

Germany and Israel – Approaches to the Future Battlefield: The Armed Drones as a Case Study

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Carl von Clausewitz – one of the greatest theoreticians of war – distinguishes between the nature of war, which he refers to as the concept of fighting, and the conduct of fighting. The nature of war, he explains, is constant and reflects the use of violence as a means to achieve goals – whether territory, resources, influence or honour. It is a constant feature of human history, and is not expected to change unless a fundamental change takes place in human nature itself. On the other hand, wars change dramatically in the way they are being conducted, and in accordance with cultural and technological developments.

Indeed, alongside traditional characteristics and familiar political reasoning, modern wars are different from the old ‘great wars’ in many ways. One of the main changes on the battlefield in recent years has come about due to dramatic technological developments: these have led to innovative protective measures, sophisticated intelligence capabilities, and advanced electronic weapon systems, all of which intensely influence the nature of warfare.

These changes have a tremendous impact on a wide variety of issues related to the concept of war. As such, almost all armies face new challenges regarding the adaptation of their forces and methods of fighting to the modern battlefield. However, different countries respond to their specific security challenges disparately in this regard.

The Role of the Army

On 16 July 2016, the German Federal Government released the much-anticipated new White Paper for security policy and the future of the Bundeswehr.¹ The purpose of the paper was to articulate the current and future strategic goals of the German government, thereby setting out the country's "principal guideline for [...] security policy decisions and measures."²

In the document the mission of the Bundeswehr is defined as follows:

- "Defend Germany's sovereignty and territorial integrity and protect its citizens.
- Contribute to the resilience of state and society against external threats.
- Support and ensure Germany's ability to take action in matters of foreign and security policy.
- Contribute, together with partners and allies, to countering security threats to our open society, and to our free and safe world trade and supply routes.
- Contribute to the defence of our allies, and to the protection of their citizens.
- Promote security and stability in an international framework.
- Strengthen European integration, the transatlantic partnership, and multinational cooperation."³

According to these principles then, the main role of the German army is to defend Germany from any outside attack, and to support its allies in an event of war. Another – internal – role of the Bundeswehr is that of helping the federal government or the states' governments in case of natural disaster.⁴ The other main mission of the Bundeswehr is to be ready to deploy as part of a multinational coalition. The approval process for deploying Bundeswehr units outside Germany

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is political, legal, and social: if the federal government wishes to send the units to be deployed abroad it must gain parliamentary approval. This approval process – which purports to achieve a holistic view of deployment objectives – was created so as to diminish the government's ability to participate in military campaigns.⁵ These two main missions do not affect the force generation process of the Bundeswehr, which is focused on the concept of a Single Set of Forces, i.e. to create a task-oriented capable single force that can be employed in both scenarios.⁶

In April 2018, then Chief of Staff of the Israel Defense Forces (IDF), Lieutenant General Gadi Eizenkot, released the document known as the IDF strategy. This was the first time the IDF strategy was publicly released; it is usually disseminated only inside the IDF. The document serves as a compass for new operational and force generation concepts. The purpose of this unusual publication was, as Brigadier General Dr. Meir Einkel argued, “to increase the transparency between the IDF, the political echelon, and the public, and to encourage the political echelon to relate to the ideas expressed in it as a response of sorts to the absence of official national security documents.”⁷ In the document it is stated that “[t]he objective of the IDF is to defend the security of the state of Israel, its citizens and inhabitants and secure [the state's] existence and territorial integrity and national interests and to win any conflict he is called upon by the political authority”.⁸

To do so, the IDF forces and units need to be capable of operating in three fundamental scenarios: first, on operational deployments (border protection) in peace time; second, in case of military, security and civil emergencies; third, in war.⁹ In the first two scenarios some of the IDF forces need to be able to participate in what is termed the ‘war between war’ (in Hebrew: *Mabam*), i.e. military operations which fall below the threshold of war, or grey zone operations, intended to minimise emerging and existing threats.¹⁰ The force generation concept, according to the document, is similar to that of Germany: creating a force that is flexible and agile enough to be efficient in all the different functions.¹¹ The main role of both armies is to defend the territory of the state and its citizens. However, they are trying to prepare for this mission while also engaging in operational deployments.

The Future Battlefield

Although the official goals of the two armies have a common denominator, as far as the future battlefield is concerned, there is great variation between the Bundeswehr and the IDF. The German government's strategic documents, and the concept of the Bundeswehr, do not mention a Pace threat, but instead different general amorphous threats. The IDF, however, points to a clearly defined threat: war with Hezbollah. The focus is not only on Hezbollah but also on the military capabilities of Iran and its proxies.¹²

In 2018, the German Minister of Defence signed a paper on the new "concept of the Bundeswehr". This sets out the overall concept of the Bundeswehr. Cyber and information war are mentioned as dimensions that reduce differences between front and home front, and need to be addressed not only by the Bundeswehr but by the entire government. Thus, the Bundeswehr is only part of a national effort to address the threats in these dimensions.¹³

On 9 February 2021, then German Defence Minister Annegret Kramp-Karrenbauer and the Generalinspekteur of the Bundeswehr, General Eberhard Zorn, published a position paper titled "Thoughts on the Bundeswehr of the future" ("Gedanken zur Bundeswehr der Zukunft").¹⁴ They argued that Germany does not see military force as a tool for conflict resolution or as an aid to diplomacy in the same way that other nations do. Furthermore, they noted, the country and the army are "poorly prepared" ("schlecht gewappnet")¹⁵ for new kind of threats, such as drones, killer satellites, hypersonic missiles, cyber threats, and other non-kinetic threats.¹⁶ This statement was part of the endeavour of Kramp-Karrenbauer and Zorn to approve the reform they had planned. Inside the Bundeswehr, a 2020 study on 'Future Warfare' describes the future battlefield in a similar manner. It argues that the patterns of military conflict are changing,¹⁷ and focuses on how new technologies and non-kinetic threats will affect the future battlefield. The new array of threats is derived mainly from leaps in digital information capabilities and the dissemination of new technologies. The paper argues that "thus, [it] is a new, highly technological theatre of war: the Multi-Domain Battlefield (MDB), which is more than just challenging the decades of established focus on the

'classic' dimensions of land, air and sea. Space and cyberspace are de facto already new battlefields."¹⁸

As the senior officers of the Bundeswehr visualise the future battlefield, they argue that the war will be fought in five dimensions (air, cyber, information, land, and space). New technologies will diminish the distinct separation of front lines and the home front. In this manner, the Bundeswehr will form one part of the whole-of-government approach.

In March 2021, the Institute for National Security Studies (INSS) in Israel published a memorandum depicting the shape future threats from Hezbollah might take, and which operational scenarios are best-suited to cope with them. The authors claim that in a future war, "Israel is expected to suffer widespread damage, at least in the initial stage of the war, in a number of areas: there is a possibility of attempts to harm Israel's vital capabilities, for example, by hitting IDF facilities (headquarters, air force bases, reserve recruitment centers); attacks on strategic infrastructures and vital services (sea and air ports, energy and water facilities, transportation); targeting of government assets; disruptions to the economy (upsetting functional continuity); and strikes on population centers. Such tactics will be aimed at undermining Israeli citizens' sense of security and national resilience. All this suggests that the next war will claim a high price – far higher than that seen in previous wars."¹⁹ Furthermore, the new capabilities of Hezbollah and Iran allow them to attack Israel and the IDF units in the cyber, information, and electromagnetic realms.²⁰

Both Israeli and German armies identify similar emerging trends regarding the battlefield of the future. First, future wars will be more technological, due to the dissemination of new technologies. Second, they will be fought both in the front lines and on the home front. Third, the importance of the cyber and information dimensions has increased and will continue to increase because of the technological advances.

Despite the slight differences in the force structure and the peace threat, the Bundeswehr and the IDF share a common solution to their particular operational challenges: multi-domain warfare. The ability to employ Bundeswehr capabilities in all dimensions is a recurrent

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theme in the defence ministry and in Bundeswehr strategic papers.²¹ The IDF current chief of staff, Lieutenant General Aviv Kochavi, created a new operational concept for the IDF, which was named “the victory concept”.²² The cornerstone of the concept is a multi-domain effort to shorten the duration of the war, its costs for Israel and the IDF, and inflict maximum damage to the enemy.²³

The Discourse

As mentioned above, one of the characteristics of the new battlefield is the increasing use of innovative weapon systems. These systems are often characterised as being accurate and smart, and based on artificial intelligence and robotic operation. In addition to many distinct advantages, they are also cost-effective when it comes to risking human lives, both for bystanders as well as for combatants.

On the other hand – as any technological apparatus based on artificial intelligence – new challenges arise with regard to these systems, too. One of the tools that is increasingly being used is the UAV (unmanned aerial vehicle) – a remotely manned aircraft. The usage of these tools engender two main axes of discussion. One focuses on professional-operational issues. These include, inter alia: usage of the tools; protection against usage by the enemy; and relationship between the use of new tools and more traditional military techniques, such as land manoeuvring. The second axis relates to ethical and normative issues regarding the implications which arise from the transition to warfare using tools with fewer human dimensions.

It is interesting to trace these axes also through a comparative view between Israel and Germany. In general, while in Germany the moral debate occupies a central pillar when it comes to discussing the use of artificial-intelligence-guided weapon systems. In Israel, however, the debate at both military and political levels focuses on operational aspects, as well as on certain legal questions regarding regulation of the use of “remotely operated objects”. The question in the centre of this debate is whether it is possible to achieve systemic and strategic goals, and overcome military foes using stand-off capabilities, and by means of an air system only. Another central question is how to

define the operationally correct balance, considering the requirements of each mission, between the use of ground forces and the use of armed drones. Furthermore, on the margins of the discussion, the transition to a technology-based army in Israel also has consequences for the army's future recruitment model and manpower needs.

In Israel, conscription is mandated by law, and the model of service is that of the 'People's Army'. This model is based, among other things, on a security concept of the need for maximum manpower. This need is now subject to a renewed interpretation in view of the introduction and centrality of modern weapon systems. Recently, the debate has also been expressed in constitutional-political questions regarding who has the authority to direct the use of these tools, and also regarding how they are deployed in the context of the policy of targeted killing which, in Israel's view, forms part of its fight against terror.

This discussion came to the fore in the light of a statement from the Israeli Chief of Staff according to which he granted permission to use armed drones in the West Bank as part of an ongoing and extensive operation against terrorist infrastructures (named "Shover Galim"). However, even in relation to this statement the discussion revolved around the question of who has the authority to order the use of these tools. In response to the Chief of Staff's statement, the Minister of Defence clarified that only he has the right to issue such a directive. The debate did not focus on moral questions about the very use of the tools and their implications for the morality of the war. The general perception in Israel is that the moral aspects regarding the usage of this tool are covered by the well-known debate on the moral status of the practice of targeted killing. There are clear legal and moral questions surrounding this practice, not least that it involves a de facto procedure of execution. However, the practice has been sanctioned by the Israeli Supreme Court. The court ruled that as long as the practice is used against what has received the title "ticking bombs", then it is legal.

Uzi Rubin, of the Begin-Sadat Center for Strategic Studies, claimed that use of new technologies has led to "[a] new form of warfare that is more economical in resources and losses." He also refers to

reducing the risk to aircrew members in the Israeli Air Force, the loss of whom forms one of the sensitive points in Israeli society.

Meanwhile, in Germany, the question of whether the Bundeswehr should be able to use armed drones and kill remotely was initially excluded from the German coalition agreement in 2018. Yet, in that same year the Bundestag approved the lease of five Heron TP drones made by Israel Aerospace Industries for a duration of nine years. Lydia Wachs, a Research Assistant at the German Institute for International and Security Affairs in Berlin, notes that the governing coalition of Social Democrats (SPD) and then Chancellor Angela Merkel's Christian Democrats (CDU) agreed that the Bundestag would decide on arming its drones only after a comprehensive assessment of international and constitutional law, as well as ethics.²⁴

In December 2020, after visiting German troops in Afghanistan's Kunduz province, the Minister of Defence Annegret Kramp-Karrenbauer (CDU) stated that "if I'm to take the troops' wishes on board, and honestly, I can understand them, then much speaks in favour of arming drones (...) Here you have to seriously ask whether we are really willing not to deploy all the options that are available to us, bearing in mind that soldiers' lives are at stake."²⁵

She then set up a series of panel discussions involving experts, politicians, and representatives of civil society. The discussions on the use of drones revolved around professional questions. However, not only from a military perspective but also from legal and moral point of views.

Wachs sums up the German debate on armed drones as follows: "Those in favour of procuring armed drones - first and foremost the CDU - have repeatedly underlined that these systems would be about the right to the best possible protection for deployed German forces in hotspots around the world. By accompanying troops on patrol, armed drones could provide close air support and better protection in an emergency. Furthermore, due to their greater precision, armed drones – if used – would cause fewer civilian fatalities. Within the critical and largely pacifist German public, drones, however, conjure up images of US-American extraterritorial targeted killings in Pakistan, Yemen, and Somalia. Turkey's drone operations against

Kurdish groups since 2016 and the Nagorno-Karabakh conflict, which re-erupted in September 2020, generating numerous publicly available videos of Azerbaijan drones striking on Armenian military vehicles and buildings, have further contributed to this picture (...) [T]he Greens and Left Party (...) raise concerns that the deployment of military UAVS may lead to a growing distance between the drone pilot and the battle ground, risking emotional indifference as well as a lower threshold for warfare on an operational as well as political level (...)."

Russia's war against Ukraine, in addition to numerous other changes to Germany's foreign policy principles, has provided a new stimulus to the debate on armed drones. On 27 February 2022, Chancellor Olaf Scholz announced that the Federal Government would actively pursue the "acquisition of the armed Heron drone".²⁶ In April, the Defence Committee of the Bundestag voted in favour of ordering the missiles necessary to arm the Heron drones. The current government plans to make concrete use of such devices subject to prior approval by parliament.²⁷

The Philosophical Moral Debate

In his article "Drones and Robots: On the Changing Practice of Warfare",²⁸ Danny Statman (an Israeli philosopher specialising in combat ethics) states: "the question regarding the morality of drones is a good illustration of a wider theoretical question: namely, whether, and in what ways, technological developments that transform traditional practices necessitate changes in the norms that govern these practices. In a sense, the answer is obviously affirmative because the application of moral principles always depends on premises about the factual reality. If reality changes, the moral norms also change. What is less obvious is whether the underlying moral principles change as well."²⁹ Statman enumerates a number of claims that are frequently raised in the discussion, opposing the development and use of these tools. Among the claims he states:

- **Disrespectful death** – Some people think that a human being deserves to be able to at least point to his or her killer(s) (and condemn them if they are unjust) – even if

said killers are cruising 20,000 feet above in a plane. The thought is that at least a human being in a plane high above is less of a “faceless” death wrought upon someone than a robot being operated remotely would be.³⁰

- ➔ **Risk-free killing undermines the license to kill in war –** This refers to the moral basis for distinguishing between combatants and non-combatants, centred on the mutual risk they pose one another. Those who oppose the use of drones sometimes claim that the lack of risk to the person who operates them, undermines their license to kill combatants.
- ➔ **Accountability –** This claim raises a question which is relevant to any system based on artificial intelligence, according to which in the event of an accident it is not clear who is held responsible for the damage.

Another central claim in the moral debate on the activation of weapon systems that rely on artificial intelligence warns from an “easy finger on the trigger”. According to this claim, in the absence of components that constrain an attack, such as fear of putting fighters at risk, or psychological difficulties in “killing with one’s hands”, states might launch attacks more easily. Of course, this concern also exists in relation to classic bombings from the air, but it exists even more strongly in relation to the weapon systems in question. Statman refers to this claim, too: “The main worry”, he explains, “is that the distance between the drone operators and their victims will lead to a more callous attitude towards killing.”

Nevertheless, Statman largely dismisses the above arguments, concluding: “One must always be cautious in predicting the future. Nevertheless, compared with the grand battles of the past, with their shockingly high toll of casualties, drone-centred campaigns seem much more humane. They also enable a better fit between moral responsibility and vulnerability to defensive action. Judged against bombers, cruise missiles – and, obviously, against various kinds of weapons of mass destruction – the drone may well be remembered in the annals of warfare as offering real promise for moral progress.”³¹

Conclusions

In summary, Germany and Israel share a similar perception of the characteristics of the future battlefield, and a common understanding of the operational concept. However, they differ in the way the challenges posed by a battlefield based on advanced technologies and artificial intelligence are reflected in the discourse. In Israel the main discussion revolves around professional questions regarding the operation of the innovative weapon systems, and the optimal manner to integrate them alongside more traditional land manoeuvres. Meanwhile, in Germany, these systems mainly raised legal and ethical questions regarding their use.

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- 10 Ibid., pp. 24.
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- 12 Ibid., pp. 16–17.
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- 21 See for example: BMVg (2018), pp. 29–30.
- 22 The first translation from Hebrew for the paper was incorrect because the name in Hebrew is *Tfifat hanitzahon*, i.e. the victory concept.
- 23 Gabi Siboni/Yuval Bazak (2021). The IDF “Victory Doctrine”: The Need for an Updated Doctrine. In: JISS. <https://jiss.org.il/en/siboni-idf-victory-doctrine-the-need-for-an-updated-doctrine/> [11 Oct 2022]; LTG Aviv Kohavi (2020). The Chief of Staff introduction. In: Dado Center Journal 28-30, pp. 7–10.
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- 27 <https://www.tagesschau.de/inland/verteidigungsausschuss-bundeswehrdrohne-101.html>
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