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On my honour as a student of the Diplomatische Akademie Wien, I submit this work in good faith and pledge that I have neither given nor received unauthorized assistance on it.

Abstract

This thesis explores how drone technology is transforming the conduct and character of irregular warfare in the 21st century. As unmanned aerial vehicles (UAVs) become increasingly affordable and accessible, non-state actors—many of whom are recognised terrorist organisations—are leveraging these tools to challenge conventional military forces. Drones offer these actors not only tactical advantages such as real-time surveillance and precision strikes, but also strategic benefits including propaganda dissemination, psychological warfare, and the expansion of their recruitment base. By providing non-state groups with a quasi-air force, drones erode the traditional dominance of state militaries in the aerial domain. On the strategic level, they enable non-state actors to impose economic and psychological burdens on state adversaries, who must respond with costly and often insufficient air defence systems. Operationally, drones allow for low-cost yet highly effective attacks, particularly in environments where conventional engagements are unfeasible. Drawing on detailed case studies from Ukraine, Yemen, Gaza, and beyond, the thesis demonstrates that drone technology is reshaping both battlefield dynamics and broader conflict strategies. These developments challenge existing doctrines of counterinsurgency and deterrence, and call for urgent adaptation by state actors. The research uses a mixed-methods approach, combining qualitative case analysis with open-source intelligence. It concludes that drone-enabled irregular warfare is no longer a future threat but a present reality, necessitating new countermeasures and doctrinal shifts to preserve security in an increasingly asymmetric world.

Abstrakt

Diese Masterarbeit untersucht, wie Drohnentechnologie die Durchführung und das Wesen irregulärer Kriegsführung im 21. Jahrhundert verändert. Da unbemannte Luftfahrzeuge (UAVs) immer kostengünstiger und leichter zugänglich werden, nutzen nichtstaatliche Akteure – darunter viele anerkannte Terrororganisationen – diese Mittel, um konventionelle Staats Streitkräfte herauszufordern. Drohnen bieten nicht nur taktische Vorteile wie Echtzeitüberwachung und Präzisionsschläge, sondern auch strategische Nutzen in den Bereichen Propaganda, psychologische Kriegsführung und Rekrutierung. Indem sie nichtstaatlichen Gruppen eine Art Quasi-Luftwaffe verschaffen, untergraben Drohnen die bisherige Dominanz staatlicher Armeen im Luftraum. Auf strategischer Ebene verursachen sie hohe wirtschaftliche und psychologische Kosten bei staatlichen Gegnern, die sich mit teuren und oft unzureichenden Luftabwehrsystemen zur Wehr setzen müssen. Auf operativer Ebene ermöglichen Drohnen kostengünstige und dennoch wirkungsvolle Angriffe, insbesondere in Umgebungen, in denen klassische Kampfhandlungen kaum durchführbar sind. Anhand von Fallstudien aus der Ukraine, dem Jemen, Gaza und weiteren Regionen zeigt die Arbeit, wie Drohnentechnologie sowohl taktische Gefechtsdynamiken als auch übergeordnete Konfliktstrategien verändert. Diese Entwicklungen stellen bestehende Doktrinen der Aufstandsbekämpfung und Abschreckung infrage und erfordern eine rasche Anpassung durch staatliche Akteure. Die Arbeit stützt sich auf einen Methodenmix aus qualitativer Fallanalyse und Open-Source-Intelligence. Sie kommt zu dem Schluss, dass durch Drohnen unterstützte irreguläre Kriegsführung keine zukünftige Bedrohung mehr darstellt, sondern bereits Realität ist – und somit neue Gegenmaßnahmen und doktrinäre Anpassungen dringend erforderlich sind.

Table of Content

Abstract.....	2
Abstrakt	3
Introduction.....	5
Theoretical Aspects of Irregular Warfare	17
Levels of Warfare.....	17
Strategic Level of Irregular Warfare	19
Operational-Tactical Level of Irregular Warfare.....	24
Insurgency and Counterinsurgency	27
Guerrilla Warfare	31
Conventional Warfare by Non-State Actors	43
Operational level objectives	44
Drone Warfare.....	47
Availability of Drones.....	48
Operational Use of Drones	51
Non-State Actors and Drone Warfare	58
Drones at the Strategic Level.....	58
Operational Use of Drones. Conventional Warfare.....	60
Operational Use of Drones. Unconventional Warfare	64
Conclusion	67
Reference List	68

Introduction

Throughout the 20th and 21st centuries, the nature of warfare has gone through significant transformations. In contrast to traditional state vs. state conflicts, which dominated earlier periods of history, modern day warfare is more associated with asymmetry: non-state actors or weaker state forces confront superior opponents through unconventional means. It involves irregular tactics such as guerrilla warfare, ambushes, sabotage, terrorism, and psychological operations and propaganda — tactics designed to neutralise the advantages held by more powerful conventional state regular armed forces.

Since the end of World War II, this type of warfare has become a primary feature of global conflicts, changing thus the basic nature of military engagements and strategic views, though not denying the possibility of a “classical” peer state vs. state war. During the Cold War era numbers of such conflicts exploded, as superpowers engaged in proxy wars across Asia, Africa, and Latin America — most notable cases would be Vietnam and Afghanistan. The post-Cold War period further cemented the notion of the changed nature of war leading to even certain exclusion of the possibility of a peer state vs. state war. Moreover, the US aggressive foreign policy, culminating with the invasion of Iraq by the US, its European allies, and Australia, has destabilised the Middle East and caused the emergence of a range of non-state actors especially a number of transnational terrorist organisations like Al-Qaeda and ISIS. It has demonstrated the continued relevance of irregular warfare in the international landscape.

New factor. However, the notion that state vs. state wars became a part of history was proven wrong after the dramatic escalation of the Russia-Ukraine Winter 2021/22 border crisis on the Feb 24, 2022, which turned into the greatest state vs. state conflict of the modern times. The military actions on the territory of Ukraine have demonstrated the shift of military tactics and strategies which is the result of the technological developments, esp. in the sphere of drones. Initially, the conduct of the warfare resembled a classical way of then-dominant military thinking which included the usage of deep mechanised combined-arms operations with tanks being the primary mean of attack. This can be demonstrated by the fights around Kiev, Kharkov, or in the Southern regions of Ukraine, where mechanised columns led by tanks played the most important role. In this circumstances, the Ukrainian side, as an inferior one to the Russian Armed Forces, had to adapt and proceeded to certain “unconventional” tactics, such as guerrilla, ambushes, and “new means of firepower”.

Ukrainian forces, despite their initial material inferiority, have leveraged cheap commercial drones alongside Western-supplied systems for intelligence, surveillance and reconnaissance (ISR) purposes, to destroy vehicles, inflict casualties, and disrupt Russian logistical chains. The Russian forces traditionally relied on classical strong armour forces, massive artillery arsenal, including powerful MLRSs and tactical missile systems, such as Iskander, stand-off long range precision strikes, and significant close air support capabilities, especially after developing the UMPK guidance kit for cheap and numerous, but yet powerful HE bombs of the Soviet design. However, despite having such a numerous arsenal with enormous firepower, the Russian Armed Forces have also proceeded to the development of drone capabilities for ISR and combat-related purposes, which illustrates the role of drones in the most intense conflict of the 21st century.

The Ukrainian battlefield offers useful analogies for asymmetric contexts, illustrating how emerging technologies can alter battlefield outcomes even when one side possesses overwhelming numerical or materiel superiority. Even though the importance of drones was recognised long before the operations in Ukraine, they were still regarded as an auxiliary mean of firepower. It was this conflict which has changed the role of unmanned aerial vehicles (UAVs) and demonstrated that drone warfare will be the next generation war – also in the domain of irregular warfare where regular forces fight non-state actors. It proved that, even a presumed inferior side can effectively conduct military operations by supplementing the classical war means (infantry, tanks, artillery, and aviation) with cheap and numerous drones. As we can see, the emergence of affordable and effective drone technologies have altered the conduct of modern warfare, with up to 70% of all casualties inflicted by UAV only¹.

While asymmetric conflicts are not the product of the recent history, their dynamics have been significantly reshaped by the proliferation of new technologies as well. These tools, once the exclusive mean of major powers, are increasingly accessible to non-state actors, enabling them to inflict casualties, project power, and contest state in ways that were previously impossible.

Drones — both commercial and military — have been integrated into the arsenals of insurgent groups, rebel movements, and paramilitary organisations. These tools, alongside with other developed, have allowed non-state actors to launch strike against strategic targets, conduct

¹ Browne, Malcolm, Lauren Leatherby, and Christoph Koettl. “The Rising Human Cost of Drones in Ukraine.” *New York Times*, March 3, 2025. <https://www.nytimes.com/interactive/2025/03/03/world/europe/ukraine-russia-war-drones-deaths.html>.

reconnaissance, and implement complex operations with a degree of precision and lethality previously associated only with regular armed forces.

In the contexts of the Middle East, non-state groups have used drones to neutralise the conventional advantages of state actors or foreign military coalitions. The Houthis, in particular, have demonstrated the operational use of drones to target both military and economic infrastructure in the Saudi Arabia or even Israel. Their ability to project force across long distances and to challenge naval or air superiority in contested zones marks a significant shift in capabilities of irregular formations. Similarly, non-state actors in West Africa have begun experimenting with improvised drone systems for reconnaissance and direct attack, altering the tactical landscape in regions where state control is already fragile².

Research question. This thesis explores: *What effects do drones have on the traditional practice of irregular warfare between non-state actors and regular militaries, and what do these changes mean for future conflicts?* This major research question will be analysed through a range of sub-questions, which together provide a framework for understanding of the evolving nature of irregular conflicts.

First, the study examines how drone systems enhance the anti-access/area denial (A2/AD), anti-vehicle, and anti-tank (AT) capabilities of non-state actors. Historically being constrained by limited capabilities, such groups have traditionally relied on guerrilla tactics, indirect engagements and improvised weaponry. Today, however, commercially available drones provide these actors with opportunities to challenge state militaries in domains previously dominated by regular forces.

Second, the thesis investigates how these technologies shift tactical and strategic balances in favour of weaker forces. Drones lower the cost and risk of high-impact operations, enabling non-state actors to exploit vulnerabilities in military infrastructure and even public morale. Tactically, such tools allow for persistent and effective surveillance and precision strikes, with the best cost-benefit ratio. Strategically, the threat of drone forces states to allocate resources toward costly countermeasures, such as electronic warfare (EW) systems or layered expensive air defences. This strategy increases the psychological and economic burden on state actors, challenging traditional views on military superiority. In addition to that, drones may alter the traditional approaches towards recruitment – physically strong men as core of irregular forces with auxiliary roles of women and/or children. Drones can be operated easily by women or even

² Africa Center for Strategic Studies. “Drone Proliferation in Africa: A Potentially Destabilizing Trend.” *Africa Center for Strategic Studies*, February 26, 2024. <https://africacenter.org/spotlight/drone-proliferation-africa-destabilizing/>.

children, thus providing opportunities for higher levels of recruitment by more effective integration of lower-represented groups.

Finally, the study assesses how this development challenge established theories of asymmetric conflict and deterrence. Classical views, which often frame non-state actors as inherently disadvantaged, struggle to account for the parity emerging in specific domains. Similarly, deterrence models predicated on state monopolies over advanced weaponry can be eroded when non-state actors acquire retaliatory capabilities. For instance, Houthis drone and missile strikes on Saudi infrastructure have forced Riyadh to recalibrate its regional deterrence posture, while the US Navy is facing a constant acute threat of possible drone barrages, which has already resulted in a confirmed loss of a 60 mil. \$ aircraft³. It illustrates how technological empowerment can alter long-assumed strategic balances.

Addressing these questions is critical for understanding how conflict will evolve in regions marked by weak governance, contested authority, and the growing influence of hybrid actors, with possible involvement of terrorist groups and other radical organisations. By understanding the links between technology, strategy, and proliferation, this thesis seeks to contribute to a nuanced understanding of warfare in an era where non-state actors increasingly wield tools once reserved for major powers.

Definitions. In exploring the theoretical foundations of irregular warfare, it is essential first to clarify several key concepts: *irregular warfare*, *asymmetric warfare*, and *conventional* versus *unconventional warfare*. Although often used interchangeably, these terms have distinct meanings that carry important analytical implications.

Irregular warfare. Irregular warfare typically refers to conflicts where one of the warring sides is composed of irregular forces – usually non-state actors or insurgents – opposing a traditional state military. In essence, it puts a state’s regular armed forces against irregular combatants who do not meet the formal definition of national military personnel. The focus here is on the legal and formal status of the combatants: one side is a state (with uniforms, hierarchy, and legal standing), while the other side is “*irregular*” or non-state (guerrillas, rebels, militias, or other armed groups). The United States Department of Defence, for example, defines irregular

³ Liebermann, Oren. “Navy Jet Pilot Goes Overboard during Training.” *CNN*, April 28, 2025. <https://edition.cnn.com/2025/04/28/politics/us-navy-jet-overboard>.

warfare as “*a violent struggle among state and non-state actors for legitimacy and influence over the relevant population(s)*”⁴.

Since the end of the Second World War, there has been a significant shift in the nature of global armed conflict, characterised by a marked decline in conventional state-versus-state warfare and a concurrent increase in the frequency and prominence of irregular conflicts. This transformation can be attributed to numerous historical and geopolitical developments, particularly the period of rapid decolonisation that swept through Africa and Asia from the late 1940s through the 1960s, resulting in multiple irregular wars where local insurgent groups confronted colonial powers through guerrilla warfare and insurgencies, as evidenced by conflicts such as the Algerian War of Independence (1954–1962) and the conflicts in Indochina.

The escalation of the Cold War further accelerated this trend, notably through proxy wars with involvement of both superpowers such as the protracted and highly asymmetric conflict in Vietnam, where the United States and its allies were engaged in fights against the Viet Cong. Similarly, the Soviet intervention in Afghanistan (1979–1989) represented another prominent example of irregular warfare, with Afghan mujahideen insurgents utilising guerrilla tactics and receiving external support to resist Soviet forces effectively.

In today's geopolitical landscape, irregular warfare remains the dominant form of armed conflict, shaping the security dynamics across numerous regions worldwide. Recent examples are abundant, including the lengthy conflict in Afghanistan where NATO-led coalitions faced persistent resistance from Taliban insurgents. The instability in Iraq has likewise generated multiple irregular armed groups and militias, each employing asymmetric tactics and guerrilla warfare strategies against coalition and Iraqi government forces. In the Middle East, the prolonged conflict between Israel and Hamas, marked by persistent guerrilla and terrorist tactics employed by Hamas against the conventionally superior Israeli Defence Forces, underscores the continued relevance of irregular warfare. Another illustrative case is the series of Chechen wars in the 1990s and early 2000s, where the Russian armed forces were engaged in bitter fighting against Chechen separatist groups and insurgents employing terrorist tactics and guerrilla warfare.

Asymmetric warfare. This type of warfare describes a **disparity in strength or capabilities** between belligerents, where one side is significantly stronger than the other. The term focuses on the imbalance in power, resources, or tactics, rather than the formal status of the

⁴ Theohary, Catherine A. *Defense Primer: What Is Irregular Warfare?* Congressional Research Service, 2023. <https://www.congress.gov/crs-product/IF12565>.

actors. Crucially, asymmetric warfare can involve state or non-state actors, or a combination of both. It is not synonymous with irregular warfare, though there is overlap. For instance, a powerful state fighting a much weaker insurgent group (e.g. the Soviet war in Afghanistan, or U.S. forces against the Taliban) is both irregular *and* asymmetric.

However, asymmetric warfare can also describe conflicts between states if one state's military dominance is overwhelming. An example is the U.S.-led invasion of Iraq in 2003: this was a regular war (state-vs-state, using regular armies and set-piece battles) yet it was highly asymmetric because the coalition forces had vastly superior strength and technology compared to Iraq's military. In asymmetric wars, the weaker side typically compensates with unconventional tactics or strategy. As the Encyclopædia Britannica notes, asymmetric warfare involves situations where military capabilities are so different that the two sides "*cannot make the same sorts of attacks on each other*"⁵. The weaker opponent often avoids the stronger's strengths and targets its vulnerabilities through guerrilla tactics, ambushes, or other indirect methods. The key point is that victory in war does not always go to the militarily superior force⁶ – history provides many cases of weaker opponents prevailing by exploiting the asymmetry to their advantage.

Conventional warfare. It refers to the traditional model of warfare between the regular armed forces of states, employing standard weapons and battlefield tactics in open confrontation. In conventional wars, both sides use organised military units – armies, navies, air forces – engaging each other's armed forces directly. The goal is typically to defeat the enemy's military formations and force the adversary's surrender or collapse. Characteristics of conventional warfare include set-piece battles, front lines, and the use of tanks, artillery, aircraft, naval fleets, and other recognised means of war. World Wars I and II, or the interstate conflicts such as the Iran–Iraq War, are classic examples of conventional warfare: state forces fighting state forces with **combined arms** operations (infantry, armour, artillery, air support in coordination). Importantly, **conventional** refers to the nature of combat (overt and between regular militaries) rather than the balance of power – a conventional war can be symmetric (forces of roughly equal strength) or asymmetric (one side far stronger). The U.S. invasion of Iraq mentioned above was conventional in form (U.S. and coalition regular armies fighting Iraq's regular army on the battlefield) even though it was asymmetric in power disparity. Conventional warfare generally abides by established laws of war and norms (combatants in uniform, distinction between

⁵ Encyclopædia Britannica. (n.d.). *Asymmetrical warfare*. Retrieved June 5, 2025, from <https://www.britannica.com/topic/asymmetrical-warfare>

⁶ Ibid.

civilian and military targets, etc.), at least in theory, and aims for decisive military victory by defeating the opponent's forces in the field.

Unconventional warfare (UW). This type encompasses all warfare that falls outside the scope of the direct, force-on-force engagements characteristic of conventional war. This term covers a broad range of **special operations, guerrilla warfare, insurgency, sabotage, subversion and clandestine activities**. A broad definition used in military contexts is *“military and quasi-military operations other than conventional warfare”*⁷. Unconventional warfare usually aims to undermine and gradually weaken an adversary's will to fight rather than to destroy their army in pitched battle. As one classic description puts it, this is *“war by guerrillas, subversives, insurgents, assassins; war by ambush instead of by combat, by infiltration instead of aggression, seeking victory by eroding and exhausting the enemy instead of engaging him”*⁸.

It is worth noting that unconventional tactics can appear within larger conventional wars. The abovementioned US-led invasion of Iraq, even though it was initially a regular asymmetric conventional warfare, turned into the unconventional one. A historical example is World War II on the Eastern Front. On the one hand, while the regular armies of Germany and the Soviet Union – the Wehrmacht and the Red Army – were engaged in the largest battles in the history of humanity, with millions of servicemen, and thousands of combat armoured vehicles, airplanes, artillery pieces being involved in conventional combined arms fights, the Soviets also supported partisan units conducting guerrilla warfare, sabotage behind German lines, disrupting logistics by attacking echelons and trains, gathering intelligence and conducting recon missions, and other means of unconventional warfare. Thus, even a broadly conventional conflict may include unconventional components. Conversely, unconventional warfare can also be an end in itself, such as a covert operation to overthrow a hostile regime or a sustained insurgency campaign against an occupying power.

While this thesis begins by clarifying the often-blurred distinctions between irregular, asymmetrical, and unconventional warfare — terms which are frequently used interchangeably despite their specific conceptual differences — it does not intend to explore these three forms of warfare as separate or isolated categories. Rather, the analysis focuses on the intersection where irregular and asymmetrical warfare converge, particularly in contexts where non-state actors engage more powerful, conventional forces through strategies that fall largely within the realm

⁷ National Institute for Defense Studies. (2002). Essence of military power at the dawn of the 21st century. In Proceedings of the NIDS International Symposium on Security Affairs 2001: The 4th Symposium (FY 2001), January 15-16, 2002

https://www.nids.mod.go.jp/english/event/symposium/pdf/2001/sympo_e2001_6.pdf

⁸ U.S. Army. "Special Forces Unconventional Warfare Training Manual." November, 2010. <https://info.publicintelligence.net/USArmy-UW.pdf>

of unconventional means. For the sake of clarity and simplicity, the term "irregular warfare" will be used as the primary general term throughout this thesis.

In this framework, drone technology serves as a central point of investigation, not as a mere technological advancement, but as a tactical instrument increasingly adopted by non-state groups operating outside the formal structures of traditional militaries. These actors exploit the accessibility, flexibility, and low-cost nature of drones to challenge state power in a manner that is simultaneously irregular in structure, asymmetrical in the power imbalance it reflects, and unconventional in the methods employed — although not every use of drones may fully meet the criteria of unconventional warfare in the strictest sense.

Theoretical framework. This study draws upon three complementary theoretical strands: irregular warfare theory, the technological dimension of military capability, and deterrence theory. Together, these provide a strong foundation for analysing the transformative impact of drones and missiles on asymmetric conflict.

Irregular warfare theory forms the cornerstone of the analytical approach. This body of theory, developed by scholars and military experts such as Mao, David Galula, Andrew Mack, and Ivan Arreguín-Toft, and other military specialists, such as Gen. David Petraeus and David Kilcullen, seeks to explain how weaker actors can prevail or achieve limited strategic goals in conflicts with materially stronger opponents. It considers not only tactical methods but also broader strategies of attrition, psychological operations, and the use of time. By applying this framework, the thesis investigates how the integration of technology changes the traditional factors in an irregular warfare.

The *technological dimension* focuses on the adaptation of military technologies. Drawing on works and respective reports from think tanks or military institutions, this perspective examines how new technologies alter warfare on operational and tactical levels. The thesis considers how the accessibility of drones has disrupted previous assumptions about exclusivity of military capacities.

Operational art and deterrence, particularly in its expanded application to non-state actors, serves as a third analytical pillar. While classical deterrence and operational art are usually state-centric, this analysis will increasingly explore how non-state groups use conventional and emerging tools to challenge the conduct of warfare where regular armies acted as active side, while non-state actors posture is usually reactive. In this context, the study assesses how the strategic use of drones strikes by non-state actors — notably the Houthis —

serves to influence state or coalition responses, thereby recalibrating the dynamics of confrontation and escalation.

Methodology. To answer the research questions effectively, this thesis adopts a mixed-methods approach that combines qualitative case study analysis with quantitative data evaluation. This methodological diversity will allow to capture both the material and interpretive dimensions of technological adaptation in irregular warfare.

Qualitative analysis will focus on in-depth case studies of recent irregular conflicts where drones have been employed by non-state actors. The primary cases include ISIS, Houthis, Syria, and Hamas in Gaza. In addition, the Russia-Ukraine conflict will serve as another case, offering numerous insights into the drone tactics. These case studies will rely heavily on open-source intelligence (OSINT) techniques, including the analysis of video footage and photographic evidence. By examining combat footage, strike data, and battlefield outcomes, the research will reconstruct patterns of drone and missile usage and assess their strategic and tactical effectiveness.

Risk and limitations. At the same time, it is necessary to acknowledge the methodological implications of relying on open-source intelligence, particularly when such material forms the empirical foundation of a thesis. OSINT, while a powerful tool in the analysis of modern conflict, poses a number of challenges and risks. The ease of access to battlefield footage the complexity of verifying the authenticity, provenance, and contextual integrity of these materials. In conflict zones marked by propaganda and psychological operations, which are significant component of irregular wars, both state and non-state actors have incentives to misrepresent battlefield outcomes, either by exaggerating victories or concealing losses. This creates a research environment where visual data, though abundant, must be interpreted with caution and verified through multiple sources.

Furthermore, the use of OSINT necessitates a degree of digital literacy and media forensics, including familiarity with metadata, geolocation techniques, reverse image searches, and verification protocols. While these tools offer significant benefits in terms of independent verification, their effectiveness is constrained by language barriers, poor image resolution, and the deliberate manipulation of content. In the context of this thesis, where many primary materials are published in various languages the risk of misinterpretation is particularly acute. To mitigate these risks, the research will adopt a cautious interpretive stance, treating visual and textual data not as objective records but as constructed artefacts embedded within information warfare.

Significance. This study contributes to both academic scholarship and policy-oriented debates in several important ways. Theoretically, it extends irregular warfare theory by integrating emerging technologies and by exploring how non-state actors employ deterrence strategies. It challenges conventional assumptions about the default superiority of state militaries and reconsiders the meaning of “power” in modern conflict. Practically, the research offers valuable insights for military planners, security analysts, and policymakers concerned with the stability of fragile regions and the proliferation of weaponised technologies. It highlights how even modest technological gains can translate into significant operational and strategic shifts, especially when combined with flexible doctrine and motivated actors. Understanding these dynamics is essential for anticipating future conflict trends and for designing effective responses to them. In addition to that, since many non-state actors in the world are recognised terrorist organisations, the thesis may be valuable to prepare military and civil policymakers demonstrating that terrorists may become stronger and counterterrorism operations will require new tools and tactics of anti-drone warfare (ADW) to defeat radical groups.

Literature review. The literature on irregular warfare and the role of drones is extensive and of high quality, providing a robust foundation for this thesis. It includes a diverse range of sources, with contributions from academics, military specialists, and official armed forces documents—most notably from the US Armed Forces—as well as news articles, reports, and commentaries from prominent think tanks such as RAND. However, the extensive volume of available material can be overwhelming, requiring careful selection to ensure relevance and focus. This review organises the literature into three key areas: the theoretical foundations of irregular warfare, the emerging role of drones in modern conflicts, and the specific tactics of irregular warfare possibly influenced by drone technology.

Theoretical Foundations of Irregular Warfare. The study of irregular warfare is grounded in a rich theoretical tradition that explores how weaker actors employ unconventional strategies to challenge stronger opponents. David Galula’s *Counterinsurgency Warfare: Theory and Practice* (1964) and Mao’s *On Guerrilla Warfare* (1937) are cornerstone texts, offering a framework for understanding counterinsurgency strategies. Similarly, Robert Taber’s *War of the Flea* (1965) examines guerrilla warfare, arguing that its success hinges on political legitimacy and popular backing, a perspective that remains relevant in contemporary settings. Further elaborating on this foundation, Andrew Mack’s article “Why Big Nations Lose Small Wars” (1975) analyses the failures of powerful states against weaker adversaries, attributing outcomes to asymmetrical interests and prolonged engagements. These works collectively provide a

theoretical lens through which to assess how irregular warfare adapts to technological advancements like drones.

The Role of Drones in Modern Conflicts. The advent of drone technology has significantly altered the landscape of modern warfare, including irregular conflicts. Sarah Kreps and Paul Lushenko's (2020) *Drones in Modern War* delves into the tactical shifts enabled by drones, such as their use in surveillance, reconnaissance, and precision strikes. The authors also address practical challenges, including ethical concerns and the potential for drones to reshape accountability in warfare.

Further expanding on this, a 2024 RAND report⁹ on the strategic implications of drone proliferation provides a comprehensive analysis of how drones are reshaping military strategy and policy. The report highlights the challenges and opportunities presented by drones in irregular warfare, emphasising the need for adaptive strategies to counter their use by non-state actors. Additionally, a 2025 article from the Combating Terrorism Center at West Point examines the tactical use of drones by non-state actors, offering detailed case studies of drone employment by groups such as ISIS and Al-Qaeda¹⁰. These examples illustrate how drones enhance the operational capabilities of such groups, posing new threats to state forces. Meanwhile, a policy report from the Center for Security Studies at ETH Zurich, in collaboration with NATO, explores the response to the drone revolution¹¹.

Together, these sources illustrate how drones are redefining operational capabilities in irregular warfare, offering both opportunities and complexities for all actors involved.

Specific Tactics of Irregular Warfare Possibly Influenced by Drones. Irregular warfare, characterised by its unconventional tactics and strategies, demands a thorough understanding of counterinsurgency and antiterrorism measures. Literature on this is mainly represented by official documents mostly by the US Armed Forces due to its extensive participation in this type of warfare.

Among the most valuable documents providing significant insights into conducting such wars are Joint Publication 3-24. Counterinsurgency and FM 3-24 by Gen. Petraeus, both offering

⁹ McCormick, Gordon, William Rosenau, and Nathan Vest. *Drone Proliferation and the Future of Conflict*. RAND Corporation, 2025. https://www.rand.org/pubs/research_reports/RRA2380-1.html.

¹⁰ Bacon, Tricia. "From Allies to Adversaries: The Transformation of Militant Relationships in the Sahel." *CTC Sentinel* 18, no. 3 (March 2025): 33–42. https://ctc.westpoint.edu/wp-content/uploads/2025/03/CTC-SENTINEL-032025_article-4.pdf.

¹¹ Kearns, Ian, and Justyna Gudowska. *NATO and the Challenge of Emerging and Disruptive Technologies: A View from NATO's Partners*. Policy Report. Zurich: Center for Security Studies, ETH Zurich, 2024. https://css.ethz.ch/content/dam/ethz/special-interest/gess/cis/center-for-securities-studies/pdfs/NATO_VDA_Policy_Report.pdf.

extensive doctrinal analysis of counterinsurgency operations. Complementing these, Counterinsurgency FMI-3.24.2 and FM-3.90 detail specific tactics employed by ground forces in irregular conflicts. Additionally, the Joint Operation Concept: Irregular Warfare and Joint Tactics, Techniques, and Procedures for Antiterrorism 3-07.2 provide essential perspectives on broader strategies and procedural frameworks of terrorism-related threats and ways to fight it. Beyond these official publications, works by experts such as Killcunen's "28 articles"¹² and analytical reports by RAND, notably "*Victory Has a Thousand Fathers: Sources of Success in Counterinsurgency*", deliver in-depth analysis of specific cases and approaches, enriching the understanding of effective counterinsurgency strategies.

¹² Kilcullen, David. "Counterinsurgency Redux." *Military Review* 86, no. 3 (May–June 2006): 111–122. <https://www.armyupress.army.mil/Portals/7/PDF-UA-docs/Kilcullen-May-June-2006-UA.pdf>.

Theoretical Aspects of Irregular Warfare

The differences between the terms *irregular warfare*, *asymmetrical warfare*, and *unconventional warfare* have already been outlined and understood. This thesis focuses specifically on the nature of asymmetrical irregular warfare, where non-state actors confront more powerful state forces using non-traditional means. Given that all three forms of warfare are often closely linked, overlap in practice, and can even emerge as consequences of one another, the theoretical discussion will approach them as broadly interchangeable. As such, references to the theory of asymmetrical, unconventional, and irregular warfare will be made with the understanding that these terms, while technically distinct, will be treated in this context as part of the same conceptual framework. However, before proceeding with addressing the theoretical foundations of irregular warfare, I believe that it is vital to provide the explanation of such military term as “level of warfare”, since in the thesis various levels of warfare will be analysed in the drone lens.

Levels of Warfare

In military theory and practice, warfare is conceptualised through a framework which consists of three interrelated levels: strategic, operational, and tactical¹³. These levels do not represent strictly bounded categories but rather serve as analytical tools to link military activity to the best way to achieve necessary objectives. While every war ultimately manifests through concrete actions on the ground, this tripartite structure allows for the planning, coordination, and execution of military operations in a way that aligns tactical decisions with broader national goals. Understanding these levels is essential not only for regular warfare but also for analysing the nature and impact of irregular conflicts, where actions at one level may carry outsized effects across the others.

At the **strategic level**, the focus lies on employing a nation's instruments of power — diplomatic, political, informational, military, and economic — in a harmonised manner to achieve ultimate national or multinational objectives. This level encompasses the formulation of national security policies and strategic objectives, usually directed by a country's highest authorities such as the President, supported by bodies like the National Security Council. The Secretary of Defence translates this guidance into strategic military objectives, which are further elaborated via specific relevant military plans developed by combatant commanders. These commanders contribute to strategic discussions and ensure their theatre-level strategies align

¹³ Joint Chiefs of Staff. (2013, March 25). *Joint Publication 1: Doctrine for the Armed Forces of the United States*. <https://irp.fas.org/doddir/dod/jp1.pdf>

with the national vision, often collaborating with international partners in coalition efforts. In the case of the US Armed Forces, the Joint Chiefs of Staffs and its Chairman are the highest commanders of the armed forces who channel the vision of the supreme leadership and serve as liaison between it and combatant commanders. Largest operations in the war history, such as Barbarossa or Belorussian Strategic Offensive Operation, are perfect examples of strategic level warfare.

The **operational level** acts as the vital bridge between strategic goals and tactical actions. Here, commanders establish operational objectives that help realise strategic ends. This level is defined by the use of *operational art* — a thoughtful, intellectual process that draws upon commanders' experience, judgement, and creativity. It involves planning and organising campaigns and major operations that position forces and shape conditions to influence the enemy and achieve desired outcomes. Commanders and component leaders use operational art to determine how and when to deploy forces, aiming to shape the adversary's behaviour even before direct combat begins. Russian counteroffensive in the Kursk region can be regarded as an example of operational level operation.

At the **tactical level**, the focus narrows to the actual employment and manoeuvre of units on the battlefield. This is where engagements and battles are planned and executed to meet objectives assigned to tactical units or joint task forces. Tactical activities involve short-duration engagements between opposing forces, as well as larger battles that can influence the broader course of a campaign. Units at this level use specific tactics to outmanoeuvre or defeat the enemy, relying on careful arrangement of troops and timing of attacks to secure victory in specific engagements.

Finally, while the separation of warfare into distinct levels provides valuable assistance to the process of planning and visualisation, real-world operations often see significant overlap between these levels. In today's interconnected environment — dominated by all the time media coverage and digital propaganda — even a single action at the tactical level can have disproportionate effects at the operational or strategic level. For example, a single misjudged act by a soldier on the ground can spark international controversy, derail strategic plans, or inflame local insurgencies. Likewise, tactical successes — such as the killing of a high-value target — may have significant operational or strategic implications. Assassination of leader of Chechen separatists Dzhokhar Dudayev would be a good illustration of this. It was a tactical level combat operation involving only two guided cruise missiles which were launched in a long range stand-off attack. However, consequences of this tactical-level operation turned out to be strategic, since the only figure, who could unite various and diverse Chechen groups, was eliminated, and

these various groups proceeded to the internal confrontation against each other. Therefore, commanders at all echelons must consider the wider implications of their decisions and ensure that their actions contribute to the overall mission. Successful military operations depend on this integrated awareness and the ability to adapt fluidly across the levels of warfare.

Strategic Level of Irregular Warfare

Irregular warfare, far from being a modern invention, is as old as warfare itself, as can be demonstrated in the manual work of Max Boot *Invincible Armies*¹⁴. Long before the development of formal military theory, commanders and strategists recognised the value of indirect, unconventional approaches in conflicts marked by asymmetry and protracted struggle. From antiquity to the present, irregular warfare has served as a strategic means for weaker actors to counter stronger powers — not by confronting them in direct battle, but by outmanoeuvring them politically, socially, and psychologically.

In ancient China, *The Art of War* by Sun Tzu — one of the earliest and most influential texts on military strategy in the history of humanity — emphasised adaptability and avoidance over confrontation. “*If equally matched, we can offer battle; if slightly inferior in numbers, we can avoid the enemy; if quite unequal in every way, we can flee from him,*”¹⁵ he wrote. Recognising enemy’s superior power and adjusting your strategy and tactics to it by avoiding direct engagements are not “disgraceful acts”, but a smart strategy to outplay a stronger opponent. This thinking encapsulates the central logic of irregular warfare.

In the Western tradition, early examples of irregular warfare can be found in Herodotus’ account of the Scythian campaign against the Persian Empire. The Scythians, facing a superior enemy in numbers and organisation, used mobility, strategic withdrawal, and hit-and-run tactics to wear down the Persian forces. They targeted supply lines, denied direct engagements, and manipulated terrain — methods that resonate with modern understandings of guerrilla warfare.

The Second Punic War offers another illustrative case. Carthaginian general Hannibal is often remembered for his tactical brilliance and battlefield dominance, yet the Roman response — under the leadership of Quintus Fabius Maximus — marked a turning point in strategic thinking. Fabius adopted a strategy of delay, attrition, and harassment, refusing direct engagement. This tactical approach, which was later named after the Roman commander as “Fabian tactics,” though controversial at the time, is now recognised as an early form of irregular

¹⁴ Max Boot, *Invisible Armies: An Epic History of Guerrilla Warfare from Ancient Times to the Present* (New York: Liveright Publishing, 2013)

¹⁵ Sun Tzu. *The Art of War*. Translated by Lionel Giles. Leicester: Allandale Online Publishing, 2000.
https://sites.ualberta.ca/~enoch/Readings/The_Art_Of_War.pdf. P. 9

military thinking — one rooted in preserving strength while slowly eroding the adversary's capacity and will to continue.

Despite these early examples, a more systematic and doctrinal approach to irregular warfare only began to emerge in the 18th century¹⁶. During the War of the Spanish Succession (1701–1714), the Austrian Empire made extensive use of semi-regular troops from Hungary and Croatia. These forces, operating on the periphery of conventional battles, conducted raids, disrupted logistics, and harassed enemy formations — integrating irregular methods into broader strategic objectives. Influential military theorists such as Carl von Clausewitz and Antoine-Henri Jomini, though primarily concerned with conventional warfare, contributed significantly to early understandings of irregular tactics, particularly in the context of national uprisings and the role of the popular will in warfare.

The 20th century, however, marked an explosion of literature and practical engagement with irregular warfare, largely as a result of decolonisation and the proliferation of asymmetric conflicts. Mao Zedong's writings, especially his seminal works on guerrilla warfare, became canonical in understanding the strategic logic of protracted people's war. Meanwhile, Western military thought was profoundly shaped by the decolonisation wars and United States' involvement in numerous irregular conflicts—from Vietnam to Iraq and Afghanistan—prompting the development of a comprehensive body of theory and doctrine addressing the strategic, operational, and tactical dimensions of irregular warfare.

This continuity across history — from Scythians and Romans to Maoist revolutionaries and modern insurgents — highlights a central truth: irregular warfare, regardless of time period or geographic context, consistently pursues political objectives. It is not simply a lesser form of war, nor a purely tactical approach. It is a strategic framework rooted in the political dimension of conflict. From the earliest examples to contemporary insurgencies, irregular warfare has sought to reshape political realities by undermining the legitimacy, cohesion, and will of the opponent.

This was already apparent to Alexander the Great, who encountered guerrilla resistance in Eastern Persia. Despite his military genius and success in conventional battles, he struggled to subdue local insurgents. Realising the futility of continued combat, Alexander turned to political engagement, seeking to win over local populations and elites rather than conquer them by force

¹⁶ Houghton Mifflin Company, ed. *The Guerrilla Reader: A Historical Anthology*. New York: New American Library, 1977. <https://archive.org/details/guerrillareaderh0000unse/page/n1/mode/2up>.

alone¹⁷. This pivot from military to political strategy underscores the essential nature of irregular warfare: the battlefield is not decisive; the political landscape is.

In conventional warfare, the primary objective is to alter the behaviour of an opposing state by decisively defeating its military forces. The battlefield serves as the arena for delivering strategic effects through the destruction or incapacitation of the enemy's armed forces. Irregular warfare, while pursuing a similar end — the influencing of political will — does so by different means. Its method lies not in overwhelming firepower, but in securing the **support and allegiance** of a relevant **local population**. Success in irregular conflict depends on winning “hearts and minds”, undermining the legitimacy of the opposing side, and positioning oneself as the more viable political authority.

*“What makes IW “irregular” is the focus of its operations – a relevant population – and its strategic purpose – to gain or maintain control or influence over, and the support of, that relevant population through political, psychological, and economic methods”*¹⁸. It centres on a population, not an army, and seeks to exert control or influence through non-military means. The US DoD basic documents on irregular warfare clearly underline that: *“People, not platforms and advanced technology, will be the key to IW success”*¹⁹. In this case, the goal of non-state actors would be to attract popular support and to channel it into influencing enemy state's behaviour by eroding its will to fight. For the purposes of this thesis, the definition provided by the US will be the only one provided. However, it is a broadly accepted understanding of the irregular warfare, with political dimension and population being key objectives of such wars both for regular forces and non-state actors, as can be demonstrated by various texts of different authors and institutions²⁰²¹²²²³²⁴.

A notable example is the U.S. Army's *Field Manual 3-24: Counterinsurgency*. While influential and widely accepted by the US Armed Forces, the manual has also been criticised for its heavy emphasis on political and civil aspects of conflict — the so-called “hearts-and-minds”

¹⁷ Robert B. Asprey, *War in the shadows: The Guerrilla in History*, (New York: Doubleday, 1975). P. 8.

¹⁸ U.S. Department of Defense. *Irregular Warfare: Countering Irregular Threats Joint Operating Concept*, Version 2.0. Washington, DC: Department of Defense, May 17, 2010. https://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/joc_iw_v2.pdf. P. 9.

¹⁹ Ibid. P. 1.

²⁰ U.S. Marine Corps. *Small Wars Manual*. Washington, DC: U.S. Government Printing Office, 1940. <https://www.marines.mil/portals/1/publications/fmfrp%2012-15%20%20small%20wars%20manual.pdf>.

²¹ Kilcullen, David. *Counterinsurgency Redux*, *Survival* 48, 111-130 (Winter 2006-2007).

²² Mack, Andrew. “Why Big Nations Lose Small Wars: The Politics of Asymmetric Conflict.” *World Politics* 27, no. 2 (1975): 175–200. <https://doi.org/10.2307/2009880>.

²³ David Galula *Counterinsurgency Warfare: Theory and Practice* <https://dn790001.ca.archive.org/0/items/CounterinsurgencyWarfare/Counterinsurgency%20Warfare.pdf>

²⁴ Mao Zedong. *On Guerrilla Warfare*. 1937. Translated by the Maoist Documentation Project. Marxists Internet Archive. <https://www.marxists.org/reference/archive/mao/works/1937/guerrilla-warfare/>

approach — and for arguably neglecting the “war dimension” of irregular conflicts²⁵. This critique itself reflects a deeper tension: irregular warfare blurs the lines between war and peace, between soldier and politician, between combat and governance.

On the strategic level, irregular warfare often bears a closer resemblance to peacebuilding and stabilisation efforts than to conventional military campaigns. Combat operations, while still present, serve more of an auxiliary role — supporting broader efforts to foster political legitimacy, social cohesion, and sustainable governance within contested or fragile environments. The US DoD has also developed 9 guiding principles to counter irregular threats which further elaborate on the more political rather than military nature of the irregular warfare. These principles are the following:

- *“Understand complex political, economic, cultural, religious, and historical factors;*
- *Use collaborative frameworks to plan, act, assess and adapt;*
- *Persistent engagement and sustained effort given longterm nature of conflict;*
- *Build partner capability to increase legitimacy of host nation;*
- *Balanced approach to the use of force;*
- *Prioritize the battle of the narrative;*
- *Counter use of cyberspace as a safe-haven and means of attack;*
- *Overcome institutional seams to address complex factors of conflict;*
- *Enable scalable, integrated and distributed operations.”*²⁶

Based on these principles, four major pillars of operations during irregular warfares can be identified, with “war dimension” being only part of these operations. While not mutually exclusive—since each instance of irregular warfare is unique—they encompass the majority of cases within the doctrine of irregular warfare. These four pillars further highlight the nuanced nature of irregular warfare, particularly in terms of incorporating civil and political missions. It is worth noting that, for the purposes of this thesis and to aid clarity, the precise military term

²⁵ Gian P. Gentile, “Our COIN Doctrine Removes the Enemy from the Essence of War,” *Armed Forces Journal* (January 2008);

Gentile, “Eating Soup with a Spoon,” *Armed Forces Journal* (September 2007).

²⁶ U.S. Department of Defense. *Irregular Warfare: Countering Irregular Threats Joint Operating Concept*, Version 2.0. Washington, DC: Department of Defense, May 17, 2010.

https://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/joc_iw_v2.pdf. P. 7.

rooted in American military tradition—*logical lines of operations*—has been substituted with the more accessible term *pillars*. These pillars are the following²⁷:

- **Information (e.g., strategic communication, PSYOP, IO):**
This area helps the commanders align military and government messaging to shape the environment for irregular warfare. These efforts should be planned and coordinated across all operations.
- **Intelligence:**
This provides timely and relevant information to commanders and agencies, helping them understand the situation and make informed decisions during operations.
- **Capacity Building (governance, rule of law, economic growth, essential services, and local security forces):**
This area focuses on enhancing the skills and resources of both governmental and non-governmental partners to conduct irregular warfare operations. Activities under this line can be either disruptive and damaging (such as unconventional warfare or targeted strikes), or stabilising and constructive (such as improving governance or public security), all in service of broader IW campaign goals.
- **Combat Operations (e.g., COIN, UW, security missions):**
This dimension involves the use of force to disrupt or destroy adversaries at chosen times, under conditions that may range from cooperative to hostile. Both lethal and non-lethal military effects may be employed.

The political nature of irregular warfare is central to understanding why powerful states often fail in these conflicts, as A. Mack argues in *Why Big Nations Lose Small Wars*²⁸. Irregular warfare is not primarily a military contest but a deeply political struggle. In these situations, winning the support of the local population, managing political legitimacy, and addressing psychological and economic concerns often outweigh the significance of battlefield victories, as was previously mentioned. Ultimately, the decisive factor is not firepower but willpower — and specifically, the erosion of political will in the stronger party.

Mack's core thesis is that in asymmetric conflicts, the militarily stronger power loses not because it is defeated on the battlefield, but because its political will to continue the conflict erodes over time. The insurgents, by contrast, tend to be politically unified and highly motivated,

²⁷ U.S. Department of Defense. *Irregular Warfare (IW) Joint Operating Concept*, Version 1.0. Washington, DC: Department of Defense, September 11, 2007.

https://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/joc_iw_v1.pdf. P. 29

²⁸ Mack, Andrew. "Why Big Nations Lose Small Wars: The Politics of Asymmetric Conflict." *World Politics* 27, no. 2 (1975): 175–200. <https://doi.org/10.2307/2009880>.

often framing the war as a total and existential struggle. For the external power, however, the war is seen as limited; it is neither perceived as vital to national survival nor is it politically sustainable in the long term²⁹.

Mack illustrates that guerrilla forces win by simply surviving. As he and others, including Kissinger, have noted, “*the guerrilla wins if he does not lose; the conventional army loses if it does not win*”³⁰. The more a war drags on without clear progress, the more domestic opposition grows in the stronger state — not because of battlefield failure, but due to rising costs and the moral or political illegitimacy of the campaign. “*Direct costs the insurgents impose on the external power will be the normal costs of war – troops killed and materiel destroyed. But the aim of the insurgents is not the destruction of the military capability of their opponents as an end in itself. [...] Direct costs become of strategic importance when, and only when, they are translated into indirect costs. These are psychological and political: their objective is to amplify the "contradictions in the enemy's camp."*” – Mack’s key point³¹.

Thus, irregular warfare operates on multiple fronts — military, political, informational, and psychological. Its success or failure is measured not in territory gained or battles won, but in legitimacy secured and opposition discredited. Its centre of gravity is the human domain, not the battlefield.

Operational-Tactical Level of Irregular Warfare

Having completed the strategic level of irregular warfare, it is now time to shift focus to the operational-tactical level. Having understood the strategic main objective, a key question emerges: how exactly are drones related to this? The operational-tactical level serves as the bridge between overarching goals and the concrete actions taken to achieve them in the field. This level addresses how non-state actors organise, plan, and execute operations within irregular conflict, taking into account mobility, terrain, timing, and adaptability. Through a deeper understanding of this level of warfare, I will later explain how drones can be effectively applied by non-state actors as tools of operational and tactical advantage.

To begin our analysis of the operational-tactical level of irregular warfare, we must first develop a clear understanding of what constitutes irregular warfare. This form of conflict has been the subject of extensive research and analysis by both academics and military practitioners,

²⁹ Ibid. P. 181.

³⁰ Henry A. Kissinger, "The Vietnam Negotiations," *Foreign Affairs*, XLVII (January 1969), 214.

³¹ Mack, Andrew. "Why Big Nations Lose Small Wars: The Politics of Asymmetric Conflict." *World Politics* 27, no. 2 (1975): 175–200. P. 185.
<https://doi.org/10.2307/2009880>.

particularly within the US Armed Forces. Over time, the evolving theoretical framework has influenced which operations are considered part of the irregular warfare spectrum. Once this conceptual foundation is established, we will examine specific tactics, including the application of drones within this context. The most current interpretation of irregular warfare by the US military is outlined in the *Joint Operating Concept: Irregular Warfare*³². This document identifies a range of combat and non-combat operations as key components of irregular warfare. The operations can be executed either separately, but usually in a cohesive interdependent approach in conjunction with other operations. The operations, which irregular warfare consists of, are the following³³:

- “Insurgency and Counterinsurgency (COIN);
- Unconventional warfare (UW);
- Terrorism and Counterterrorism (CT);
- Foreign internal defence (FID);
- Stabilisation, security, transition, and reconstruction operations (SSTRO);
- Strategic communications, Psychological operations (PSYOP) and Information operations (IO);
- Civil-military operations (CMO);
- Intelligence and counterintelligence activities;
- Transnational criminal activities, including narco-trafficking, illicit arms dealing, and illegal financial transactions, that support or sustain IW;
- Law enforcement activities focused on countering irregular adversaries”.

Before proceeding further with the analysis, it is essential to understand what exactly some of those operations mentioned are.

Insurgency and COIN. According to the US DoD definition, “*Insurgency is the organized use of subversion and violence to seize, nullify, or challenge political control of a region*”³⁴. COIN is the opposite – use of military and non-military instruments to counter insurgency.

Unconventional warfare (UW). The already terminated separate doctrine of the US military under code name JP 3-05.1 defined UW as: “*Activities conducted to enable a resistance*

³² U.S. Department of Defense. *Irregular Warfare (IW) Joint Operating Concept*, Version 1.0. Washington, DC: Department of Defense, September 11, 2007.

https://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/joc_iw_v1.pdf.

³³ Ibid. P. 9.

³⁴ U.S. Department of Defense. *Joint Publication 3-24: Counterinsurgency*. Washington, DC: Joint Chiefs of Staff, April 25, 2018. https://irp.fas.org/doddir/dod/jp3_24.pdf.

movement or insurgency to coerce, disrupt or overthrow a government or occupying power by operating through or with an underground, auxiliary, and guerrilla force in a denied area”³⁵. The famous guerrilla warfare, which is often used in irregular wars by non-state actors, as can be exemplified by the Afghanistan case, is part of unconventional warfare, however, due to its significance it will be also briefly analysed later.

Terrorism and Counterterrorism (CT). It is perhaps the most understandable part of irregular warfare. In the military terrorism is defined as “*The unlawful use of violence or threat of violence, often motivated by religious, political, or other ideological beliefs, to instill fear and coerce governments or societies in pursuit of goals that are usually political*”³⁶, and CT is actions aimed at neutralising terrorists, their organisations and networks.

Foreign Internal Defence (FID). Unlike previous operations, this type does not involve direct combat with the enemy but rather falls within the civil-military dimension of irregular warfare. It is defined as “*Participation by civilian agencies and military forces of a government or international organizations in any of the programs and activities undertaken by a host nation government to free and protect its society from subversion, lawlessness, insurgency, terrorism, and other threats to its security*”³⁷.

SSTRO. As the name suggests, this type of operation primarily focuses on establishing sustainable conditions in the host area within the context of irregular warfare. It includes a broad spectrum of civil-military activities, including military, security, political, economic, legal, and developmental efforts. In the case of the US, these operations involve not only the Department of Defence but also the Department of State, USAID, and other relevant non-military agencies. Often positioned within the non-combat realm, or at the intersection between combat and non-combat aspects of irregular warfare³⁸, the ultimate objective of such operations is to achieve full host nation responsibility and transfer of authority to this nation³⁹.

³⁵ United States Army Special Operations Command. *Unconventional Warfare Pocket Guide*, Version 1.0. Fort Bragg, NC: USASOC, April 5, 2016. <https://info.publicintelligence.net/USASOC-UW-PocketGuide.pdf>.

³⁶ U.S. Department of Defense. *Joint Publication 1-02: Department of Defense Dictionary of Military and Associated Terms*. Washington, DC: Joint Chiefs of Staff, November 8, 2010. https://irp.fas.org/doddir/dod/jp1_02.pdf.

³⁷ U.S. Department of the Army. *Field Manual No. 1-02.1: Operational Terms*. Washington, DC: Headquarters, Department of the Army, February 28, 2024. <https://irp.fas.org/doddir/army/fm1-02-1.pdf>.

³⁸ U.S. Department of Defense. *Irregular Warfare (IW) Joint Operating Concept*, Version 1.0. Washington, DC: Department of Defense, September 11, 2007. https://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/joc_iw_v1.pdf.

³⁹ U.S. Department of Defense. *Military Support to Stabilization, Security, Transition, and Reconstruction Operations Joint Operating Concept*, Version 2.0. Washington, DC: Department of Defense, December 2006. https://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/joc_sstro.pdf.

Stratcom, PSYOP, IO. A “positive psychological effect on the populace” forms the foundation of successful irregular warfare⁴⁰. In this context, such operations are essential to the success of both state and non-state actors. They shape public perception by influencing thoughts and emotions, steering them in a desired direction, controlling narratives, and ultimately fostering attitudes favourable to the actor’s objectives among the local population.

Civil-Military Operations (CMO). Tasks undertaken by assigned military units under a commander’s authority that involve developing, preserving, shaping, or leveraging interactions with local communities and organisations. These activities are directly aimed at helping to achieve goals related to the restoration or preservation of stability in a particular area or host country.

Such operations are integral in strategies of irregular conflicts by state actors, where military success often depends less on conventional battlefield dominance and more on influencing populations, fostering legitimacy of local institutions, and addressing the root causes of instability. Through coordinated engagement with local communities, governance structures, and essential services, civil-military operations enable commanders to shape the operational environment in a manner conducive to long-term stability and strategic success.

The remaining operations mentioned appear to be understandable without delving deeply into their definitions. Of all those listed, I will now elaborate more on tactics used in insurgency and counterinsurgency (COIN), unconventional warfare (UW), and terrorism and counterterrorism (CT) operations, as these involve combat actions where drones can be most effectively employed.

Insurgency and Counterinsurgency

Insurgency is one of the most common types of actions within irregular conflict which is thoroughly examined, especially in the US military⁴¹. Insurgent movements frequently pursue two primary objectives: the legitimacy in the eyes of the population and the exercise of political control within a specified geographical area. In comparison to recognised state authorities, insurgent groups are often characterised by a resolute will but possess markedly different capabilities. At the core of insurgency lies the contestation of political power, with insurgent efforts deliberately structured to erode governmental authority while simultaneously expanding

⁴⁰ U.S. Department of Defense. *Irregular Warfare (IW) Joint Operating Concept*, Version 1.0. Washington, DC: Department of Defense, September 11, 2007.

https://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/joc_iw_v1.pdf, p. 21

⁴¹ U.S. Department of the Army. *Field Manual No. 3-24: Counterinsurgency (Final Draft)*. Washington, DC: Headquarters, Department of the Army, June 2006. <https://irp.fas.org/doddir/army/fm3-24fd.pdf>. Chapter 2.

their own influence and control⁴². These movements typically engage in protracted struggles, which contribute to long-term regional instability. Such instability often runs counter to broader strategic interests, by fostering environments of insecurity and unpredictability⁴³.

Given their limited resources, insurgent groups commonly resort to “Fabian tactics”, avoiding conventional military confrontations where state actors can exploit their superior combat capabilities. By avoiding decisive engagements, insurgents are able to utilise both the terrain and civilian population for concealment and strategic advantage. This asymmetric approach enables them to carry out operations that are tactically effective and strategically symbolic. The irregular nature of these conflicts also creates opportunities for non-state actors, including terrorists and criminal elements, to operate with relative impunity, further complicating the operational environment and potentially undermining the legitimacy of both the state and the insurgent cause⁴⁴.

Insurgents employ a multifaceted strategy incorporating violence, propaganda, subversion, and political mobilisation to incrementally degrade the authority and perceived legitimacy of the incumbent government. Rather than seeking immediate military victory, their efforts aim to exhaust and discredit the governing regime, diminish its control over the population, and erode public confidence in its capacity to rule. Central to this approach is the concept of “propaganda of the deed”⁴⁵, which underscores the symbolic value of insurgent actions and their ability to shape public perception. Through the accumulation of such actions over time, insurgencies endeavour to construct a compelling strategic narrative that undermines the state’s credibility, often without the need for outright military triumph.

Women have also been significantly represented within insurgent movements, with estimates suggesting that they constitute up to 40% of participants across various roles⁴⁶. Their involvement extends well beyond traditional support functions, encompassing both combatant and non-combatant capacities. Women have served in combat support roles such as cooks, porters, and medics or doctors, while others have been coerced or conscripted into serving as wives or slaves, as well as combat roles. Additionally, many have taken on strategically vital functions as intelligence operatives, political officers, disseminators of propaganda, and, in some cases, suicide bombers. This broad spectrum of involvement highlights the multifaceted nature

⁴² U.S. Department of the Army. *Field Manual Interim No. 3-24.2: Tactics in Counterinsurgency*. Washington, DC: Headquarters, Department of the Army, April 2009. <https://irp.fas.org/doddir/army/fmi3-24-2.pdf>.

⁴³ Ibid.

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ U.S. Department of the Army. *Field Manual No. 3-24: Counterinsurgency (Final Draft)*. Washington, DC: Headquarters, Department of the Army, June 2006. <https://irp.fas.org/doddir/army/fm3-24fd.pdf>. II-12

of women's participation in insurgencies and underscores the complexity of their roles within such movements, whether as voluntary agents, instrumental actors, or victims of coercion.

Having examined the general characteristics of insurgencies and their strategic dimensions, we now turn to their **operational-level objectives**⁴⁷. These objectives represent the aims pursued by insurgents to erode government legitimacy and progressively achieve their political strategic goals. Serving as the vital link between tactical actions and strategic goals, operational objectives are central to the conduct of an insurgency.

Insurgents frequently exploit the state's inability to address the root causes that gave rise to the conflict. Although most insurgent movements lack a formal campaign plan, their operational objectives effectively delineate the framework of such a plan. These aims are informed by a broader insurgent strategy that encompasses political, military, economic, and social spheres. The US military identifies the following common sample objectives on the operational level pursued by insurgents⁴⁸:

Military:

- Interrupt supply chains and communication networks essential to operational effectiveness
- Compel government or allied forces to withdraw from contested regions
- Confine enemy troops to their bases, limiting their freedom of movement
- Trigger disproportionate responses from US or Host Nation forces, particularly those leading to civilian casualties that attract media attention

Economic:

- Sabotage rebuilding initiatives and deliberately damage key infrastructure
- Obstruct the government's capacity to resolve the fundamental issues driving the insurgency
- Undermine efforts by the state to provide essential services to the population

Social:

- Incite sectarian violence;
- Undermine trust in the government's legitimacy and competence;
- Publicise instances of police misconduct or systemic corruption;

⁴⁷ U.S. Department of the Army. *Field Manual Interim No. 3-24.2: Tactics in Counterinsurgency*. Washington, DC: Headquarters, Department of the Army, April 2009. <https://irp.fas.org/doddir/army/fmi3-24-2.pdf>. 2-7

⁴⁸ Ibid.

- Create and maintain platforms for disseminating propaganda or messaging, such as local radio stations or printed media.

These goals are pursued through deliberate and specific tactical actions, which serve as the immediate means of achieving operational effects⁴⁹. They may include acts such as disseminating propaganda (via posters, paper materials, or digital media), targeted killings, or assaults on strategic facilities. These actions are not only physical but often psychological in nature, intended to influence perceptions, morale, and public confidence. Political actions might involve intimidating local officials or spreading insurgent messaging; in the military dimension, it may include attacks on government convoys, checkpoints, or indiscriminate indirect fire on bases. Economically, insurgents may target markets, manufacturing centres, or infrastructure—such as roads, power lines, and pipelines—while also threatening violence against businesses and civilians. Socially, insurgents might assault police stations or engage directly with communities to shape public opinion.

To better understand how non-state actors employ drones, it is essential to examine the **tactical level** of combat operations, where such actors engage directly on the ground. Drones, after all, function primarily as a tool of firepower. By focusing on this level, we can more precisely assess how drones fit into insurgent or militant strategies, revealing how these actors leverage relatively low-cost technology to achieve significant battlefield impact and advance their broader operational goals.

Insurgencies utilise both violent and non-violent tactics to pursue their objectives. Non-violent tactics are employed to achieve political aims without resorting to force. These include propaganda and subversion actions, such as demonstrations, hoaxes and strikes. Typically, violent operations are accompanied by a range of non-violent activities. When used in combination, these approaches—supported by propaganda—can prove effective in recruitment efforts and in garnering broader public support.

Insurgents generally have four violent tactics at their disposal: terrorism, guerrilla warfare, conventional tactics, and criminal activity, such as kidnapping or trafficking⁵⁰. These violent tactics are typically marked by stealth, surprise, and swift, intense action. Insurgents frequently rely on terrorism and guerrilla tactics because they lack the resources or strength to confront government or counterinsurgency forces through conventional means. In the early

⁴⁹ U.S. Department of the Army. *Field Manual Interim No. 3-24.2: Tactics in Counterinsurgency*. Washington, DC: Headquarters, Department of the Army, April 2009. <https://irp.fas.org/doddir/army/fmi3-24-2.pdf>. 2-7

⁵⁰ U.S. Department of the Army. *Field Manual Interim No. 3-24.2: Tactics in Counterinsurgency*. Washington, DC: Headquarters, Department of the Army, April 2009. <https://irp.fas.org/doddir/army/fmi3-24-2.pdf>. 2-7

stages of an insurgency, when insurgent forces lack enough manpower and firepower to openly confront regular armies, such violence is usually categorised as either terrorism or guerrilla warfare. Apart from guerrilla warfare, commonly used tactics include⁵¹:

- “Ambushes;
- Assassination;
- Arson;
- Bombing and high explosives.
- Hijacking and skyjacking;
- Hostage taking;
- Indirect and indiscriminate fire;
- Kidnapping;
- Raids or attacks on facilities;
- Sabotage;
- Seizure”.

Guerrilla Warfare

Across more than twenty-five centuries, strategists have returned repeatedly to the terse aphorisms of Sun Tzu’s *Art of War*. While Chinese statesmen of the Warring States period were his original audience, twentieth- and twenty-first-century insurgents—from the Viet Cong to the Taliban—have discovered that his emphasis on deception, patience and terrain speaks powerfully to the asymmetric contests they fight. Robert Taber’s influential study *War of the Flea*⁵² serves as an interpretative bridge between Sun Tzu’s ancient guidelines and the practical requirements of modern guerrilla warfare.

Strategic Foundations: The Protracted War of Attrition. Guerrilla warfare is fundamentally a “war of the flea,” a protracted war of attrition where insurgents exploit their ability to exhaust a numerically and technologically superior adversary. Central to this strategy is the insurgents’ ability to exploit their unique advantages: mobility, decentralised organisation, and the capacity to draw recruits from the populace. The guerrilla’s strength lies in their capacity to sustain conflict indefinitely, leveraging time as a weapon to erode the opposing state actor’s resources, morale, and political will. Guerrilla fighters do not usually have fixed territories,

⁵¹ U.S. Department of Defense. *Joint Publication 3-07.2: Antiterrorism*. Washington, DC: Joint Chiefs of Staff, March 14, 2014. https://irp.fas.org/doddir/dod/jp3_07_2.pdf. II-2

⁵² Taber, Robert. *The War of the Flea: A Study of Guerrilla Warfare Theory and Practice*. New York: Lyle Stuart, 1965. https://ia802208.us.archive.org/1/items/war-of-the-flea_202203/War%20of%20the%20Flea.pdf. P. 25

property or assets, which must be defended at any cost, and this factor enables their mobility, flexibility. Ultimately it provides them with “bottomless well of manpower”⁵³.

Mao, arguably the most influential theorist of modern guerrilla warfare, has clearly underlined that it is the people, “bottomless well of manpower” in the words of Taber, who can bring the victory to the guerrillas: “*the riches source of power to wage war lies in the masses of the people*”⁵⁴. Further elaborating on the crucial significance of popular support, he even developed a special code of behaviour with the population aimed at maximising their support. This code is known as “*The Three Rules and the Eight Remarks*”⁵⁵:

“Rules:

1. *All actions are subject to command.*
2. *Do not steal from the people.*
3. *Be neither selfish nor unjust.*

Remarks:

1. *Replace the door when you leave the house.*
2. *Roll up the bedding on which you have slept.*
3. *Be courteous.*
4. *Be honest in your transactions.*
5. *Return what you borrow.*
6. *Replace what you break.*
7. *Do not bathe in the presence of women.*
8. *Do not without authority search the pocketbooks of those you arrest”.*

David Galula — widely regarded as a leading theorist of guerrilla warfare and insurgency during the Cold War — also underlines that such conflicts are inherently population-centric. His analysis exemplifies the enduring continuity of this principle across guerrilla campaigns, irrespective of the historical period in which they are waged. From the insurgents point of view, the goal of the guerrilla campaign is to “*Build (or rebuild) a political machine from the population upward*”⁵⁶.

⁵³ Ibid.

⁵⁴ Mao Tse-Tung, *Selected Military Writings*. Peking: Foreign Language Press, 1966. P. 260.

⁵⁵ Mao Tse-tung, *On Guerrilla Warfare*. Translated and with an introduction by Samuel B. Griffith. Fleet Marine Force Reference Publication (FMFRP) 12-18. Washington, DC: Department of the Navy, Headquarters United States Marine Corps, April 5, 1989. <https://www.marines.mil/portals/1/publications/fmfrp%2012-18%20%20mao%20tse-tung%20on%20guerrilla%20warfare.pdf>. P. 92

⁵⁶ Galula, David. *Counterinsurgency Warfare: Theory and Practice*. London: Praeger, 2006. P. 95.

From the counterguerrilla point of view, the logic of insurgent war is the same – gaining and securing support from the local population. Galula clearly outlines certain “laws” for COIN forces to be followed, which are also significantly population-centred⁵⁷:

For instance, the first law of counterinsurgency would be “*The Support of the Population Is as Necessary for the Counterinsurgent as for the Insurgent. What is the crux of the problem for the counterinsurgent? It is not how to clean an area. [...] The problem is, how to keep an area clean so that the counterinsurgent forces will be free to operate elsewhere. This can be achieved only with the support of the population*”⁵⁸.

He further elaborates “A victory is that [destruction of guerrilla military and political organisation] *plus the permanent isolation of the insurgent from the population, isolation not enforced upon the population but maintained by and with the population*”⁵⁹.

Another law by Galula clearly underlines that “*operations needed to relieve the population from the insurgent’s threat and to convince it that the counterinsurgent will ultimately win*”⁶⁰.

This configuration of the organisation of campaigns enables partisans to dictate the dynamics of conflict, forcing the regular army into a reactive posture. It is directly stated that “*The guerrilla has the initiative; it is he who begins the war, and he who decides when and where to strike. His military opponent must wait, and while waiting, he must be on guard everywhere*”⁶¹. By constantly moving, dispersing, and regrouping, insurgents remain elusive. They employ Sun Tzu’s classic advice: “*When able to attack, we must seem unable; when using our forces, we must seem inactive; when we are near, we must make the enemy believe we are far away; when far away, we must make him believe we are near*”⁶²

Taber notes that the state, burdened by the logistical demands of occupation and the need to defend dispersed territories, becomes a power which is unable to counter the insurgents’ activities. Guerrillas avoid direct confrontation until conditions favour them, instead prioritising attrition through small-scale engagements that cumulatively “exhaust” and destabilise the state-actor’s ability to further conduct its military campaign.

⁵⁷ Ibid. P. 52-60

⁵⁸ Ibid. P. 52.

⁵⁹ Ibid. P. 54.

⁶⁰ Ibid. P. 55.

⁶¹ Taber, Robert. *The War of the Flea: A Study of Guerrilla Warfare Theory and Practice*. New York: Lyle Stuart, 1965. https://ia802208.us.archive.org/1/items/war-of-the-flea_202203/War%20of%20the%20Flea.pdf. P. 19.

⁶² Sun Tzu. *The Art of War*. Translated by Lionel Giles. Leicester: Allandale Online Publishing, 2000. https://sites.ualberta.ca/~enoch/Readings/The_Art_Of_War.pdf.

Being not restrained by fixed positions or heavy infrastructure, guerrillas operate fluidly, dissolving into civilian populations after strikes and re-emerging to exploit vulnerabilities. Taber highlights the insurgents' mastery of terrain-based asymmetry, luring adversaries into environments—mountain passes, jungles, or urban sprawls—where numerical superiority becomes irrelevant⁶³. By striking under conditions of surprise, darkness, or difficult terrain, lightly armed insurgents can neutralise a superior opponent.

As guerrilla warfare is aimed at a long-term confrontation, a phased approach underlines this notion. Recognising their initial weakness, guerrillas plan for a long war divided into phases. Beginning with small-scale operations—ambushes, sabotage, and raids—insurgents incrementally build strength while degrading the enemy. However, these small-scale operations are carried out on the big territories to **overextend the enemy**. This creates opportunities to isolate and attack small units. For example, insurgent strategy is “*to force the enemy to overextend his lines so that his communications may be disrupted and small units [can be] picked off, one at a time, by locally superior rebel forces.*”⁶⁴

Each tactical victory, such as capturing weapons from an isolated outpost, contributes to a cumulative equalisation of forces. This protracted timeline ensures that the regime's finite resources are stretched thin, while the insurgents' “bottomless well of manpower” allows them to endure. Over time, the conflict shifts from isolated skirmishes to coordinated campaigns, culminating in either open and direct conventional combats or even collapse of the state's will to fight.

In the thought of Mao, guerrilla conflict are clearly carried out in three deliberately sequenced phases⁶⁵. It begins with *strategic defence*, often called the ‘survival’ stage. Here, the insurgent's ultimate purpose is simply to endure. Guerrilla fighters concentrate on gathering local sympathy and building a discreet but resilient network of logistical, economic and military support for the more intense stage of the future warfare. They usually undertake only small-scale, low-intensity actions—raids, ambushes or acts of sabotage.

Once a robust foundation has been laid, the struggle enters the *strategic stalemate* phase. The guerrilla movement, now better armed and more numerous, escalates its operations to torpedo the government's legitimacy, overstretch its forces and drain its will to fight. Persistent hit-and-run attacks, propaganda campaigns and the steady expansion of liberated zones gradually

⁶³ Taber, Robert. *The War of the Flea: A Study of Guerrilla Warfare Theory and Practice*. New York: Lyle Stuart, 1965. https://ia802208.us.archive.org/1/items/war-of-the-flea_202203/War%20of%20the%20Flea.pdf, P. 114

⁶⁴ Ibid. P. 107

⁶⁵ Mao Tse-Tung. *Selected Military Writings*. Peking: Foreign Language Press, 1966. PP. 210-219

undermine state authority. Crucially, resource accumulation does not cease at this point; it accelerates, ensuring that matériel keeps pace with the widening scope of the conflict.

If these efforts succeed, the insurgents advance to *strategic offence*—the culmination of a successful guerrilla war. With their own strength consolidated and the regular army both weakened and dispersed, the guerrillas proceed to a “classical war” with large-scale conventional operations. They adopt increasingly conventional tactics, massing units for major military operations and battles aimed at destroying the enemy’s remaining field forces and seizing decisive political centres. At this juncture the revolution is no longer an affair of scattered skirmishes but a campaign of large-scale manoeuvre designed to deliver the final, irrevocable blow. Thus Mao’s tripartite schema traces an insurgency’s evolution from fragile beginnings to triumphant conclusion, illustrating how patience, popular support and disciplined resource mobilisation can enable irregular forces to defeat a seemingly superior foe.

Mao’s three-phase theory of revolutionary warfare proved influential far beyond China. In occupied Yugoslavia, Josip Broz Tito adopted the same logic: initially with small but numerous partisan detachments organised in the rural and mountainous areas, hit occupiers where they were weakest, and ultimately managed to organise themselves into a regular army capable of defeating Axis formations.

Once Germany launched its invasion of the Soviet Union in June 1941, Tito realised that opening of the Eastern Front had created a perfect military opportunity to start the liberation movement of Yugoslavia. On the 4th of July, which later became a public holiday in Socialist Yugoslavia, Tito formally made the decision to start the campaign. His detachments opened the first communist-led uprising in occupied Yugoslavia on the 7th of July when the first shots were fired in the so-called Bela Crkva incident. During the initial phase, the partisan war was a low-intensity warfare with assassinations, diversions, and sabotage—cutting railway lines, ambushing small columns, and melting away before reprisals – being the primary way of carrying out operations⁶⁶. However, each local success extended the movement’s reach, brought in fresh volunteers, and allowed the leadership to introduce rudimentary governance and arms workshops. The momentum grew and by late September they had even liberated the western-Serbian town of Užice and declared the short-lived “Užice Republic”, the first sizeable free territory in wartime Europe.

⁶⁶ Encyclopædia Britannica. “Partisan: Yugoslavian Military Force.” Last modified September 26, 1998. <https://www.britannica.com/topic/Partisan-Yugoslavian-military-force>.

Being alarmed by the initial success and disorder on the territory of Yugoslavia, the Wehrmacht and its collaborators, first of all, the Croatian formations, launched what post-war Yugoslav historiography described as the “*Seven Enemy Offensives*”, enormous combined arms multi-divisional military operations intended to encircle and annihilate Tito’s forces. None achieved their strategic aim. However, during these offensives, the German forces and their collaborators have inflicted brutal reprisals on civilians and committed numerous war crimes and crimes against humanity, deepening popular support for the Partisans.

By exploiting their mobility, political messaging and the occupiers’ excesses, the guerrillas gradually exhausted German manpower committed to the Balkans. Strength swelled to about 300,000 fighters by the end of 1943⁶⁷, transforming the movement from scattered bands into a formidable national liberation army. At the same time, Josip Tito proceeded to the creation of political organisation within the national liberation movement and established the Anti-Fascist Council for the National Liberation of Yugoslavia. This organisation coordinated numerous partisan movement detachments and units and turned into the political entity of the communist partisan movement and later a provisional government.

German position in the Balkans was significantly undermined after the disasters at Stalingrad, Kursk, and general the Red Army’s counteroffensives, which had already reached Europe, forced Berlin to regroup exhausted formations and assign them on the Eastern Front, weakening its hold on Yugoslavia. The situation deteriorated further when Italy signed its armistice. Numerous Italian divisions were disbanded and some of them even later joined the Partisan movement, as can be exemplified by the “Italia Brigade”.

Being reinforced with this sudden event and further supported by the Allied Air Forces and the Soviet Red Army, Tito abandoned the loose brigade structure and started to group his forces into structured and organised corps and divisions, which later became the fundament of the Yugoslav regular armed forces. Marching alongside the Red Army, these formations liberated Belgrade on 20 October 1944 and continued further its advance in the north-west in conventional set-piece battles until the final capitulation of German troops in May 1945. By the end of the war, the Yugoslav partisans had the strength of around 800 thousand men organised into four field armies and more than 50 divisions⁶⁸. Re-designated the Yugoslav People’s Army, the former guerrillas now equipped with armour, artillery and even an proto-air forces—

⁶⁷ Ibid.

⁶⁸ Anić, Nikola, Joksimović, Sekula, Gutić, Mirko. Narodno oslobodilačka vojska Jugoslavije. Pregled Razvoja Oružanih Snaga Narodnooslobodilackog pokreta 1941—1945 / Uroš KOSTIĆ. — Beograd: Vojnoistorijski institut, 1982. <https://web.archive.org/web/20200907090028/http://www.znaci.net/00003/523.htm> P. 539-540.

completing the Maoist approach of the guerrilla warfare, beginning from village insurgents to a national army capable of holding its own on a modern European battlefield.

The Mao theory of guerrilla with its own phases of war proved to be influential that even the US Armed Forces consider this with certain adjustments in its own military documents and doctrines, as demonstrated in FMI 3-24.2.⁶⁹ Summarising Mao's views on guerrilla: "*Enemy advances, we retreat. Enemy halts, we harass. Enemy tires, we attack. Enemy retreats, we pursue*"⁷⁰.

Political Imperatives: The Primacy of Ideological Warfare. Guerrilla warfare is inseparable from its political objectives. As Taber asserts, the insurgent is "the conscious agent of revolution," with military actions serving as instruments of ideological dissemination⁷¹. By the time Taber completed his work, most of the "revolutions" he might have witnessed could be traced to socialist and communist movements. Ultimately, however, any insurgency can be regarded as a revolution, so the term applies equally to modern guerrillas. Every ambush, assassination, or act of sabotage is calibrated to erode government legitimacy and channel popular support. The destruction of infrastructure, such as bridges or power grids, is not merely logistical but symbolic, projecting the opposing power's impotence and the inevitability of its collapse.

"*Social and political dissolution bleeds the military, and the protracted and futile campaign in the field contributes to the process of social and political dissolution, creating what I have elsewhere called "the climate of collapse."*"⁷² The creation of a "climate of collapse" represents the ultimate objective of this political strategy, as guerrillas measure success less by territory gained and more by the political effects. Through a combination of military attrition and psychological operations, guerrillas cultivate a perception of governmental decay. This perception, once internalised by the population, becomes self-fulfilling. In Vietnam, the Viet Cong's assassination of local officials and systematic destabilisation of rural administration eroded the Saigon regime's credibility long before its military defeat. Similarly, urban terrorism—bombings in cafes or government offices—is designed not only to terrorise but to provoke repressive countermeasures, which in turn radicalise moderates and swell insurgent ranks

⁶⁹ U.S. Department of the Army. *Field Manual Interim No. 3-24.2: Tactics in Counterinsurgency*. Washington, DC: Headquarters, Department of the Army, April 2009. <https://irp.fas.org/doddir/army/fmi3-24-2.pdf>. . 2-15, 2-16

⁷⁰ Mao Tse-Tung, "A Single Spark Can Start a Prairie Fire", *Selected Works*, Eng. ed., FLP, Peking, 1965, Vol. I, p. 124.

⁷¹ Taber, Robert. *The War of the Flea: A Study of Guerrilla Warfare Theory and Practice*. New York: Lyle Stuart, 1965. https://ia802208.us.archive.org/1/items/war-of-the-flea_202203/War%20of%20the%20Flea.pdf. P. 107

⁷² Ibid. P. 26

Tactical implementation of the strategy. Guerrilla tactics achieve strategic and political goals through decentralised, avoiding, unconventional and adaptive methods. Ambushes, roving patrols, and sabotage exemplify the insurgents' emphasis on initiative and unpredictability. By attacking isolated outposts, patrols, or convoys, guerrillas inflict casualties while seizing arms and supplies. Though limited in scale, these operations have significant psychological impacts, projecting an image of being presented everywhere. The simultaneous execution of such strikes across multiple regions—a tactic which can be called “swarm”⁷³—forces the opposing army to overextend its forces, creating vulnerabilities that insurgents exploit.

1. Ambushes⁷⁴.

Ambushes are the cornerstone of guerrilla tactics, leveraging terrain, timing, and deception to neutralise superior firepower. Insurgents select choke points—narrow mountain passes, jungle corridors, or urban alleys—where enemy mobility is restricted. By striking unexpectedly, they inflict maximum casualties on the enemy while minimising possible losses. For example, Castro's rebels in Cuba frequently ambushed Batista's convoys in remote valleys, seizing weapons and supplies while demoralising government forces.

Key Elements :

- **Terrain mastery:** Guerrillas exploit natural features to funnel enemies into kill zones.
- **Rapid withdrawal:** After inflicting damage, insurgents disperse to avoid counterattacks.

2. Night Raids⁷⁵⁷⁶.

Night raids capitalise on darkness to strike enemy bases, supply depots, and outposts. These operations disrupt logistics, deprive the regime of rest, and project an image of omnipresence. During the Cuban Revolution, Fidel Castro's forces executed night time raids on Batista's garrisons, capturing arms and demoralising troops. Similarly, the Viet Cong's nocturnal attacks on U.S. bases in Vietnam exploited the psychological toll of constant vigilance.

⁷³ Taber, Robert. *The War of the Flea: A Study of Guerrilla Warfare Theory and Practice*. New York: Lyle Stuart, 1965. https://ia802208.us.archive.org/1/items/war-of-the-flea_202203/War%20of%20the%20Flea.pdf. P. 35.

⁷⁴ U.S. Department of the Army. *Field Manual No. 3-90: Tactics*. Washington, DC: Headquarters, Department of the Army, July 2001. <https://irp.fas.org/doddir/army/fm3-90.pdf>. 5-18

⁷⁵ U.S. Department of the Army. *Field Manual No. 3-24: Counterinsurgency (Final Draft)*. Washington, DC: Headquarters, Department of the Army, June 2006. <https://irp.fas.org/doddir/army/fm3-24fd.pdf>. B-20

⁷⁶ U.S. Department of the Army. *Field Manual Interim No. 3-07.22: Counterinsurgency Operations*. Washington, DC: Headquarters, Department of the Army, October 2004. <https://irp.fas.org/doddir/army/fmi3-07-22.pdf>. D-3

Key Elements⁷⁷:

- **Psychological warfare:** Sleep deprivation and fear erode enemy morale.
- **Resource acquisition:** Raids secure critical supplies (weapons, food, medical kits).
- **Symbolic impact:** Successful night attacks undermine the regime's control over its own territory.

3. **Sabotage:** Undermining Infrastructure and Economic Stability.

Sabotage targets war materiel, infrastructure (bridges, railways, power grids) and economic assets (plantations, mines) to undermine governance and drain the opposing state's resources⁷⁸. By destroying bridges or mining roads, insurgents limit manoeuvre capabilities of enemy forces while escalating maintenance costs. In colonial contexts, such as Morocco's anti-French struggle, sabotage served dual purposes: disrupting administration and "*taking the profit out of colonialism*"⁷⁹ by destabilising industries reliant on foreign investment.

Key Elements :

- **Economic attrition:** Attacks on plantations and mines reduce the regime's revenue.
- **Mobility denial:** Destroying transportation routes hampers military logistics.
- **Propaganda value:** Sabotage symbolises the regime's inability to maintain order.

4. **Mining and Booby-Traps:** Turning Terrain into a Weapon.

Improvised explosive devices (IEDs) and booby-traps exploit the enemy's dependence on predictable routes. Guerrillas plant mines on roads, trails, and key routes to destroy vehicles, kill personnel, and instil fear. The war in Vietnam provides a classical example of using traps as a mean of warfare. These tactics amplify the insurgents' asymmetrical advantage by allowing small forces to neutralise large units without direct engagement.

Key Elements:

- **Cost-effectiveness:** Low-cost explosives yield disproportionate tactical gains.

⁷⁷ U.S. Department of the Army. *Field Manual Interim No. 3-07.22: Counterinsurgency Operations*. Washington, DC: Headquarters, Department of the Army, October 2004. <https://irp.fas.org/doddir/army/fmi3-07-22.pdf>. D-3

⁷⁸ U.S. Department of Defense. *Joint Publication 1-02: Department of Defense Dictionary of Military and Associated Terms*. Washington, DC: Joint Chiefs of Staff, November 8, 2010. https://irp.fas.org/doddir/dod/jp1_02.pdf. P. 209

⁷⁹ Taber, Robert. *The War of the Flea: A Study of Guerrilla Warfare Theory and Practice*. New York: Lyle Stuart, 1965. https://ia802208.us.archive.org/1/items/war-of-the-flea_202203/War%20of%20the%20Flea.pdf. P.102.

- Fear induction: Mines create a constant atmosphere of danger, slowing enemy movements.
- Resource diversion: Clearing mines requires specialised equipment and manpower, straining the regime's capabilities.

5. **Sniping and Harassment Fire:** Pinning Down Superior Forces.

Snipers and harassment fire exemplify the guerrilla's ability to exploit precision over brute force. By targeting key personnel (officers, radio operators) or pinning down entire units, insurgents disrupt enemy operations. Che Guevara described how Cuban rebels used snipers to halt a superior column with minimal ammunition, forcing the enemy into static positions⁸⁰. This tactic also conserves insurgent resources, as small arms and limited ammunition suffice for sustained harassment.

Key Elements :

- Targeted attrition: Eliminating high-value individuals weakens command structures.
- Mobility restriction: Harassment fire limits the enemy's freedom of movement.
- Psychological fatigue: Constant sniper threats erode troop morale over time.

6. **Hit-and-Run Attacks:** Exploiting Weaknesses Through Speed.

Hit-and-run strikes target isolated patrols, convoys, or outposts, maximising damage while minimising exposure. These operations rely on speed and surprise to overwhelm defenders before retreating. In Vietnam, Viet Cong units frequently attacked isolated U.S. patrols, vanishing into the jungle before reinforcements arrived. Such attacks, though small in scale, cumulatively degrade enemy logistics and confidence.

Key Elements :

- Temporal advantage: Strikes occur during rest periods or low-visibility conditions.
- Decentralised execution: Units operate independently, reducing vulnerability to centralised countermeasures.
- Propaganda amplification: Victories are publicised to magnify their psychological impact.

⁸⁰ Taber, Robert. *The War of the Flea: A Study of Guerrilla Warfare Theory and Practice*. New York: Lyle Stuart, 1965. https://ia802208.us.archive.org/1/items/war-of-the-flea_202203/War%20of%20the%20Flea.pdf. P. 114

7. **Attacks on Isolated Outposts:** Seizing Arms and Momentum.

Guerrillas prioritise isolated outposts to seize weapons, eliminate enemy forces, and undermine rural governance. In Cuba, Castro's rebels systematically overran remote garrisons, enhancing their firepower with captured arms⁸¹. These attacks also serve as recruitment tools, as victories attract new recruits disillusioned with the regime.

Key Elements :

- Resource acquisition: Captured weapons and supplies offset the insurgents' initial disadvantages.
- Strategic isolation: Weakening rural garrisons creates safe havens for insurgent operations.
- Momentum building: Successive victories boost rebel morale and attract external support.

8. **Assassination of Officials and Collaborators**⁸²: Decapitating Governance.

Targeted killings of local authorities, informants, and collaborators destabilise governance and terrorise the bureaucracy. In Morocco's anti-colonial struggle, assassinations of French-aligned officials channelled popular anger, transforming the conflict into a moral crusade⁸³. Similarly, the Viet Cong's systematic elimination of village chiefs eroded the Saigon regime's control over rural areas⁸⁴.

Key Elements :

- Decapitation strategy: Removing key figures paralyses administrative functions.
- Intimidation: Fear of assassination coerces neutrality or support from undecided populations.
- Symbolic resonance: High-profile killings frame the regime as illegitimate and vulnerable.

9. **Terror Tactics:** Bombings and Urban Intimidation.

Urban terrorism — bombings in cafes, government offices, or markets—seeks to destabilise cities and provoke repressive countermeasures. In Algeria's war for independence, FLN bombers targeted colonial symbols, triggering brutal French crackdowns that alienated

⁸¹ Ibid. P. 38.

⁸² U.S. Department of the Army. *Field Manual No. 3-24: Counterinsurgency (Final Draft)*. Washington, DC: Headquarters, Department of the Army, June 16, 2006. <https://irp.fas.org/doddir/army/fm3-24fd.pdf>. B-20

⁸³ Taber, Robert. *The War of the Flea: A Study of Guerrilla Warfare Theory and Practice*. New York: Lyle Stuart, 1965. https://ia802208.us.archive.org/1/items/war-of-the-flea_202203/War%20of%20the%20Flea.pdf. P. 102.

⁸⁴ Ibid. P. 81.

moderates. Sometimes terrorism could be even more effective than classical guerrilla, as seen in the case of Morocco⁸⁵. Such tactics exploit the regime's tendency to overreact, radicalising the populace and swelling insurgent ranks.

Key Elements :

- Psychological shock : Bombings create fear and chaos, undermining the regime's authority.
- Provocation: Repressive responses alienate neutrals and legitimise the insurgency.
- Media amplification: Attacks attract international attention, framing the conflict as a struggle for liberation.

10. **Psychological Operations and Propaganda:** Winning the Narrative.

Guerrillas use propaganda leaflets, broadcasts, and symbolic acts to shape perceptions. Each victory is publicised to magnify its impact, while regime failures are amplified to erode legitimacy and ultimately “undermine the morale of the government and to destroy the prestige⁸⁶. In Cuba, Castro's rebels disseminated leaflets highlighting Batista's corruption, while the Viet Cong distributed pamphlets depicting US soldiers as occupiers. These efforts ensure that military actions serve dual purposes: physical damage and ideological persuasion.

Key Elements :

- Narrative control: Framing the conflict as a struggle for justice or freedom.
- Symbolic acts: Dramatic raids or assassinations reinforce the insurgency's potency.
- Rumours and misinformation: Spreading uncertainty weakens the regime's grip on information.

12. **Multi-Front Operations:** Stretching Enemy Resources.

As insurgencies grow in power, they expand geographically to stretch enemy's forces. Splitting into smaller units allows simultaneous strikes across regions, creating the illusion of being everywhere. Taber notes that when a guerrilla column exceeds 100 fighters, it should divide and operate in distant areas⁸⁷. This “swarm” tactic forces the enemy to overextend, creating vulnerabilities that insurgents exploit.

⁸⁵ Ibid. P. 102

⁸⁶ Taber, Robert. *The War of the Flea: A Study of Guerrilla Warfare Theory and Practice*. New York: Lyle Stuart, 1965. https://ia802208.us.archive.org/1/items/war-of-the-flea_202203/War%20of%20the%20Flea.pdf. P. 43

⁸⁷ Ibid. P. 139.

Key Elements :

- Geographic dispersion: Opening fronts in urban and rural zones maximises pressure.
- Decentralised coordination: Units act autonomously but align with overarching strategic goals.
- Resource exhaustion: The opposing state's limited forces are spread thin, enabling local victories.

Conventional Warfare by Non-State Actors

Having already analysed irregular warfare at the strategic level – its unconventional character and the particular tactics that give various non-state actors or insurgent movements their asymmetrical edge – we have realised that the boundary between irregular and classical conflict can be thin. Historical precedents such as the Chinese Communists and the Yugoslav Partisans in 1944-45 illustrate that non-state forces can, when conditions permit, transform themselves from guerrillas into military entities capable of carrying out major military operations, holding ground, and conducting set-piece large-scale battles. Because of cases like these, it makes sense to add the conventional side of the picture to our study. Noteworthy, the discussion that follows will not review conventional irregular war in general, nor dive into grand strategy; instead, it will concentrate on some of the concrete operational-tactical level components with focus on the tactics and techniques through which non-state actors can conduct conventional engagements once they cross the threshold into open warfare.

Any conflict, from antiquity to the present day, unfolds across distinct levels of warfare; each level frames decisions and actions in its own way, yet all converge on the same overarching aim. Having explored the operational level — where commanders translate strategy into a sequence of major, mutually supporting objectives — we can now scrutinise those aims in depth. We will examine the operational-level goals in detail, showing how they bridge together to advance the wider strategic design.

Operational level objectives

From the point of the US military, at the operational level forces employ eight mutually reinforcing objectives that, taken together, influence an adversary's capacity to fight⁸⁸.

Isolating the Adversary. Operational success begins by severing the enemy's external support factors — physical, informational, and moral. Financial sanctions, travel restrictions, and counter-proliferation measures cut external physical support, while strategic communications expose the opponent's intent and delegitimise his narrative. In the military domain, isolation is achieved through a deliberately conducted blend of joint shaping activities, access-denial operations, and the coordinated employment of air, land, maritime, littoral, space, special, and irregular warfare forces. Isolation is not an end in itself; rather, it sets the conditions for every subsequent objective by eroding the adversary's capacity to draw upon military or political capacities.

Gaining and Maintaining Operational Access. With the enemy increasingly isolated, forces must secure freedom of their own actions in all domains — land, sea, air, space, and cyberspace. Expeditionary basing, agile force projection, and the reduction of anti-access/area-denial (A2/AD) threats provide the foothold required for decisive manoeuvre. Logistics plays a crucial role: rapid closure of forces and diversified sustainment routes shorten operational pauses and deny the enemy time to regroup.

Denying Battlespace Awareness. Multidomain access is of limited value if the adversary retains the ability to observe, orient, and respond. Consequently, it is vital that forces seek to blind, confuse, and mislead enemy commanders by degrading intelligence, surveillance, and reconnaissance (ISR) assets, masking friendly movements, and accelerating the tempo of decision-making. Information operations further distort the opponent's situational picture, occasionally allowing limited clarity to encourage capitulation when the futility of continued resistance becomes evident. Denial of awareness thus multiplies the advantages gained through access.

Denying Freedom of Action. Blinded adversaries still possess latent combat power; it must be constrained before it can be re-activated. Distributed manoeuvre and precision fires, synchronised across theatres, target decisive points to strip the opponent of viable options. Control of the global commons — international airspace, sea lines of communication, outer space, and the cyber realm — prevents the enemy from exploiting alternative approaches or

⁸⁸ U.S. Department of Defense. *Major Combat Operations Joint Operating Concept, Version 2.0*. Washington, DC: Department of Defense, December 2006.

https://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/joc_combatops.pdf. P. 21-25

staging areas. Parallel diplomatic initiatives, combined with public-information campaigns, further diminish any residual freedom of action by reducing sympathy or neutrality among external actors.

Disrupting Command and Control. At the centre of the adversary's capability lies his decision-making architecture. Kinetic strikes, cyber intrusion, and psychological operations influence enemy's decision makers, communications relays, and coordination hubs, forcing fragmented and delayed responses. By imposing simultaneous dilemmas the forces induce paralysis and undermine the adversary's capacity to learn and adapt. Such disruption is essential for complementing the physical isolation and manoeuvre achieved in preceding objectives.

Containing Weapons of Mass Destruction and Other Critical Capabilities. A sophisticated or desperate adversary may threaten escalation through weapons of mass destruction (WMD) or disruptive emerging technologies. International diplomatic pressure, declaratory policy, and active counter-proliferation together form the first line of containment. Should deterrence fail, the regular forces may be authorised to conduct pre-emptive or rapid neutralisation strikes against WMD stockpiles, delivery platforms, or enabling infrastructure. This objective safeguards both coalition forces and civilian populations, preventing catastrophic escalation and maintaining political legitimacy.

Disrupting Sustainment Systems. Combat power cannot be regenerated without a functioning sustainment network. Operations therefore target depots, arsenals, distribution nodes, and lines of communication — both domestic and trans-national — to starve front-line units of ammunition, fuel, and replacements. Non-lethal capabilities, such as cyber-attack or electromagnetic disruption, are favoured where collateral risk to civilians is high, particularly in dense urban environments. By degrading sustainment, forces accelerate the exhaustion of enemy formations without necessarily increasing kinetic footprint.

Degrading Critical Infrastructure and Production Capacity. Finally, selected elements of national infrastructure — energy grids, war-related industry, and key transportation facilities — may be struck to prevent the adversary from restoring strategic-level power. Every strike is weighed against humanitarian considerations and long-term stabilisation requirements, consistent with the law of armed conflict. The aim is not destruction in general but the elaborated removal of capabilities that directly support the opposing military, ensuring the enemy cannot restore its capacities once its tactical formations have been defeated.

While the eight operational objectives constitute a universally applicable framework for confronting a state-on-state opponent, their relevance is uneven when the adversary is a non-state

actor. Containing or neutralising weapons of mass destruction, for instance, presupposes capabilities and stockpiles that most irregular forces lack. Similarly, comprehensive denial of battlespace awareness is far more challenging against a technologically advanced regular army whose space-based ISR and resilient communications architecture mitigate such blinding efforts. Gaining and sustaining multidomain access, moreover, which is as much a function of friendly basing, logistics, and protection as it is of adversary degradation, becomes especially complicated when an ill-equipped non-state actor has to achieve this goal. However, the remaining objectives — isolating the opponent, limiting freedom of action, disrupting command and control, interdicting sustainment and logistic support, and degrading critical infrastructure — can be effectively carried out in operations by non-state against state actors. The following chapter will illustrate how these latter objectives can be tailored to an irregular threat, especially in the context of drone warfare.

Drone Warfare

The ongoing conflict in Ukraine is frequently cited as a turning point in modern warfare, with some analysts referring to it as a “drone revolution” on the battlefield⁸⁹⁹⁰⁹¹. However, the foundations for this transformation were laid well before the beginning of the direct military confrontation between Russia and Ukraine, particularly throughout the 2010s. Prior to this period, drones or unmanned aerial vehicles (UAVs) were largely the mean of firepower belonging to technologically advanced militaries such as those of the United States and Israel. These forces primarily employed drones for intelligence, surveillance, and reconnaissance (ISR) across tactical, operational, and strategic levels of warfare, as well as for stand-off precision strikes — often in the form of targeted assassinations against high-value individuals within non-state groups, especially in the Middle East. Yet, the monopoly on drone technology began to erode as non-state actors adapted simpler and more accessible UAVs for their own purposes. By the mid-2010s, drug cartels in Latin America were reportedly using drones to deliver explosives and drop the payload on the targets⁹², while terrorist organisations in the Middle East adopted them for similar attacks, marking a significant shift in the accessibility and tactical application of drone technology⁹³.

In August 2016 a video appeared which captured a Hezbollah-operated drone releasing sub-munitions on its target⁹⁴. In September 2016, a video reportedly showed the jihadist group Jund al Aqsa using a drone to drop an improvised explosive device on Syrian government forces⁹⁵. Hezbollah has claimed to possess such capabilities since September 2014 and was among the early adopters of suicide drones, having deployed

⁸⁹ “Drones Are the Future of Warfare, Like Gunpowder Was.” *Business Insider*, May 2025. <https://www.businessinsider.com/drones-future-warfare-like-gunpowder-once-was-ukraine-russia-belgium-2025-5>.

⁹⁰ Sarah Kreps & Paul Lushenko (2023) Drones in modern war: evolutionary, revolutionary, or both?, *Defense & Security Analysis*, 39:2, 271-274, DOI: 10.1080/14751798.2023.2178599

⁹¹ “Ukraine-Russia War: Drones and Deaths.” *The New York Times*, March 3, 2025. <https://www.nytimes.com/interactive/2025/03/03/world/europe/ukraine-russia-war-drones-deaths.html>.

⁹² “Mexico's Drug War Fought with Drones, Human Shields, Gunships.” *PBS NewsHour*. <https://www.pbs.org/newshour/world/mexicos-drug-war-fought-with-drones-human-shields-gunships>.

⁹³ Hennigan, W.J. “Islamic State's Deadly Drone Operation Is Faltering, but U.S. Commanders See Broader Danger Ahead.” *Los Angeles Times*, September 28, 2017. <https://www.latimes.com/world/la-fg-isis-drones-20170928-story.html>.

⁹⁴ Waters, Nick. “Death from Above: The Drone Bombs of the Caliphate.” *Bellingcat*, February 10, 2017. <https://www.bellingcat.com/news/mena/2017/02/10/death-drone-bombs-caliphate/>.

⁹⁵ Ibid.

them as far back as the 2006 Lebanon War⁹⁶. In 2017 there were conducted almost 300 attacks in which non-state actors had used UAVs⁹⁷. All in all, since 2016 the total number such incidents has exceeded 1000⁹⁸. At this time, the usage of drones by violent groups has been relatively contained, however experts had already expressed their concerns regarding future advancements in this technology and possible proliferation of it among non-state actors⁹⁹. Current military actions carried out in Ukraine and earlier in Nagorno-Karabakh, which had not caused the proliferation of drone technology among non-state actors, have, however, significantly popularised them and accelerated the broader usage of UAVs. Estimates suggest that 65 various non-state actors across the world now possess drone capabilities¹⁰⁰.

Availability of Drones

The rapid development of “commercial-off-the-shelf” drone technology has transformed the operational landscape for non-state actors¹⁰¹. These systems — originally designed for civilian markets — are increasingly repurposed for use in asymmetric warfare due to their affordability, accessibility, and adaptability. The influence of the private sector has pushed these technologies forward, producing drones that are not only cheap and easy to operate but also highly modifiable for specific combat purposes¹⁰². This democratisation of aerial capabilities has rendered drones a highly appealing asset for non-state actors operating with limited financial and logistical resources.

One of the reasons that drones are appealing is in their user-friendly design. These systems, developed for consumers rather than militaries, emphasise ease of use. Miniaturisation and intuitive interfaces have enabled even untrained individuals to operate drones competently. Non-state actors have benefitted from this, as the commercial imperative to simplify technology for hobbyists has incidentally reduced the

⁹⁶ Ibid.

⁹⁷ Rassler, Don. “On the Horizon: The Ukraine War and the Evolving Threat of Drone Terrorism.” *CTC Sentinel*, March 2025. https://ctc.westpoint.edu/wp-content/uploads/2025/03/CTC-SENTINEL-032025_article-4.pdf.

⁹⁸ Ibid.

⁹⁹ Hennigan, W.J. “Islamic State's Deadly Drone Operation Is Faltering, but U.S. Commanders See Broader Danger Ahead.” *Los Angeles Times*, September 28, 2017. <https://www.latimes.com/world/la-fg-isis-drones-20170928-story.html>.

¹⁰⁰ Clausen, Maria-Louise. “Non-State Armed Groups in the Sky.” *Danish Institute for International Studies*. <https://www.diiis.dk/en/research/non-state-armed-groups-in-the-sky>.

¹⁰¹ Rassler, Don. “On the Horizon: The Ukraine War and the Evolving Threat of Drone Terrorism.” *CTC Sentinel*, March 2025. https://ctc.westpoint.edu/wp-content/uploads/2025/03/CTC-SENTINEL-032025_article-4.pdf.

¹⁰² Ibid.

technical barrier for illicit use. Moreover, the relentless pace of commercial innovation—driven by competitive market pressures — has continued to enhance the capabilities of COTS drones while simultaneously reducing costs.

Commercial dynamics play a central role in this transformation. Unlike state actors, who possess the infrastructure and funding necessary for sophisticated military systems, non-state actors rely on technologies that are both budget-conscious and functionally effective. The value these organisations derive from converting low-cost commercial drones into weapons systems far exceeds their initial purchase cost¹⁰³. Leading manufacturers such as DJI have dominated segments of the drone market, particularly for units priced above \$500, while a crowded field of producers offers competitive alternatives below that threshold. Remarkably, drones equipped with high-definition recording and live-streaming capabilities are now available for under \$200.

ISIS, among other groups, has demonstrated considerable ingenuity in the deployment of both quadcopter and fixed-wing drones readily procured from the open market. Though limited to a range of approximately five kilometres and thirty minutes of flight time, such drones nevertheless deliver disproportionate operational advantages comparing with their price. Further analysis has revealed that fixed-wing platforms like the Skyhunter FPV and X-8 Skywalker—both affordable at around \$200—have been employed in intelligence, surveillance, reconnaissance (ISR), and even offensive operations¹⁰⁴. Significantly, technological improvements unrelated to drones per se, such as advances in camera systems, have had a strong positive effect on drone functionality. Each generation of commercial camera innovation has coincided with an increase in drone utility¹⁰⁵, further expanding their battlefield applicability.

Non-state actors have also exploited the modifiability of commercial drones¹⁰⁶. The potential for transformation into weaponised platforms has enhanced innovation, with open-source communities and forums playing a crucial role. Technical resources

¹⁰³ “Air Superiority Under 2000 Feet: Lessons from Waging Drone Warfare Against ISIL.” *War on the Rocks*, May 2018. <https://warontherocks.com/2018/05/air-superiority-under-2000-feet-lessons-from-waging-drone-warfare-against-isil/>.

¹⁰⁴ Serkan Balkan, “Daesh’s Drone Strategy – Technology and the rise of innovative terrorism,” Foundation for Political, Economic and Social Research (SETA) (2017), 17.

¹⁰⁵ Friese, Jones and Smallwood, “Emerging Unmanned Threats: The use of commercially available UAVs by armed non-state actors,” 31.

¹⁰⁶ Rassler, Don. “On the Horizon: The Ukraine War and the Evolving Threat of Drone Terrorism.” *CTC Sentinel*, March 2025. https://ctc.westpoint.edu/wp-content/uploads/2025/03/CTC-SENTINEL-032025_article-4.pdf.

such as OpenPilot provide accessible blueprints for customising autopilot functions¹⁰⁷, while online videos demonstrate the mounting of firearms or flamethrowers onto drones¹⁰⁸. The breadth of this modification culture was evidenced in ISIS-held Mosul, where over a dozen workshops were reportedly dedicated to drone weaponisation¹⁰⁹. The ability to tailor these systems for offensive roles at low cost significantly enhances their strategic value in hybrid and unconventional conflicts.

In essence, drones offer non-state actors substantial tactical flexibility without the need for extensive logistical infrastructure. As the US military officers noted, the combination of increasing capabilities — payload capacity, endurance, autonomy — with declining costs is reshaping the threat landscape to the regular armies¹¹⁰. These characteristics grant non-state actors a decisive advantage in contemporary irregular warfare.

Mechanisms of Access in a Globalised Market

Three factors shape the accessibility of drones to non-state actors: interconnectedness of the world due to the process of globalisation¹¹¹, the diffusion of operational knowledge, and the absence of a coordinated international response. Together, these factors form a favourable environment, particularly within the shady spaces of global commerce.

The globalised nature of today's markets enhances the rapid spread of dual-use technologies. International supply chains, high-volume shipping networks, and online retail ecosystems make restrictions on drone acquisition exceedingly difficult to enforce. Violent actors operating within often benefit from these transnational flows.

Within this unregulated flow of goods, drones and associated components pass with relative ease — both in physical form and as downloadable software¹¹². Commercial developers routinely release software updates and open-source coding platforms, which

¹⁰⁷ Friese, Jones and Smallwood, "Emerging Unmanned Threats: The use of commercially available UAVs by armed non-state actors," 32.

¹⁰⁸ Rassler, *Remotely Piloted Innovation: Terrorism, Drones and Supportive Technology*, 1.

¹⁰⁹ Balkan, Serkan. "Daesh's Drone Strategy – Technology and the Rise of Innovative Terrorism."

Foundation for Political, Economic and Social Research (SETA), 2017. 18.

¹¹⁰ "Counter-Drone Is the New Counter-IED." *C4ISRNET*, March 21, 2017.

<https://www.c4isrnet.com/unmanned/uas/2017/03/21/counter-drone-is-the-new-counter-ied/>.

¹¹¹ "Unmanned Aircraft Systems: Current and Potential Programs." *RAND Corporation*.

https://www.rand.org/content/dam/rand/pubs/reprints/2007/RAND_RP1248.pdf. P. 3.

¹¹² Rassler, Don. "On the Horizon: The Ukraine War and the Evolving Threat of Drone Terrorism." *CTC Sentinel*, March 2025. https://ctc.westpoint.edu/wp-content/uploads/2025/03/CTC-SENTINEL-032025_article-4.pdf.

non-state actors can readily adapt for their purposes. The challenge lies in the sheer volume of these exchanges, which overwhelms enforcement capacity and allows illicit procurement to go unnoticed.

In addition to material proliferation, the internet has ignited the spread of tactical knowledge. Online communities disseminate not only technical guides for drone operation but also strategic insights into battlefield application. This diffusion of ideas — low-risk, scalable, and transnational — has enabled actors to replicate and innovate.

Investigative efforts, such as the study by Conflict Armament Research into ISIS armaments, have exposed the broader ecosystem that sustains such capabilities¹¹³. The findings highlight contradictions in international arms transfers and the porous borders of conflict zones like Syria and Iraq. These regions, characterised by overlapping jurisdictions and weak enforcement, function as supply channels for materiel — including drone components. Though the CAR report focused on improvised explosive device precursors, it underscores the ease with which commercially available items can be acquired.

Operational Use of Drones

We have explored the popularity of drones, examining the factors that make them attractive as well as the various means by which they are acquired. Now, it is time to delve deeper into the practical side — how drones are actually used, and what roles they play once they are in operation. The operational roles can be divided into two categories — direct attack roles and combat support missions¹¹⁴.

Direct attack roles

Anti-tank. Drones equipped for anti-tank operations have become a critical asset on modern battlefields, offering precision strikes against armoured vehicles with reduced risk to personnel. Previously, the anti-tank (AT) capabilities of non-state actors were mainly implemented through AT guided missiles, such as Kornet, or man-portable anti-tank (MANPAT) systems such as the famous RPG-7. However, these systems come with

¹¹³ Conflict Armament Research, *Weapons of the Islamic State* (London, Conflict Armament Research Ltd, 2017)

¹¹⁴ Rassler, Don. “On the Horizon: The Ukraine War and the Evolving Threat of Drone Terrorism.” *CTC Sentinel*, March 2025. https://ctc.westpoint.edu/wp-content/uploads/2025/03/CTC-SENTINEL-032025_article-4.pdf.

notable limitations, including restricted range and significant exposure to counter-fire during execution of the task.

In contrast, drones can engage targets from a safe distance, often striking the most vulnerable parts of combat vehicles—particularly the roof of the hull, which is typically less protected. They have proven effective not only in destroying enemy tanks, but also in disabling other armoured combat vehicles such as APCs and IFVs¹¹⁵. Furthermore, drones can neutralise enemy manoeuvre capabilities by targeting critical components such as the vehicle's movement systems and vision optics, leaving them inoperative even without total destruction. Moreover, modern tanks have proven surprisingly unprepared for numerous simultaneous "swarm" attacks¹¹⁶, where coordinated drone assaults overwhelm defensive systems and exploit blind spots with devastating effect.

The Ukrainian battlefield has demonstrated that even the most heavily protected tanks—such as the Leopard 2 or M1 Abrams¹¹⁷—can be fully destroyed by drone strikes. Numerous war footages have demonstrated the capability of drones to destroy or significantly damage even the most advanced armoured vehicles. The Russian army destroyed its first Leopard-2 tank in June 2023,¹¹⁸ when Ukraine launched its long-anticipated counteroffensive, which eventually failed.¹¹⁹¹²⁰ Though it remains unclear how exactly this tank was destroyed, with high probability of an classical artillery strike being conducted, numerous of the following destroyed Leopards have been effectively struck by drones¹²¹. All in all, there are 40 identified casualties among Leopard-2 tanks, with majority of them being inflicted by drones¹²². In case of Abrams tanks, 22 of them

¹¹⁵ "Attack on Europe: Documenting Ukrainian Military Equipment Losses." *Oryx*, February 2022. <https://www.oryxspioenkop.com/2022/02/attack-on-europe-documenting-ukrainian.html>.

¹¹⁶ McCormick, Gordon, William Rosenau, and Nathan Vest. *Drone Proliferation and the Future of Conflict*. RAND Corporation, 2025. https://www.rand.org/pubs/research_reports/RRA2380-1.html.

¹¹⁷ "Ukraine-Russia War: Drones and Deaths." *The New York Times*, March 3, 2025. <https://www.nytimes.com/interactive/2025/03/03/world/europe/ukraine-russia-war-drones-deaths.html>.

¹¹⁸ Axe, David. "The Russians Just Destroyed Their First Ukrainian Leopard 2 Tank." *Forbes*, June 8, 2023. <https://www.forbes.com/sites/davidaxe/2023/06/08/the-russians-just-destroyed-their-first-ukrainian-leopard-2-tank/>.

¹¹⁹ "U.S., Ukraine Officials Privately Say Counteroffensive Against Russia Has Failed." *The Messenger*. Archived December 7, 2023. <https://web.archive.org/web/20231207234311/https://themessenger.com/politics/us-ukraine-officials-privately-say-counteroffensive-against-russia-has-failed-exclusive>.

¹²⁰ "U.S. Ukraine War Strategy." *The New York Times*, December 11, 2023. Archived December 11, 2023. <https://web.archive.org/web/20231211223050/https://www.nytimes.com/2023/12/11/us/politics/us-ukraine-war-strategy.html>.

¹²¹ Sky News Australia. "Leopard 2A6 Tank Destroyed by Russian Fiber-Optic Drone." YouTube video, 1:08. Posted December 3, 2024. <https://www.youtube.com/watch?v=id48aVBj9Ak>.

¹²² "Attack on Europe: Documenting Ukrainian Military Equipment Losses." *Oryx*, February 2022. <https://www.oryxspioenkop.com/2022/02/attack-on-europe-documenting-ukrainian.html>.html

have been destroyed or damaged, with numerous casualties caused by drones as well¹²³. The situation is similar with Russian, Ukrainian or Soviet-design tanks, which are widely used across the world. In the case of non-state actors, Hamas, for example, has successfully conducted drone attacks against Israeli Merkava tanks¹²⁴, which are also one of the most sophisticated combat vehicles¹²⁵¹²⁶.

It is worth mentioning that the anti-tank strikes do not exclude other types of combat vehicles, as was mentioned, and non-combat vehicles, which can be widely used to transport personnel or equipment. It means that drones have become a cheap, accessible and effective mean of attack against the main armament of any regular armies – their armoured combat and support vehicles – thus reducing state's army firepower and manoeuvre abilities.

Anti-personnel. Drones serve as a cost-effective and highly flexible tool in the anti-personnel role. Often deployed as kamikaze units or being equipped with firearms, grenades, or even improvised explosives, these drones can strike individual soldiers or small groups either by direct hit or dropping munitions, or also known as drone reset tactic¹²⁷, as shown in these footages¹²⁸¹²⁹, especially in areas that are otherwise inaccessible to a fighter with regular small arms and light weapons due to terrain or security barriers. Their ability to operate silently and unpredictably creates significant psychological pressure, particularly on unprepared or poorly protected troops. Even a single casualty caused by such an attack can impose a disproportionate burden on a state—both financially, through medical and compensation costs, and publicly, by affecting morale and political perception. All in all, up to 70-80% of deaths and injuries

¹²³ Ibid.

¹²⁴ "First Conclusions of Hamas' Attack on Israel: Why Missiles Slipped Through the Iron Dome, a Merkava Tank Destroyed by a Camera Drone and Intelligence' Failure." *Defence Express*, October 8, 2023. https://en.defence-ua.com/news/first_conclusions_of_hamas_attack_on_israel_why_missiles_slipped_through_the_iron_dome_a_merkava_tank_destroyed_by_a_camera_drone_and_intelligence_failure-8179.html.

¹²⁵ "Footage Shows Hamas Drone 'Top Attack' Kill Against Israeli Merkava IV Tank." *Military Watch Magazine*, October 8, 2023. <https://militarywatchmagazine.com/article/footage-hamas-drone-kill-merkavaiv>.

¹²⁶ Chávez, Kerry, and Ori Swed. "How Hamas Innovated with Drones to Operate Like an Army." *Bulletin of the Atomic Scientists*, November 2023. <https://thebulletin.org/2023/11/how-hamas-innovated-with-drones-to-operate-like-an-army/>.

¹²⁷ "FPV Drone Tactics & Countermeasures." *Endoacustica Europe*. <https://www.endoacustica.com/fpv-drone-tactics.php>.

¹²⁸ Milinfo Live. Telegram. "https://t.me/milinfo/94382". Accessed 4 June 2025.

¹²⁹ Milinfo Live. Telegram. "https://t.me/milinfo/94367". Accessed 4 June 2025.

are caused by drones in the fights across Ukraine¹³⁰. Non-state actors also use such approach. For instance, when the IDF started its campaign in Gaza, Hamas fighters used drones to drop munitions on the Israeli infantrymen, successfully inflicting casualties¹³¹.

Counter-battery fire. Besides combat and support vehicles, there is another main weapon of regular armies — artillery. Drones play a crucial dual role in counter-battery operations: they are used both to detect and to destroy enemy artillery. Equipped with sensors and optics, drones can detect enemy artillery positions in real time, which gives friendly forces a significant advantage, by identifying muzzle flashes, heat signatures, or by simple “visual observation”. Just as importantly, armed drones can strike these targets directly, reaching deep into rear areas where artillery units often operate from what was once considered a safe distance. Their ability to fly long distances, strike with precision, and operate in swarms makes them especially valuable for neutralising artillery threats swiftly and at scale. Recent experiences during campaigns in Ukraine have demonstrated that both towed and self-propelled artillery¹³² are vulnerable to such drone attacks, challenging the assumption that mobility or concealment alone can ensure survivability.

Antiaircraft, Penetration and/or Suppression of Enemy Air Defence. Drones have increasingly assumed a role in direct attack missions, particularly in anti-aircraft operations and the avoidance and/or suppression of enemy air defences (SEAD). In the anti-aircraft role, drones are employed to conduct counterforce attacks against aircrafts stationed on the ground, targeting airbases to destroy or disable enemy jets before they can take off. Their small size, low radar cross-section, and ability to fly at low altitudes make them difficult to detect, allowing them to approach targets with a higher chance of launching a surprise attack. This capability undermines an regular armies air power, which is a crucial component of any modern state military, at its most vulnerable point, effectively reducing operational readiness.

In parallel, drones are instrumental in SEAD missions, where they are deployed to detect, target, avoid and/or neutralise surface-to-air missile (SAM) systems¹³³. Due to

¹³⁰ “Ukraine-Russia War: Drones and Deaths.” *The New York Times*, March 3, 2025.

<https://www.nytimes.com/interactive/2025/03/03/world/europe/ukraine-russia-war-drones-deaths.html>.

¹³¹ “Hamas Uses Drone to Drop Explosive on Troops in North Gaza’s Jabalia, Wounding 3.” *The Times of Israel*, June 4, 2025. https://www.timesofisrael.com/liveblog_entry/hamas-uses-drone-to-drop-explosive-on-troops-in-north-gazas-jabalia-wounding-3/.

¹³² “Attack on Europe: Documenting Ukrainian Military Equipment Losses.” *Oryx*, February 2022. <https://www.oryxspioenkop.com/2022/02/attack-on-europe-documenting-ukrainian.html>.

¹³³ Kearns, Ian, and Justyna Gudowska. *NATO and the Challenge of Emerging and Disruptive Technologies: A View from NATO’s Partners*. Policy Report. Zurich: Center for Security Studies, ETH

their small size and low-altitude flight profiles, conventional air defences often struggle to detect and hit them effectively¹³⁴¹³⁵ — large SAMs and their radars, designed for high-speed or high-altitude aircrafts, missiles, or large UAVs, such as MQ-9 Reaper or RQ-4 Global Hawk, frequently miss or are wasted against such small, agile targets, meaning that small drones, even one, especially in a “swarm” tactics, *can* and *will* break through air defence and attack their targets¹³⁶. As a result, anti-aircraft artillery and rapid-firing guns remain the most effective means of countering drones in these scenarios. By either striking directly or drawing enemy fire, drones play a crucial role in degrading integrated air defence networks. This dual application not only paves the way for manned aircraft to operate with reduced risk but also marks a strategic shift towards more autonomous and risk-tolerant platforms in modern aerial warfare.

The recent operation of the Ukrainian forces “Spiderweb” is a perfect demonstration of anti-aircraft capabilities of drones¹³⁷. It has demonstrated that small-size drones can remain invisible for conventional air-defence systems, efficiently avoid them, and to conduct surprise attacks against planes, which are located on the ground without proper shelters. In the case of non-state actors, ISIS is known to conduct drones attacks which left conventional air-defence systems ineffective¹³⁸.

Attacks against large fixed targets. Drones have proven highly effective in striking large fixed targets such as command centres, ammunition depots, radar installations, fuel storage sites¹³⁹ or oil refineries¹⁴⁰, infrastructure facilities like bridges,

Zurich, 2024. https://css.ethz.ch/content/dam/ethz/special-interest/gess/cis/center-for-securities-studies/pdfs/NATO_VDA_Policy_Report.pdf.

¹³⁴ Hambling, David. “Russian Report Explains Why Air Defenses Cannot Shoot Down Drones.” *Forbes*, December 6, 2023. <https://www.forbes.com/sites/davidhambling/2023/12/06/russian-report-explains-why-air-defenses-cannot-shoot-down-drones/>.

¹³⁵ “Russians Say Their S-300 SAM Missed a Drone, Which Eventually Dropped Grenades on It in Bryansk Oblast.” *Defense Express*, December 29, 2022. https://en.defence-ua.com/events/russians_say_their_s_300_sam_missed_a_drone_which_eventually_dropped_grenades_on_it_in_bryansk_oblast-5274.html.

¹³⁶ Lopez, C. Todd. “3 U.S. Service Members Killed, Others Injured in Jordan Following Drone Attack.” *U.S. Department of Defense*, January 29, 2024. <https://www.defense.gov/News/News-Stories/Article/Article/3659809/3-us-service-members-killed-others-injured-in-jordan-following-drone-attack/>.

¹³⁷ Mazhulin Artem, Oliver Holmes, Lucy Swan, Laure Bouludier, and Arnel Hecimovic. “Operation Spiderweb: A Visual Guide to Ukraine’s Destruction of Russian Aircraft.” *The Guardian*, June 2, 2025. <https://www.theguardian.com/world/2025/jun/02/operation-spiderweb-visual-guide-ukraine-drone-attack-russian-aircraft>.

¹³⁸ Larter, David B. “SOCOM Commander: Armed ISIS Drones Were 2016’s ‘Most Daunting Problem’.” *Defense News*, May 16, 2017. <https://www.defensenews.com/digital-show-dailies/sofic/2017/05/16/socom-commander-armed-isis-drones-were-2016s-most-daunting-problem/>.

¹³⁹ “Sudan Tribune.” *Sudan Tribune*. <https://sudantribune.com/>.

power stations, energy objects, pontoons¹⁴¹, and even enemy's fortifications¹⁴². Their ability to operate at low altitudes and follow pre-programmed routes allows them to evade detection by radar and air defences. When deployed in swarms or waves, even low-cost drones can overwhelm defensive systems and increase the likelihood of successful strikes. These attacks can cripple an enemy's logistics and command structure without the immediate risk to friendly forces.

Combat Support Roles

ISTAR (Intelligence, Surveillance, Target Acquisition, and Reconnaissance).

Drones play a crucial combat support role through ISTAR missions, providing real-time intelligence and battlefield awareness to commanders at all levels¹⁴³. Their endurance, mobility, and ability to loiter over areas of interest make them ideal for continuous surveillance and reconnaissance in both conventional and asymmetric warfare. Operating at various altitudes, drones can track enemy movements, detect concentrations of forces, and identify potential targets with precision, often without alerting adversaries. This capability enables timely decision-making, more accurate targeting, and greater operational flexibility. Furthermore, drones equipped with advanced sensors — such as electro-optical cameras, infrared systems, and synthetic aperture radar — can function effectively in diverse weather conditions and across day-night cycles, though it is applicable more to advanced state military rather than non-state actors. In target acquisition, they not only detect but also help designate or confirm strike coordinates for artillery, air strikes, or loitering munitions. By reducing the sensor-to-shooter gap, drones significantly enhance the responsiveness and lethality of modern forces, while minimising the exposure of human reconnaissance teams to frontline risks.

Psychological and Information Operations. Beyond their kinetic strike and ISTAR functions, drones have emerged as powerful tools in psychological and

¹⁴⁰ “Russian Energy Facilities Targeted by Ukraine's Drones.” *Reuters*, March 19, 2025.

<https://www.reuters.com/world/europe/russian-energy-facilities-targeted-by-ukraines-drones-2025-03-19/>.

¹⁴¹ “Ukrainian FPV Drones Target Russian Pontoon Crossings in Kursk (Video).” *Defense Express*, August 20, 2024. https://en.defence-ua.com/weapon_and_tech/ukrainian_fpv_drones_target_russian_pontoon_crossings_in_kursk_video-11583.html.

¹⁴² “FPV Drone Operators Dismantle Ukrainian Strongpoint in Zaporozhye Region.” *Komsomolskaya Pravda*, July 17, 2024. <https://www.kp.ru/daily/27609/4959766/>.

¹⁴³ “Military Drones for ISTAR.” *Height Technologies*. Accessed June 5, 2025. <https://heighttechnologies.com/military-istar-drones/>

information warfare¹⁴⁴. The persistent presence of drones over conflict zones creates a constant sense of vulnerability among enemy forces and civilian populations, eroding morale and contributing to a climate of fear and uncertainty. Their ability to strike unexpectedly, often without warning, reinforces the perception that no location is truly safe — whether on the front line or deep in the rear. In the information domain, footage captured by drones — especially of successful strikes or enemy movements — can be rapidly disseminated for propaganda purposes, shaping narratives, influencing public opinion, and undermining enemy's will to fight, which is highly important for non-state actors¹⁴⁵. These visual materials often go viral, amplifying their impact far beyond the battlefield. In addition to that, drones can disseminate propaganda leaflets over enemy positions or use speakers with pre-recorded message which undermines morale of troops¹⁴⁶. Moreover, even unarmed drones can trigger overreactions or false alarms, forcing opponents to expend valuable resources on constant alert. In this way, drones serve not only as instruments of tactical advantage but also as strategic assets in shaping the psychological and informational dimensions of modern warfare.

In modern warfare, drones are increasingly employed for logistical purposes, particularly in the transport of supplies, ammunition, and medical equipment across contested or hard-to-reach areas¹⁴⁷. This capability is especially valuable in environments where traditional supply lines are vulnerable to enemy fire or surveillance. Unmanned aerial vehicles can deliver critical resources with speed and precision, often bypassing terrain obstacles or frontline hazards that would impede manned transport. Moreover, drones are also used to deliver munitions or improvised explosive devices to inaccessible or fortified enemy positions, enabling forces to strike targets that would otherwise be beyond reach without incurring direct risk¹⁴⁸.

¹⁴⁴ “FPV Drone Tactics & Countermeasures.” *Endoacustica Europe*. Accessed June 5, 2025.

<https://www.endoacustica.com/fpv-drone-tactics.php>.

¹⁴⁵ Dulligan, Jake, Laura Freeman, Austin Phoenix, and Bradley Davis. “The Rising Threat of Non-State Actor Commercial Drone Use: Emerging Capabilities and Threats.” *CTC Sentinel* 18, no. 3 (March 2025): 39–45. https://ctc.westpoint.edu/wp-content/uploads/2025/03/CTC-SENTINEL-032025_article-4.pdf.ctc.westpoint.edu

¹⁴⁶ “FPV Drone Tactics & Countermeasures.” *Endoacustica Europe*. Accessed June 5, 2025.

<https://www.endoacustica.com/fpv-drone-tactics.php>.

¹⁴⁷ Amir Emadi, “Contested Logistics: How Heavy-Lift Drones Are Changing the Future of the Military,” *Forbes*, February 21, 2024, <https://www.forbes.com/councils/forbestechcouncil/2024/02/21/contested-logistics-how-heavy-lift-drones-are-changing-the-future-of-the-military/>.

¹⁴⁸ David Hambling, “Mine Craft: Ukrainian Drones Add a New Dimension to Mine Warfare,” *Forbes*, April 3, 2025, <https://www.forbes.com/sites/davidhambling/2025/04/03/mine-craft-ukrainian-drones-add-a-new-dimension-to-mine-warfare/>.

Non-State Actors and Drone Warfare

In this chapter, we build upon our prior analysis of the theory of irregular warfare, examining its application across both the strategic and operational-tactical levels. At the strategic level, non-state actors typically pursue four core objectives: ensuring their own survival, accumulating and securing critical resources, undermining the legitimacy of the opposing state in the eyes of both domestic and international audiences, and ultimately breaking the state military's will to fight. In the military domain, these long-term aims are pursued through the achievement of operational goals, which are themselves executed via carefully planned tactical missions designed to degrade enemy capabilities, shape perceptions, and exert political pressure. Having previously examined the evolution, classification, and general utility of drone technologies, this chapter now turns to how such tools can be employed by non-state actors to strengthen their capacity to wage irregular warfare — beginning at the strategic level and proceeding to operational planning and tactical implementation.

Drones at the Strategic Level

At the strategic level, one of the most significant uses of drones by non-state actors lies in the realm of psychological operations and information warfare. By capturing and disseminating aerial footage — often showing attacks, casualties, or successful penetrations of state defences — non-state groups can shape convenient narratives that serve multiple strategic aims. Such materials are frequently employed to bolster the morale of sympathetic or coerced local populations, to discredit the state's positions in the country, and to erode the perceived legitimacy or competence of state institutions. Moreover, in the digital age, with the access provided by the internet and the general power of social media platforms, these messages can reach not only local but also global audiences. The circulation of drone footage — sometimes stylised or accompanied by commentary — can shape public opinion within the adversary state itself, potentially increasing domestic political pressure on governments to de-escalate or withdraw from contested regions. This dynamic is not new: similar psychological effects were observed in conflicts such as the Vietnam War and the Iraq insurgency, where media imagery and guerrilla communications played a central role in undermining state resolve. Today, however, the accessibility of drone technology combined with globalised media networks

has greatly enhanced the ability of non-state actors to conduct such strategic information campaigns with minimal cost and high visibility.

This factor can also be supplemented by the fact that modern societies, especially in the West, are more vulnerable and less resilient than they used to be. In 1995, one of the most prominent modern military theorists of the West, E. Luttwak, popularised the term “*post-heroic society*” to describe the nature of contemporary societies¹⁴⁹. He argues that, in the absence of a clearly “heroic” rationale for war, modern nations are increasingly unwilling to accept significant sacrifices or casualties. In such post-heroic societies, the public is generally unwilling to support the loss of life for what may be perceived as a marginal or unimportant cause. Even minimal casualties in counter-insurgency operations in the Middle East or Africa have provoked substantial public pressure on Western governments, often contributing to decisions to withdraw from these conflict zones. For example, the loss of merely 19 soldiers in Mogadishu prompted President Clinton to withdraw all U.S. ground forces from Somalia, while the public protests and campaign against Vietnam war were one of the main reasons which forced the US to withdraw from this country.

In the context of modern day irregular formations, this practice has already been used. For instance, during the Oct. 7 attack on Israel, Hamas used a range of drones to attack targets, such as Israeli watchtowers or vehicles¹⁵⁰. Since the initial attack turned out to be a huge tactical success, there were numerous footages with destroyed or damaged targets which were later disseminated.¹⁵¹ The HTS terrorists, who launched their offensive in North-Eastern Syria in late November, have massively used modern drone tactics and circulated numerous footages for propaganda purposes.¹⁵² The same strategy has already been used by the pioneer of drone warfare among non-state actors – ISIS.¹⁵³

¹⁴⁹ Luttwak, Edward N. 1995. “Toward Post-Heroic Warfare.” *Foreign Affairs* 74 (3):109. <https://doi.org/10.2307/20047127>.

¹⁵⁰ Chávez, Kerry, and Ori Swed. 2023. “How Hamas Innovated with Drones to Operate Like an Army.” *Bulletin of the Atomic Scientists*, November 2023. <https://thebulletin.org/2023/11/how-hamas-innovated-with-drones-to-operate-like-an-army/>.

¹⁵¹ Loucaides, Darren. 2023. “The Dangerous Mystery of Hamas’ Missing ‘Suicide Drones’.” *WIRED*, October 2023. <https://www.wired.com/story/hamas-drones-israel-war/>.

¹⁵² McDonald, Broderick. 2024. “The Drones of Hayat Tahrir al-Sham: The Development and Use of UAS in Syria.” *GNET*, December 20, 2024. <https://gnet-research.org/2024/12/20/the-drones-of-hayat-tahrir-al-sham-the-development-and-use-of-uas-in-syria/>.

¹⁵³ “Drone Imagery in Islamic State Propaganda: Flying Like a State.” *International Affairs* 96, no. 4 (2020): 955–973.

Beyond their use in psychological operations and propaganda, drones offer non-state actors a strategic advantage by broadening their recruitment base. The operation of drones does not demand significant physical strength or advanced tactical training, making them accessible to a wider demographic, including women and even children¹⁵⁵. This ease of use allows non-state groups to present drone piloting as a role that virtually anyone can undertake, thereby enhancing their recruitment efforts and expanding participation across traditionally underrepresented groups within militant activities.

Last but not least, the threat posed by drones necessitates a fundamental re-evaluation of previously accepted rules and military doctrines, compelling states to formulate effective counter-drone warfare strategies¹⁵⁶¹⁵⁷¹⁵⁸. This process may impose a significant burden on the state, as it must allocate resources to both the development and implementation of these measures. Furthermore, the deployment of such systems on the battlefield is likely to place additional strain on already limited resources.

Operational Use of Drones. Conventional Warfare

Now we turn our focus to the operational level of warfare. At this level, certain objectives must be pursued to generate meaningful effects within a campaign. These goals typically include isolating the adversary, gaining and maintaining operational access, denying battlespace awareness, and limiting the enemy's freedom of action. While disrupting command and control can pose significant challenges due to the high level of technological development of many regular armies and the existence of reserve ways of communication, it still remains a theoretical possibility. Likewise, objectives such as disrupting sustainment systems and degrading critical infrastructure and production capacities are often within reach, depending on resources and capabilities. However, containing weapons of mass destruction and the task of gaining and maintaining

¹⁵⁴ Chávez, Kerry, and Ori Swed. 2023. "How Hamas Innovated with Drones to Operate Like an Army." *Bulletin of the Atomic Scientists*, November 2023. <https://thebulletin.org/2023/11/how-hamas-innovated-with-drones-to-operate-like-an-army/>.

¹⁵⁵ "Drone Warfare: The Future of Conflict," YouTube video, 14:06, posted by "DefenseTech," March 15, 2023, <https://youtu.be/AOHkJbjmZRU>.

¹⁵⁶ McCormick, Gordon, William Rosenau, and Nathan Vest. *Drone Proliferation and the Future of Conflict*. RAND Corporation, 2025. https://www.rand.org/pubs/research_reports/RR2380-1.html.

¹⁵⁷ Kearns, Ian, and Justyna Gudowska. *NATO and the Challenge of Emerging and Disruptive Technologies: A View from NATO's Partners*. Policy Report. Zurich: Center for Security Studies, ETH Zurich, 2024. https://css.ethz.ch/content/dam/ethz/special-interest/gess/cis/center-for-security-studies/pdfs/NATO_VDA_Policy_Report.pdf.

¹⁵⁸ Archambault, Emil, and Yannick Veilleux-Lepage. *Tower 22: Innovations in Drone Attacks by Non-State Actors*. International Centre for Counter-Terrorism, February 1, 2024. <https://icct.nl/publication/tower-22-innovations-drone-attacks-non-state-actors>.

operational access are generally less relevant in this context, given the fact that these tasks are usually attributed to the state actors.

Isolating the adversary, disrupting sustainment systems and limiting the enemy's freedom of action. As previously analysed, the task of isolating an adversary necessitates the restriction of their manoeuvrability through a coordinated sequence of restricting and access-denial operations across all domains. Drones have demonstrated significant utility in maintaining the isolation of specific areas. This can be demonstrated by the Russian counteroffensive in Ukrainian-occupied sections of the Kursk region, which commenced with a drone-imposed blockade of Ukrainian garrisons stationed in the area¹⁵⁹. Russian drones persistently disrupted the arrival of Ukrainian supplies and reinforcements by destroying transport vehicles, thereby sustaining the isolation. While a comparable large-scale isolation operation has not yet been executed by non-state actors, their increasing tactical sophistication suggests that such capabilities could be developed and employed in the future.

Ukrainian forces are likewise adapting their drones for operations designed to restrict enemy manoeuvre via implementing the project of “wall of drones”¹⁶⁰¹⁶¹. Their aim is to establish a 10–15 km ‘kill zone’ in which opposing units cannot advance appreciably without incurring unacceptable casualties. This shows that the large-scale employment of drones can be a highly effective access-denial tool.

In addition to direct attacks aimed at limiting the manoeuvrability of enemy forces by posing a significant threat to vehicles, drones can also restrict movement through the remote deployment of mines.¹⁶²¹⁶³ This approach allows for remote, precise, and often rapid placement of mines in areas that are difficult or dangerous to access by conventional means, with dynamic mining and pre-emptive mining. Dynamic mining refers to the real-

¹⁵⁹ Hambling, David. 2025. “New Drone Tactics Sealed Russian Victory in Kursk.” *Forbes*, March 17, 2025. <https://www.forbes.com/sites/davidhambling/2025/03/17/new-drone-tactics-sealed-russian-victory-in-kursk/>.

¹⁶⁰ Tanghe, Mila. “Russia Assails Ukraine’s Drone Wall.” *Center for European Policy Analysis* (Europe’s Edge), 4 June 2025. Accessed 6 June 2025. <https://cepa.org/article/russia-assails-ukraines-drone-wall/>

¹⁶¹ Ministry of Defence of Ukraine. “The ‘Drone Line’ Project Has Been Launched in the Defence Forces of Ukraine to Develop UAV-Operating Units.” *Ministry of Defence of Ukraine* (news release), 3 March 2025. Accessed 6 June 2025. <https://mod.gov.ua/en/news/the-drone-line-project-has-been-launched-in-the-defence-forces-of-ukraine-to-develop-uav-operating-units>.

¹⁶² Militarnyi, “Ukrainian Drones Employed for Remote Mining Operations Behind Enemy Lines,” *Militarnyi*, April 3, 2024, <https://militarnyi.com/en/news/ukrainian-drones-employed-for-remote-mining-operations-behind-enemy-lines/>.

¹⁶³ David Hambling, “Mine Craft: Ukrainian Drones Add a New Dimension to Mine Warfare,” *Forbes*, April 3, 2025, <https://www.forbes.com/sites/davidhambling/2025/04/03/mine-craft-ukrainian-drones-add-a-new-dimension-to-mine-warfare/>.

time deployment of mines in response to enemy movement, while pre-emptive mining involves placing mines ahead of anticipated enemy routes to deny access or create ambush conditions. Drones can carry and release these munitions directly onto roads, trails, or vehicle paths, significantly enhancing the flexibility and unpredictability of mine warfare.

In addition to restricting the manoeuvrability of ground forces, drones can also significantly impact freedom of action at sea—potentially with even greater effectiveness. For example, the threat posed by naval drones prompted the Russian Black Sea Fleet to relocate from its usual bases in Crimea to more secure locations in the eastern Black Sea.¹⁶⁴ The threat of Houthi aerial and naval drones (and, to be accurate, missiles as well), which caused significant reshaping of both military and commercial vessels routes in the Red Sea, is another valuable example of the drone influence on the freedom of action.

Denying battlespace awareness. By directly attacking ISR facilities, drones can significantly undermine situational awareness and decision-making processes. Additionally, swarms of low-cost drones can overwhelm defensive systems and sensor grids, forcing adversaries to divert resources towards detection and interception rather than reconnaissance. The employment of such tactics not only obscures the operational picture for opposing forces but also enables greater freedom of manoeuvre for friendly units. Although traditionally associated with state actors, the increasing accessibility of drone technology raises the potential for non-state groups to similarly disrupt battlespace awareness in asymmetric contexts. This can be demonstrated by the Hamas Oct 7 attack which started by drone attacks against Israeli observation capacities,¹⁶⁵¹⁶⁶¹⁶⁷¹⁶⁸ which became one of the key reasons for the initial tactical success.

Disrupting command and control. In the case of a sophisticated military power, such disruption may prove more difficult and less efficient due to the higher resilience

¹⁶⁴ “Russia Ships Black Sea Fleet to Novorossiysk.” *Newsweek*, March 2025.

<https://www.newsweek.com/russia-ships-black-sea-fleet-novorossiysk-1908856>.

¹⁶⁵ Kershner, Isabel. 2023. “Hamas Attack on Israel Shows Advanced Planning.” *The New York Times*, October 10, 2023. <https://www.nytimes.com/2023/10/10/world/middleeast/hamas-israel-attack-gaza.html>.

¹⁶⁶ Chávez, Kerry, and Ori Swed. 2023. “How Hamas Innovated with Drones to Operate Like an Army.” *Bulletin of the Atomic Scientists*, November 2023. <https://thebulletin.org/2023/11/how-hamas-innovated-with-drones-to-operate-like-an-army/>.

¹⁶⁷ “Watch: Hamas Drones Bomb Observation Towers in Multi-Pronged Assault.” *The Telegraph*, October 9, 2023. <https://www.telegraph.co.uk/world-news/2023/10/09/hamas-assault-israel-watchtower-bombings-rockets-gliders/>.

¹⁶⁸ “Hamas Drones Helped Catch Israel Off Guard, Experts Say.” *C4ISRNET*, October 18, 2023. <https://www.c4isrnet.com/global/mideast-africa/2023/10/18/hamas-drones-helped-catch-israel-off-guard-experts-say/>.

and redundancy of its command and control (C2) systems; however, it is still sometimes possible, particularly through coordinated attacks or exploiting overlooked vulnerabilities. Some of the non-state actors have adopted drones as cost-effective tools to disrupt the C2 structures of conventional armies, especially in the form of targeted killings of officers. This asymmetric tactic undermines the traditional technological superiority of state militaries, creating vulnerabilities in their C2 infrastructure. As the technology becomes more accessible, the threat to military C2 networks from agile, decentralised non-state actors is set to grow. This can be demonstrated by the case of HTS offensive in Syria when rebels used drones to destroy top officers¹⁶⁹, field staffs and officer councils of Syrian army¹⁷⁰.

Degrading critical infrastructure and production capacities. Non-state actors are increasingly leveraging drones to degrade critical infrastructure and production capacities, posing a significant threat to national security and economic stability. In fact, this may be one of the most effective ways for such actors to utilise drones, given the relatively low cost and high impact of these operations. UAVs can be deployed to strike power stations, oil refineries, transport hubs, or industrial sites, causing substantial disruption to essential services and supply chains. We must also remember that, unlike military targets, civilian infrastructure is often less resilient and more exposed, with much of it sustaining the daily life of ordinary people — making it especially vulnerable to targeted drone strikes. Real-world examples highlight this risk: the Houthi drone attacks against Saudi and Emirati oil refineries or depots caused significant damage and underscored the strategic vulnerability of critical energy infrastructure¹⁷¹¹⁷²¹⁷³¹⁷⁴. Similarly, recent Ukrainian drone operations in central Russia managed to disrupt air movement and temporarily shut down major airports — demonstrating that just existence

¹⁶⁹ “Shaheen Drone: New Rebel Weapon in Syria Skies.” *Middle East Eye*. Accessed June 5, 2025. <https://www.middleeasteye.net/news/shaheen-drone-new-rebel-weapon-syria-skies>.

¹⁷⁰ McDonald, Broderick. 2024. “The Drones of Hayat Tahrir al-Sham: The Development and Use of UAS in Syria.” *GNET*, December 20, 2024. <https://gnet-research.org/2024/12/20/the-drones-of-hayat-tahrir-al-sham-the-development-and-use-of-uas-in-syria/>.

¹⁷¹ “Continued Houthi Strikes Threaten Saudi Oil and Global Economic Recovery.” *The Washington Institute*. Accessed June 5, 2025. <https://www.washingtoninstitute.org/policy-analysis/continued-houthi-strikes-threaten-saudi-oil-and-global-economic-recovery>.

¹⁷² “Saudi Aramco Jeddah Storage Facility Hit by Attack.” *Al Jazeera*, March 25, 2022. <https://www.aljazeera.com/news/2022/3/25/saudi-aramco-jeddah-storage-facility-hit-by-attack>.

¹⁷³ “Timeline: UAE Drone and Missile Attacks by Houthis in Yemen.” *Al Jazeera*, February 3, 2022. <https://www.aljazeera.com/news/2022/2/3/timeline-uae-drone-missile-attacks-houthis-yemen>.

¹⁷⁴ Hubbard, Ben, and Palko Karasz. 2019. “Drone Strikes on Saudi Oil Facilities Renew Questions of U.S. Alliance.” *The New York Times*, September 14, 2019. <https://www.nytimes.com/2019/09/14/world/middleeast/saudi-arabia-refineries-drone-attack.html>.

of a drone in airspace is sufficient enough to cause massive disruption¹⁷⁵. Such scenarios could easily be replicated by non-state actors, making the threat both realistic and increasingly urgent as drone capabilities continue to evolve, and there are already some reports claiming this happened¹⁷⁶.

Operational Use of Drones. Unconventional Warfare

The preceding analysis has illustrated that drones can equip non-state actors with credible conventional capabilities, thereby enabling them to confront regular state militaries with a relatively high degree of confidence. Nevertheless, unmanned aerial systems may also serve to enhance the effectiveness of unconventional tactics — such as terrorism or guerrilla warfare.

Drones now play a central role in both combat and combat support functions within unconventional warfare. In support roles, they are indispensable tools in ISTAR and psychological operations. Their ability to patrol unseen, gather intelligence in real time, and project a constant sense of threat places pressure on both military forces and civilian populations. In combat, drones grant non-state actors a previously unavailable advantage: the ability to conduct operations across large distances, over broad areas, and from relatively secure positions, all while preserving a degree of precision and effects previously limited to well-equipped state forces.

This technological shift has transformed the way irregular forces execute traditional insurgent tactics such as ambushes, sabotage, and hit-and-run attacks. Operations that once relied on close contact and terrain familiarity can now be managed remotely, with increased lethality and decreased exposure to risk.

In the case of **ambushes**, drones serve as both the eyes and the weapon¹⁷⁷¹⁷⁸¹⁷⁹. They are often deployed ahead of time to track enemy patrols or convoys, gathering key

¹⁷⁵ Jessica Rawnsley, “Ukrainian Drones Strike Moscow Hours before Leaders Arrive for WW2 Parade,” May 7, 2025, <https://www.bbc.com/news/articles/c2dedjn3px3o>.

¹⁷⁶ “Yemen's Houthis claim responsibility for 2 drone attacks on Israeli airport” *Xinhua*, June 5, 2025. <https://english.news.cn/20250605/3494e01086154efdb12d525d2bba1463/c.html>.

¹⁷⁷ Hambling, David. “Ukraine’s Ambush Drones Step Up Attacks Behind Enemy Lines.” *Forbes*, February 3, 2025. <https://www.forbes.com/sites/davidhambling/2025/02/03/ukraines-ambush-drones-step-up-attacks-behind-enemy-lines/>.

¹⁷⁸ Hambling, David. “Russian Pop-Up Ambush Drones Use a Tactic That Could Change Warfare.” *Forbes*, December 6, 2024. <https://www.forbes.com/sites/davidhambling/2024/12/06/russian-pop-up-ambush-drones-use-a-tactic-that-could-change-warfare/>

information about timing, composition, and movement patterns. This enables insurgents to choose ideal terrain, set escape routes, and synchronise attacks with precision. Critically, drones can also act as means of effective firepower during the ambush itself. A sudden swarm attack using multiple drones — armed with small explosives or incendiaries— can be launched from a distance, achieving shock, confusion, and destruction without requiring ground fighters to reveal themselves. This type of aerial ambush significantly increases survivability while delivering devastating tactical results.

Sabotage operations are similarly enhanced.¹⁸⁰¹⁸¹ Drones provide discreet observation of key infrastructure targets — bridges, power lines, fuel depots, or transport hubs — allowing attackers to understand guard routines, identify weak points, and plan for optimal timing. In some cases, the drone itself can carry out the sabotage, delivering a payload directly onto a critical node. The capacity to remotely damage infrastructure without any on-site presence dramatically reduces the operational risk while maintaining high impact.

Hit-and-run tactics have likewise can be improved by drone integration¹⁸². Drones can observe enemy movements, identify temporary vulnerabilities, and guide forces into and out of engagements. Their overwatch capability ensures that attackers strike only when advantageous, and disengage swiftly before a counterattack is possible. As with ambushes, drones may be used directly to strike targets, extending the reach and lethality of the operation.

In terms of **harassment and psychological warfare**, drones exert a continuous burden on conventional forces. Persistent drone activity over military camps, checkpoints, or convoys can inflict sensitive casualties¹⁸³ and may cause overall anxiety, fatigue, and distraction. Even when unarmed, their presence signals surveillance and imminent threat. This forces adversaries to divert manpower to drone defence and constant vigilance, which wears down morale and operational focus over time.

¹⁷⁹ “FPV Drone Tactics & Countermeasures.” *Endoacustica Europe*. Accessed June 5, 2025. <https://www.endoacustica.com/fpv-drone-tactics.php>.

¹⁸⁰ Hambling, David. “Russia’s New Danger: Saboteurs with Drones.” *Forbes*, June 5, 2024. <https://www.forbes.com/sites/davidhambling/2024/06/05/russias-new-danger-saboteurs-with-drones/>.

¹⁸¹ “FPV Drone Tactics & Countermeasures.” *Endoacustica Europe*. Accessed June 5, 2025. <https://www.endoacustica.com/fpv-drone-tactics.php>.

¹⁸² Ibid.

¹⁸³ Lopez, C. Todd. “3 U.S. Service Members Killed, Others Injured in Jordan Following Drone Attack.” *U.S. Department of Defense*, January 29, 2024. <https://www.defense.gov/News/News-Stories/Article/Article/3659809/3-us-service-members-killed-others-injured-in-jordan-following-drone-attack/>.

As already covered in the section on **mining and booby traps**, drones assist by identifying vulnerable routes and security gaps, enabling more effective placement of these devices while keeping operators at a safe distance.

In the realm of **terror attacks**, drones provide irregular actors with a flexible and psychologically potent weapon. Often derived from commercially available civilian models, drones can be adapted to carry small explosive charges or improvised munitions into crowded urban areas or symbolic targets. What makes this especially insidious is the dual-use nature of such drones: widely available and commonly used for peaceful purposes—recreational flying, photography, or delivery—their presence alone does not signal danger. This ambiguity deepens the psychological impact. In a city already under threat, the question lingers: *is that drone overhead harmless—or is it about to drop a bomb or conduct a kamikaze attack?* This uncertainty generates persistent fear, undermines public confidence in security forces, and further magnifies the disruptive potential of even a single attack.

Conclusion

The proliferation of drone technology has profoundly reshaped the dynamics of irregular warfare, significantly enhancing both the strategic and operational capacities of non-state actors. By equipping these groups with a quasi-air force capability, drones have enabled even relatively unsophisticated organisations to conduct precision strikes, real-time surveillance, and coordinated attacks—capabilities once exclusive to state militaries. On the strategic level, drones contribute to broadening the recruitment base by reducing the physical demands of combat, thereby enabling participation by women and even children as operators. They also serve as powerful tools of propaganda and psychological warfare, projecting power, intimidating adversaries, and generating media attention. Simultaneously, they compel state actors to commit vast financial and technological resources toward often inadequate counter-drone defences, thereby exerting economic and psychological pressure.

Operationally, drones offer non-state actors a cheap, effective, and adaptable tool for disrupting enemy movements, targeting high-value assets, and overcoming traditional military disadvantages. Existing air defence systems, typically optimised for conventional aerial threats, frequently struggle to counter small, low-flying, and numerous unmanned systems. This gap enables irregular forces to inflict substantial tactical damage and shape battlefield outcomes with minimal investment. As a result, many non-state actors—including groups formally designated as terrorist organisations—are becoming more capable and thus more dangerous. Their growing proficiency in drone warfare represents a serious and evolving threat to national and international security.

In light of these developments, state militaries must rapidly adapt to this new paradigm. This includes not only investing in scalable and cost-effective counter-drone technologies but also revising doctrines, training, and operational planning to account for the asymmetric threat posed by drone-enabled irregular forces. The future of irregular warfare will not be determined by firepower alone, but by the ability to anticipate, counter, and outmanoeuvre an adversary empowered by accessible and disruptive technology. The age of drone-enabled irregular warfare has already arrived, and it demands a serious, sustained, and strategic response.

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