom of Action can better be understood as a function of the combat landscape, the level of parity between warring parties, and the constitution of both one's own and the enemies forces. Too much Freedom of Action and a force may lose cohesion and decisiveness, too little and it loses flexibility and risks inertia. However, how much is too much or too little is dictated by circumstances, not by preconceived philosophy.

Disciplined disobedience, therefore, is simply a more pronounced version of mission control thrust upon the AFU by the combination of modern technological warfare, a numerically vastly superior adversary, and the political decision to focus the draft on older males (25 years and above) [21]. As mentioned above, modern technological warfare has made communication, coordination, and movement across the battlefield far more complicated, and, consequently, small-unit independent decision-making has become the rule rather than the exception. On a battlefield that is highly contested, in constant flux, and where communication and up-to-date intelligence sharing are problematic at best, junior leaders must have the freedom to assess the situation and formulate responses independently if they are to respond in time for decisions to matter at all. However, the implementation, be that implicitly (it just happens without codification) or explicitly (by incorporating it into official doctrine), of such a system comes with two prerequisites. Firstly, for a command structure to, *de facto*, relinquish control to lower ranks, there needs to be sufficient pressure to do so; battlefield realities alone are often not enough. During World War I, for instance, trench raids, which were conducted by small, independently functioning elite units, became more frequent as the war settled into a stalemate. With both sides confronted with the failure of traditional tactics, trench raids were a partial solution until offensive technologies caught up with the realities of trench warfare [22]. In the Russo-Ukrainian War, that pressure came from the overwhelming Russian numerical advantage in men and equipment. To withstand this advantage, the AFU had to enter a process of rapid technological and tactical/strategic innovation, and the quickest way to do that is by tolerating the novel and creative use of technologies, letting direct frontline experience drive technological development, and stimulating innovative and independent tactical decision-making throughout leadership

cadres. Disciplined disobedience, at the risk of unit cohesion deterioration, at least in part, enabled the rapid innovation without which Ukraine may not have sustained the fight. As such, it was a brilliant novel approach to leadership, but a necessary adaptation for survival. That, of course, does not diminish, in any way, what the AFU has accomplished; that there is an impetus to adapt does not always mean that an organisation can or will do so. Moreover, rather than trying to impose potentially dysfunctional theory on an unresponsive reality, the AFU let reality drive its innovation.

Secondly, disciplined disobedience requires a source population that is able to carry the weight of responsibility that mission command brings for junior leaders. We will return to the institutional environment needed to enable such a mindset and, for now, will focus on the source population itself. Any military draws its personnel from a source population, i.e. the people that can potentially be brought into uniform. In modern times, this mostly refers to the citizens of a nation-state, but can include mercenaries or foreign nationals as well. As such, the quality and variety of skill sets in the source population, as well as its morale and connectedness to the world, determine the ability of junior leaders to take on the responsibility that comes with mission control philosophies. As mentioned above, the average age of Ukrainian service personnel is relatively high, as is morale [21,23]. Consequently, many Ukrainian soldiers have prior experience in the civilian sphere and are used to thinking outside of military doctrine. Moreover, they bring their prior expertise to the combat zone. As such, this is a population that is uniquely well-equipped to take on the challenge of disciplined disobedience, as it is generally competent, experienced and motivated, yet unaccustomed to strict military order.

The contrast with the Russian military could not be starker, and it is no surprise, therefore, that Freedom of Action, let alone disciplined disobedience, have not seen widespread adaptation. Firstly, the numerical superiority of the Russian Armed Forces in this conflict removes part of the impetus for far-reaching tactical and especially leadership innovation. Of course, technologically, the Russians have innovated tremendously while implementing tactics that make good use of said technology. However, this innovation has not translated into a notable revaluation of leadership processes. In part, this lack of leadership innovation can be traced, however, to the constitution of the Russian source population. Russia did not institute a general mobilisation and instead relies heavily on contract soldiers. Because military salaries are relatively high, this disproportionately attracts individuals from disadvantaged strata of society, who are primarily motivated by money. As such, questionable how far any Freedom of Action philosophy can see wide implementation Russian military; the population is probably not equipped to handle the responsibility that comes with it. Under the same battlefield conditions, in other words, the Ukrainian and Russian Armed Forces have developed different strategies to cope with those conditions based on secondary pressures such as force size, source population and available resources. To assume, therefore, that just because a mission control philosophy of leadership (be that a limited level of Freedom of Action, disciplined disobedience, or any gradient in between) is theoretically sound and incorporated into official doctrine, does not mean that it can be practically implemented without reference to context, and if we wish to prepare NATO military personnel for any form of decentralised combat leadership, that would require both the technological advancement to shape the battlefield to potentiate independent junior leadership and a shift in military culture and education to prepare junior officers for these roles.

3. Guilt and Responsibility: The Consequences of Failure

After the declaration of independence of Bosnia-Herzegovina by Muslim leader Izetbegović in 1992, the young, multi-ethnic state soon devolved into war with Serbian, Croatian, and Bosnian Muslim forces fighting each other for control. In 1993, the forces of Republika Srpska, an ethnic Serbian region of Bosnia-Herzegovina, reached the small city of Srebrenica, which had by then become a place of refuge for many Bosnian Muslims who lived in the surrounding countryside. The humanitarian situation in the small city deteriorated rapidly as the pressure rose, and eventually, the commander of the United Nations (U.N.) mission to former Yugoslavia (UNPROFOR), the French General Morillon, urged the U.N. to intervene, which led to the establishment of Srebrenica as a U.N. safe zone. Initially, the city was placed under the protection of Canadian troops, who were relieved in 1993 by elements of the 11th Dutch Airmobile Brigade, Dutchbat (Dutch Battalion). In November 1993, the third rotation of this force (Dutchbat III), under Lieutenant-Colonel Thom Karremans, took up positions in and around the enclave [24].

The widely held belief was that the Bosnian-Serb forces would not dare to attack a U.N.-defended safe area. When they did, Karremans found himself in an impossible situation; he commanded 450 lightly armed and inexperienced troops against an overwhelming, experienced and heavily armed Bosnian-Serb force. He was, in other words, outmanned, outgunned and, because he had to hold a city, outmanoeuvred. Moreover, because this was a peacekeeping mission, he had no mandate to use force except for self-defence and could not independently direct air support [24,25]. Following a period of probing attacks, the attack on the enclave commenced on the 6th of July, and despite localised resistance, it soon became clear that the Dutch could not hold Srebrenica without serious air support. When this was not forthcoming, Karremans had few options, none of them good. He could stand and fight, which would probably lead to the annihilation of his force, which was already suffering from morale issues, or he could surrender the enclave and keep as many of his people alive. Either way, he knew what would come next; once the enclave fell, the Bosnian Serbs would commit a massacre. This, he was convinced, was unavoidable. Karremans opted for the latter and negotiated the surrender of Srebrenica without much of a fight [24,25].

Arguably, Karremans could have put up more resistance, which might have given at least some of the 8000 Bosnian men and boys a chance to survive. However, would his forces obey him? They were outgunned, outmanned and relatively inexperienced. Morale was generally low, and the situation was chaotic at best. And even if they would, would that make a real difference? Srebrenica was surrounded, and the massacre would probably still have taken place. On the other hand, if they had held out longer, maybe air support would have meaningfully materialised. This paper does not aim to settle the

question one way or another, but rather to draw attention to Karreman's situation. Overseeing the defence of Srebrenica, the surrender of the enclave was his responsibility – he made the choice. The question is, and has been since the fall of the enclave, whether he is therefore culpable for the consequences of that surrender? Does he carry blame for the deaths of over 8000 Bosnian Muslim men and boys?

This question is surprisingly important for the effective implementation of mission command philosophies; if you devolve decision-making authority down the ranks, to what extent do you conflate blame and responsibility for unsuccessful actions or unintended consequences? They are not, despite colloquial interchangeability, the same. Responsibility refers to the recognition that a chosen path or solution was suboptimal within a specific context. You recognise you made a mistake and aim to learn from that mistake. Blame, on the other hand, traces the source of the failure to flaws in one's character, irrespective of context. This tendency to ascribe the negative effects of actions disproportionately to character, rather than contextual pressures, is known as the fundamental attribution error [26-30]. We are, in other words, more likely to trace failure to character flaws in the person responsible (as long as that person is not us) than to ascribe it to the circumstances that may have led a person to make the decisions they made. This may well be one aspect of the common reluctance to take initiative, when decisions can be deferred to senior leadership; if you take initiative, you are not only responsible for negative outcomes, you are also to blame for them! And, whereas the former is a mistake, the latter says something about your quality as a person and thus your value to the institution. From this perspective, philosophies like extreme ownership, as propagated by former US Navy Seal, turned influencer, Jacko Willink, [31] should be seen as a means to reframe the discussion and force a separation of responsibility and blame by accepting full responsibility while refusing any of the blame.

The evidence, although scant, suggests that shared knowledge and personal closeness may aid in perspective taking and thus attenuate this error in our thinking [27]. Especially in the military, most professionals can at least sympathise with the complex, unpredictable and highly stressful conditions under which military leaders make decisions. As such, there is fertile ground for the exploration of this separation. Of course, there are situations where blame and responsibility collide and these should be treated as such, but in cases where they do not, Freedom of Action, demands the possibility of responsibility without blame.

4. Conclusion

In this paper, we aimed to make the case that the practical implementation of disciplined disobedience, and by extension other forms of mission control, is driven largely by battlefield realities and force composition, rather than ascribed doctrine. As such, to implement a certain level of Freedom of Action throughout leadership cadres, certain prerequisites must be met.

Firstly, communication must be severely hampered to render oversight both blind and frequently unreachable. Secondly, there must be serious limits to the concentration of forces (operational units must remain small enough to provide junior leaders with the freedom to make independent decisions without jeopardising larger unit cohesion. Thirdly, there must be strong enough external pressure to adapt to this style of warfare (a severe disparity in manpower or technology, for instance).

And finally, the population your military draws from must be able to handle the responsibility that comes with disciplined disobedience. An educated, motivated and experienced source population will have an easier time adapting to such a system than a source population that lacks any or all of these attributes. However, even if these prerequisites are met, institutional inertia can keep junior leaders from stepping up. This is most evident in the common conflation of blame and responsibility. If one cannot make mistakes, without these mistakes reflecting negatively on one's character, it becomes much more tempting to defer decision-making and thus responsibility up the chain of command. We therefore argue for a cultural shift in which blame and responsibility are decoupled to facilitate the development of effective disciplined disobedience in junior leader cadres.

References

1. S. Ricciardi and C. Souque, "Modern Electromagnetic Spectrum Battlefield," *Source: PRISM*, vol. 9, no. 3, pp. 122–139, 2021, doi: 10.2307/48640750.
2. K. Crombe and J. A. Nagl, "A Call to Action: Lessons from Ukraine for the Future Force," *Parameters*, vol. 53, no. 3, pp. 19–29, Sep. 2023, doi: 10.55540/0031-1723.3233.
3. T. Withington, "Manoeuvre Warfare and the Electromagnetic Spectrum," *RUSI Journal*, vol. 168, no. 6, pp. 32–41, 2023, doi: 10.1080/03071847.2023.2288487.
4. T. Dyson and Y. Pashchuk, "Organisational learning during the Donbas War: the development of Ukrainian Armed Forces lessons-learned processes," *Defence Studies*, vol. 22, no. 2, pp. 141–167, 2022, doi: 10.1080/14702436.2022.2037427.
5. Ludwig Beck, *H.Dv. 300/1 Truppenführung, teil 1*. Berlin: E.S. Mittler & Sohn, 1936.
6. S. Sjögren and N. Nilsson, "Multinational Mission Command: From Paper to Practice in NATO," *Scandinavian Journal of Military Studies*, vol. 8, no. 1, pp. 89–103, 2025, doi: 10.31374/sjms.329.
7. N. Nilsson, "Practicing mission command for future battlefield challenges: the case of the Swedish army," *Defence Studies*, vol. 20, no. 4, pp. 436–452, Oct. 2020, doi: 10.1080/14702436.2020.1828870.

8. U. Ben-Shalom and E. Shamir, "Mission command between theory and practice: The case of the IDF," *Defense and Security Analysis*, vol. 27, no. 2, pp. 101–117, Jun. 2011, doi: 10.1080/14751798.2011.578715.
9. Z. Kallenborn and M. Plichta, "Breaking the Shield: Countering Drone Defenses."
10. L. Bojor, T. Petrache, and C. Cristescu, "Emerging Technologies in Conflict: The Impact of Starlink in the Russia – Ukraine War," *Land Forces Academy Review*, vol. 29, no. 2, pp. 185–194, Jun. 2024, doi: 10.2478/raft-2024-0020.
11. R. Horbyk, "'The war phone': mobile communication on the frontline in Eastern Ukraine," *Digital War*, vol. 3, no. 1–3, pp. 9–24, Dec. 2022, doi: 10.1057/s42984-022-00049-2.
12. J. J. Mcgrath, *The Other End of the Spear: The Tooth-to-Tail Ratio (T3R) in Modern Military Operations The Long War Series Occasional Paper 23*. Fort Leavenworth: Combat Studies Institute Press, 2007.
13. M. T. Hackett and J. A. Nagl, "A Long, Hard Year: Russia-Ukraine War Lessons Learned 2023," *The US Army War College Quarterly: Parameters*, vol. 54, no. 3, Aug. 2024, doi: 10.55540/0031-1723.3302.
14. P. Braunerhjelm and M. Brychko, "Ukraine's Drone Industry The role of volunteerism and policy in building an emerging UAV Industry," 2025. Online. Available: www.entreprenorskapsforum.se
15. O. Fedorovich, L. Malieiev, T. Pisklova, and Y. Polishchuk, "Method of adaptive component-based design of unmanned aerial vehicles suitable for military missions," *Aerospace Technic and Technology*, no. 3, pp. 96–106, May 2025, doi: 10.32620/aktt.2025.3.09.
16. O. Bilousova, E. Omelchenko, M. Makarchuk, and T. Mylovanov, "UKRAINE'S DRONES INDUSTRY: INVESTMENTS AND PRODUCT INNOVATIONS," 2024.
17. Ludwig Beck, *On the German Art of War: Truppenfuhrung*. London: Lynn Rienner Publishers inc., 2001.
18. J. Rickard, "'The Full Will of the Commander': German Forward Command Doctrine in the Second World War," *Canadian Army Journal*, vol. 3, no. 19, 2022.
19. H. Guderian, *Achtung - Panzer! The Development of Tank Warfare*. London: Cassell Wellington House, 1992.
20. D. A. Butler, *Field Marshal: The Life and Death of Erwin Rommel*. Oxford: Casemate Publishers, 2015.
21. "CERTAIN RISKS OF MOBILIZATION DRAFT LAWS AND THEIR POSSIBLE IMPACT ON THE MILITARY SECURITY OF UKRAINE."
22. Kenneth. Radley, *On the dangerous edge: British and Canadian trench raiding on the Western Front, 1914-1918*. Helion & Company Limited, 2018.
23. "MORALE AND MORALITY IN THE ARMED FORCES OF UKRAINE: NATO APPROACHES AND THE NATIONAL DIRECTION OF IMPLEMENTATION", doi: 10.33099/2617-6858-23-72-2-58-68.
24. O. J. M. L. Van Bockxmeer *et al.*, "De val van Srebrenica Boom uitgevers Amsterdam," 2016. Online. Available: www.bua.nl
25. "Srebrenica Reconstruction, background, consequences and analyses of the fall of a 'safe' area."
26. L. Ross, "From the Fundamental Attribution Error to the Truly Fundamental Attribution Error and Beyond: My Research Journey," *Perspectives on Psychological Science*, vol. 13, no. 6, pp. 750–769, Nov. 2018, doi: 10.1177/1745691618769855.
27. N. Hooper, A. Erdogan, G. Keen, K. Lawton, and L. McHugh, "Perspective taking reduces the fundamental attribution error," Apr. 01, 2015, *Elsevier Inc.* doi: 10.1016/j.jcbs.2015.02.002.
28. K. Haggag, R. W. Patterson, N. G. Pope, and A. Feudo, "Attribution bias in major decisions: Evidence from the United States Military Academy," *J. Public Econ.*, vol. 200, p. 104445, 2021, doi: 10.1016/j.jpubeco.2021.104445.
29. Z. Berry and J. Frederickson, "EXPLANATIONS AND IMPLICATIONS OF THE FUNDAMENTAL ATTRIBUTION ERROR: A REVIEW AND PROPOSAL," 2015. Online. Available: www.JISS.org,
30. L. W. Lee and R. A. Fiore, "MEASURING LEVELS OF FUNDAMENTAL ATTRIBUTION ERROR ASCRIBED TO LEADERSHIP OF ENTREPRENEURIAL ORGANIZATIONS ACROSS NATIONAL CULTURES."
31. Jocko. Willink and Leif. Babin, *Extreme ownership: how U.S. Navy SEALs lead and win*. St. Martin's Press, 2015.

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