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# Visions on Future War

## *The War in Ukraine as Litmus Test*

Frans Osinga\*

### Introduction

The three relatively peaceful decades following the end of the Cold War have seen a lively debate on the future of war producing many types of often contrasting visions, inspired by recent traumatic strategic experiences, the rise of new types of actors in international politics, emerging threatening or promising technological developments, specific security concerns of a society or the ambitions of a specific service. Several emerged from and focused on the US military, whereas others arose within the European security culture. Most suffered from presentism, emphasising either continuities or disruptive innovations due to the expected impact of new technologies or offering normative arguments. At least five such visions can be distilled: (1) Sophisticated Barbarism; (2) Humanitarian Wars; (3) Immaculate War; (4) Cool War; (5) Major War. The ongoing war in Ukraine has once again inspired analysts to assess what observed features mean for the future of war. This article sketches the main contours of Western visions on the future of war prior to the start of the war on 24 February 2022. Next it interrogates the validity of those visions by confronting them with the evolution of that war and shows it contains features of several visions of the future but also paradoxical ones. If that war, and what happened on the international scene since then, offers any indication, those existing visions serve analytical and policy-making purposes and contain a warning: reducing expectations on the shape of future war to one dominant perspective contains significant political and military. Indeed, currently the West is challenged by the multiple futures simultaneously becoming the present.

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## Sophisticated Barbarism

The fist perspective – Sophisticated Barbarism – sees a bleak future with wars conducted primarily by violent non-state actors in an ecosystem of terrorist movements, well-armed criminal organisations, warlords with their militias and insurgents, and private military companies. While identity – religious or ethnic – often superficially serves as a rallying flag and motive for persistent fanatical struggle, they merge with economic profit and raw power politics. Martin van Creveld already described the dynamics of such wars and the threat these posed for liberal democratic western societies in his much praised *The Transformation of War* (1989). Similarly, dynamics of identity-driven conflicts are sketched in Mary Kaldor's 'New Wars' thesis (1999), as well as in the '4th Generation Warfare' concept (1989) and in Frank Hoffman's 'Hybrid Conflict' concept from 2007.<sup>1</sup> All argue that violent non-state actors will increasingly be equipped with easily attainable kinetic (drones, missiles) and non-kinetic tools (cyberattacks), posing a direct threat to Western militaries and societies. They can easily organise themselves into 'smart mobs' via social media. In the wake of the insurgencies in Iraq and Afghanistan, the rise of ISIS, Boko Haram, Hamas and Hezbollah, recently authors, such as Kilcullen and McFate,<sup>2</sup> warn how these groups win wars, not by military victory but by way of terrorizing populations through barbaric massacres, ethnic cleansing, rape, torture, bombing and public hangings, deliberately ignoring the distinction between civilians and

combatants. They subsequently gain power over local governments and, as a result, gain a certain measure of support, also in the West. With cities increasingly turning into battlefields, they can deny Western militaries the advantage of their superior technology, saddling Western governments with the prospect of very risky and bloody humanitarian interventions. State supported private military companies, but also regular troops, commit similar atrocities on behalf of authoritarian regimes in efforts to suppress opposition or minorities. There will be a 'durable disorder', according to McFate, repeating Kaplan's 1990s warning against the spread of anarchism in large parts of the world.<sup>3</sup> For Western militaries this vision holds that 'the future is irregular', according to Seth Jones, and they need to be prepared for counterinsurgency operations in the many protracted conflicts in unstable regions, the so-called Arc of Instability.<sup>4</sup>

## Humanitarian Wars

The second vision, related to the first one, finds its inspiration exactly in the civil wars in this Arc of Instability. It argues that the West should focus on humanitarian crises and be prepared, militarily and politically, to conduct corresponding humanitarian operations and end the horrors of sophisticated barbarism. As Kaldor stated forcefully, such 'Humanitarian Wars' are and should remain the sole justification for the use of the military instrument by the West. Recently labelling this the 'liberal peace security culture', she basically repeats her influential normative cosmopolitan vision of the end of the 1990s, which played a role in the emergence of the Responsibility to Protect concept and projects a future in which Western nations (now that they are safe) are morally obliged to end wars in failing and fragile states and contain the endemic violence through peacekeeping operations.<sup>5</sup> Because humanitarian values are key, as Christopher Coker observes in his book *Humane Warfare*, in order to maintain political and public support, the Western militaries are obliged to take every possible precaution to limit the risk of own military losses, civilian casualties and collateral damage. The West is humanizing

1 Martin van Creveld, *The Transformation of War* (New York, The Free Press, 1991); Mary Kaldor, *New and Old Wars. Organized Violence in a Global Era* (Cambridge, Polity Press, 1999); Bill Lind et al., 'The Changing Face of War. Into the Fourth Generation', *Marine Corps Gazette* 85, No.11 (1989) 22-26; Frank Hoffman, *Conflict in the 21st Century. The Rise of Hybrid Wars* (Arlington, The Potomac Institute for Policy Studies, December 2007).

2 David Kilcullen, *Out of the Mountains. The Coming of Age of the Urban Guerilla* (Oxford University Press, 2013); Sean McFate, *The New Rules of War. Victory in the Age of Durable Disorder* (New York, William Morrow, 2019).

3 See for instance Robert Kaplan, *The Coming Anarchy. Shattering the Dreams of the Post Cold War* (New York, Vintage Books, 2001).

4 Seth Jones, 'The Future of Warfare is Irregular', *The National Interest*, 26 August 2018.

5 Mary Kaldor, *Global Security Cultures* (Cambridge, Polity Press, 2018).

warfare and putting the individual human being back once again at the very centre of modern warfare.<sup>6</sup>

## Immaculate War

The third vision – Immaculate Warfare – agrees with the previous two, but sees new strategic and operational modes of operation emerging among Western militaries. In the light of the failing stabilization and COIN missions in Iraq and Afghanistan, the high risks of incurring casualties in peace and COIN operations, and because of other pressing international security threats, the West will in the future refrain from employing large troop contingents in a conflict zone. Instead they will increasingly resort to employing special forces teams, training of proxy forces and long-endurance reconnaissance drones capable of observing large areas. If required, insurgents or a specific leader of a terrorist group can be neutralized by special forces raids or precision strikes by armed drones. Risk management is the key concept: containing the risk that violent non-state groups may cause regional destabilisation and/or form a direct threat to the West.<sup>7</sup> The Western campaign against ISIS in Iraq is an example of this. Martin Shaw cynically labelled this strategic concept as Risk Transfer Warfare, in which all the inherent risks of war – civilian casualties, collateral damage – will be ‘transferred’ to the target society. Similarly, other critical authors recently called it ‘Surrogate Warfare’, in which the West wants to exert influence in conflict areas but is not willing to accept the associated risks and, instead, employs minimal physical presence on the ground and therefore runs minimal political risk.<sup>8</sup> War has become a form of political risk management.

## Cool War

The return of great-power competition is the backdrop of the fourth vision: ‘Cool War’. Along with similarly oriented concepts, such as ‘hybrid threats’, ‘new total warfare’, ‘political warfare’, ‘soft war’ and ‘gray zone warfare’,<sup>9</sup> Cool War

denotes the wide range of non-military instruments and activities non-Western states exploit to exert influence in various sections of Western society,<sup>10</sup> such as economic espionage, cyberattacks, economic sanctions and financial warfare, bribing and intimidating politicians (and elimination by poisoning, if necessary), and financing and even arming militant anti-European political groups in democratic states.<sup>11</sup> ‘Cool’ social media facilitate the rapid and widespread dissemination of disinformation and fake news through troll armies, as Peter Singer shows in his *Like Wars*.<sup>12</sup> Indeed, echoing the tenets of the Chinese book *Unrestricted Warfare* of 2002, Galeotti has observed recently, ‘everything has become weaponized’. War and peace merge.<sup>13</sup> With open democratic societies inherently vulnerable, societal resilience and a whole-of-society approach is called for as a counter to ‘Cool War’.<sup>14</sup>

- 6 Christopher Coker, *Humane Warfare* (London, Routledge, 2001).
- 7 Daniel Byman, ‘Why States are Turning to Proxy War’, *The National Interest*, 26 August 2018.
- 8 Andreas Krieg and Jean-Marc Rickli, ‘Surrogate Warfare: the Art of War in the 21st Century?’, *Defence Studies* 18, No.2 (2018) 113-130; Martin Shaw, *The New Western Way of War. Risk-Transfer War and its Crisis in Iraq* (Cambridge, Polity Press, 2005).
- 9 Michael Mazarr et al., *What Deters and Why* (Santa Monica, RAND, 2018); Michael C. McCarthy, Matthew A. Moyer and Brett H. Venable, *Deterring Russia In The Gray Zone* (US Army SSI, March 2019); Gregory F. Treverton, Andrew Thvedt, Alicia R. Chen, Kathy Lee and Madeline McCue, *Addressing Hybrid Threats* (Swedish Defence University, 2018); Alina Polyakova and Spencer P. Boyer, *The Future Of Political Warfare. Russia, The West, and The Coming Age Of Global Digital Competition* (Washington D.C., Brookings Institution, 2017).
- 10 David Rothkopf, ‘The Cool War’, *Foreign Policy*, 20 February 2013; Noah Feldman, *Cool War. The Future of Global Competition* (New York, Random House, 2013); Michael Gross and Tamar Meisels (eds.), *Soft War. The Ethics of Unarmed Conflict* (Cambridge, Cambridge University Press, 2017).
- 11 Todd C. Helmus et al., *Media Influence Understanding Russian Propaganda in Eastern Europe* (Santa Monica, RAND, 2018); Michael J. Mazarr et al., *Hostile Social Manipulation Present Realities and Emerging Trends* (Santa Monica, RAND, 2019).
- 12 Peter Singer, *Like War. The Weaponization of Social Media* (Boston, Eamon Dolan, 2018).
- 13 Qiao Liang and Wang Xiangsui, *Unrestricted Warfare. China’s Master Plan to Destroy America* (New York, Newsmax.Com, 2002); Mark Galeotti, *The Weaponisation of Everything. A Field Guide to the New Way of War* (New Haven, Yale University Press, 2023); Elie Perot, ‘The Blurring of War and Peace’, *Survival* 61, No.2 (2019) 101-110.
- 14 Sean Monaghan (ed.), *Countering Hybrid Warfare* (Shrivenham, DCDC, 2018); Lyle J. Morris et al., *Gaining Competitive Advantage in the Gray Zone. Response Options for Coercive Aggression Below the Threshold of Major War* (Santa Monica, RAND, 2019); Linda Robinson et al., *Modern Political Warfare. Current Practices and Possible Responses* (Santa Monica, RAND, 2018); Thomas G. Mahnken, Ross Babbage and Toshi Yoshihara, *Countering Comprehensive Coercion. Competitive Strategies Against Authoritarian Political Warfare* (Washington, D.C., CSBA, 2018); Elizabeth G. Troeder, *A Whole-of-Government Approach To Gray Zone Warfare* (Carlisle Barracks, US Army SSI, 2019).

## Major War

In the wake of Russia's annexation of Crimea and China's aggressive actions in the South Chinese Sea, Michael Mandelbaum concluded that war between major powers in the classical sense is no longer impossible and less unlikely now than, for example, in 1999.<sup>15</sup> Whereas some foresee war with China,<sup>16</sup> many see US power and Western influence decline in relation to China and the liberal world order under threat, if not already steadily eroding.<sup>17</sup> Iran is manifesting itself as a major regional power and challenger of the West and is joined by other authoritarian powers in seeking to disrupt stability. Within Europe nations are witnessing the rise of nationalist, populist and illiberal political movements, all joined in their anti-internationalist stance. Western liberalism has once again met an ideological competitor in aggressive authoritarianism.<sup>18</sup> Although well-armed with long range missiles and air defence capabilities, Western military

superiority can be eroded and Western retaliation frustrated after being challenged in the form of limited 'probes' threatening Western interests or involving minor incursions into the airspace or territory of Western countries. Such potentially escalating provocations serve as tests of Western willingness to respond. Failing to react properly may undermine credibility and gradually change the status quo.<sup>19</sup>

Challenges and armed clashes will, several analysts predict, increasingly involve swarms of drones, 'killer robots', along with cyberattacks, electro-magnetic pulse systems and hypersonic missiles. Intelligence analysis processes will be aided and expedited with AI, fed with massive data derived from an array of networked commercial and military sensors and satellites. Decisionmaking processes in turn will be advised by or even automated with AI and quantum computing on issues concerning, for example, the right time for a conventional attack, a cyber-offensive, whether to escalate or to launch an anti-satellite weapon.<sup>20</sup> Indeed, for some the synergy resulting from combining these emerging technologies may well result in a new Revolution in Military Affairs.<sup>21</sup> And, unlike the previous precision warfare revolution, in this informatization revolution it is not the West, but China that will outpace its rivals.<sup>22</sup> Drones, cyberweapons and AI may readily proliferate, also among non-state actors, as these technologies are driven by commercial motives and/or are easy to militarize. Apart from challenging Western military dominance, this new arms race may also undermine nuclear deterrence stability.<sup>23</sup>

## The War in Ukraine As a Mirror

These scholarly perspectives highlight worrying tendencies and novelties and sometimes their warnings influence policy-making. After the COIN operations in Iraq and Afghanistan, the US took heed of the emerging great power rivalry and military build-up in Russia and China, shifting its focus towards the Pacific, and started a programme to capture emerging technologies – the 3rd off-set strategy – and in 2018

- 15 Michael Mandelbaum, Is Major War Still Obsolete? *Survival*, Vol. 61:5, (2019) 65-71; Michael Mandelbaum, *The Rise and Fall of Peace on Earth* (Oxford, Oxford University Press, 2019).
- 16 Graham Allison, *Destined for War. Can America and China Escape Thucydides's Trap?* (New York, Scribe Publications, 2018; Matthew Kroenig, *The Return of Great Power Rivalry. Democracy versus Autocracy from the Ancient World to the U.S. and China* (Oxford, Oxford University Press, 2020).
- 17 Richard Haass, 'How a World Order Ends. And What Comes in Its Wake', *Foreign Affairs* 98, No.1 (2019) 22-30, 22; Edward Luce, *The Retreat of Western Liberalism* (New York, Atlantic Monthly Press, 2017);
- 18 Ronald Inglehart, 'The Age of Insecurity: Can Democracy Save Itself?', *Foreign Affairs* 97, No.3 (2018) 20-28; Cas Mudde, 'Europe's Populist Surge. A Long Time in the Making', *Foreign Affairs* 95, No.6 (2016): 25-30; Hal Brands, 'Democracy vs Authoritarianism. How Ideology Shapes Great-Power Conflict', *Survival* 60, No.5 (2016) 61-114.
- 19 Michael Mandelbaum, *The Rise and Fall of Peace on Earth* (New York, Oxford University Press, 2019); David Kilcullen, *The Dragons and the Snakes. How the Rest Learned to Fight the West* (New York, Oxford University Press, 2020).
- 20 Kenneth Payne, *Strategy, Evolution and War. From Apes to Artificial Intelligence* (Washington, D.C., Georgetown University Press, 2018); Paul Scharre, 'The Real Danger of an AI Arms Race', *Foreign Affairs* 98, No.3 (2019) 135-144.
- 21 Christian Brose, 'The New Revolution in Military Affairs. War's New Sci-Fi Future', *Foreign Affairs* 98, No.3 (2019) 122-134; Robert Latiffe, *Future War. Preparing for the New Global Battlefield* (New York, Vintage Books, 2017).
- 22 Michael Raska, 'The Sixth RMA Wave. Disruption in Military Affairs?', *Journal of Strategic Studies* 44, No.4 (2021) 456-479, DOI: 10.1080/01402390.2020.1848818.
- 23 US Army TRADOC, *Multi-Domain Battle. Evolution of Combined Arms for the 21st Century* (Carlisle Barracks, 2018); King Mallory, *New Challenges in Cross-Domain Deterrence* (Santa Monica, RAND, 2018).

published a robust military strategy that squarely addressed the new reality.<sup>24</sup> In 2014, European NATO member states pledged to increase defence spending to 2% and refocus on collective defence and collaborated in setting up the multinational enhanced Forward Presence units. In 2016 the EU published a new vision warning that Europe was facing an existential crisis because of Russia's aggression, a transatlantic relation under tension, uncontrolled migration flows and the rise of right-wing populist movements.<sup>25</sup> Several European states meanwhile joined the US counter insurgency campaign against ISIS in Iraq. Yet Europe's military spending hardly ceased to decline, nations disagreed on strategic priorities and NATO deterrence lacked credibility as a result of military capability shortfalls.<sup>26</sup> Kagan's criticism of 2003 that Europe was convinced it lived in paradise seemed still valid.<sup>27</sup> That lasted until Russia invaded Ukraine in 2022.

Real wars, like the tragedy unfolding in Ukraine, are educational events critically exposing the merits of extant theories of future war. At first blush Russia's invasion seems to validate several predictions, albeit not in their pure form or with the dramatic impact analysts anticipated. With its 'special military operation', major war, which NATO in 2010 had dismissed as very unlikely, had returned to Europe. Like the annexation of Crimea, in which hybrid actions were used below the threshold of traditional war, again 'Cool War' methods – a massive prolonged concerted disinformation campaign and cyberattacks – preceded the actual invasion. An easy and speedy victory – regime change and eradication of the Ukrainian identity – seemed within reach. With its vast military and economic resources (the world's 9<sup>th</sup> economy) Russia would simply steamroll over Ukraine (the 56<sup>th</sup> economy). The 150,000-190,000 troops gathered along the border might not achieve Russian President Putin's maximalist objective (the complete occupation of Ukraine) but would suffice for a rapid advance, outpacing Ukraine's mobilization of additional troops and the West's ability to agree on and mount a timely and robust response. Russia benefited from a 3-1

superiority in tanks and artillery pieces, 8-1 in combat helicopters and 10-1 in combat aircraft.

Immaculate war seems evident also. Putin asserted his 'special operation' only involved a limited number of highly trained units promising quick success with less risk of own casualties. Putin's use of informal armed groups, such as the Wagner Group and Kadyrov's Chechnyan fighters, is another feature. Third, it seems apparent in the prevalent use of stand-off munitions to attack the opponent while keeping own troops out of range of enemy weapons. The war showed massive Russian strikes with cruise- and ballistic missiles, volleys of long-range rocket artillery as well as swarms of cheap long-range Iranian Shaheed drones, suggesting Putin at least originally intended to bludgeon Ukraine from afar and reduce the political risks for the Kremlin regime.

For the first two-three days of the invasion, Putin's plan seemed to succeed. Massive cyberattacks attempted to paralyze Ukraine's transport and communications infrastructure. Around 1,000 cruise missiles and stand-off weapons were launched at airfields, military headquarters, and air defence positions.<sup>28</sup> Communications and radar systems were disrupted by intensive jamming operations, temporarily neutralizing Ukrainian SAM systems. Ukrainian fighter jets lost against the qualitatively and quantitatively superior Russian air craft, which could use airborne early warning and extended-range air-to-air missiles.

24 Daniel Fiott, 'A Revolution Too Far? US Defence Innovation, Europe and NATO's Military-Technological Gap', *Journal of Strategic Studies* 40, No.3 (2017) 417-437.

25 *Shared Vision, Common Action, A Stronger Europe. A Global Strategy for the European Union's Foreign and Security Policy* (Brussels, European Union, 16 June 2016).

26 Sten Rynning, Strategic Culture and the Common Security and Defence Policy – A Classical Realist Assessment and Critique, *Contemporary Security Policy*, 32:3 (2011) 535-550, DOI: 10.1080/13523260.2011.623057; Hugo Meijer and Stephen G. Brooks, 'Illusions of Autonomy; Why Europe Cannot Provide for Its Security If the United States Pulls Back', *International Security*, Vol. 45, No. 4 (Spring 2021) 7-43, [https://doi.org/10.1162/isec\\_a\\_00405](https://doi.org/10.1162/isec_a_00405).

27 Robert Kagan, *Of Paradise and Power. America and Europe in the New World Order* (New York, Vintage, 2003).

28 This reconstruction draws on Justin Bronk, Nick Reynolds and Jack Watling, *The Russian Air War and Ukraine Requirements for Air Defense* (London, RUSI, November 2022).



Airmobile units landed with helicopters at Hostomel airfield near Kyiv, waiting to connect with the mechanized columns advancing towards Kyiv from the north and northeast, and ready to receive transport planes carrying hundreds of infantrymen and armoured vehicles to Hostomel.

In later stages of the war, Russian drones combined with artillery significantly improved in finding targets, fire accuracy, responsiveness, and counter-battery tactics. As a result, artillery caused the most damage to materiel and led to the most casualties. Small drones provide the infantry with cheap intelligence, surveillance and reconnaissance (ISR) and with armed drones also organic short range air power, often with deadly results against dug-in enemy troops. This proliferation of various types of drones crowding the lower layers of the skies over the battlefield combined with the frequent use of hypersonic missile launches in 2023 and 2024 reinforce the perception that predictions of a new revolution in warfare is in the making.

But those predictions also stated that drones, robotics, AI, and cyberattacks proliferate rapidly among smaller powers, as such technologies do not require massive military industries, developments are driven by the private sector, and are easily militarized. As the US CRS report on emerging technologies warned, it may erode the military technological advantage of major powers.<sup>29</sup> Ukraine, with its substantial private ICT sector, benefited from these features. Zelensky won the 'Cool War', smartly exploiting the worldwide reach of social media. He succeeded in unifying his nation and created the moral foundation that energized Western support which materialized in a series of intensifying economic and financial sanctions and military supplies.<sup>30</sup> Operationally, readily available civilian cell phones and tablet apps

boosted the situational awareness of Ukrainian commanders, enabling troops and civilians to spot enemy units and weapon systems and transmit those locations to headquarters using simple target location apps. Those headquarters also exploited the near real time transmission of drone footage through networks that had been provided and supported by commercial companies, such as the Starlink communication satellites. The use of autonomous weapons, such as Swiftblade and Lancet drones, also confirm the increasing impact of emerging technologies on warfare some visions warned about.

## Regression and Primitivization?

There is, however, also another potential pointer. The future might well resemble the past but it is in the new modes of operations that we can witness the regression and primitivization of warfare. No cyber Pearl Harbor has materialised despite massive cyberattacks nor have autonomous weapons systems or hypersonic missiles proven real strategic level gamechangers offering offensive dominance. The dramatic asymmetry in capabilities between the warring parties that Immaculate Warfare presupposes, proved absent. After one week Russia's northern and northeastern advance stalled. Combined arms tactics faltered, logistics were uncoordinated, and Russia omitted to exploit its air power advantage, failing to achieve air superiority, launch intensive air interdiction missions, conduct strategic attacks and provide responsive close air support. Ukraine meanwhile brought artillery fire to bear on Hostomel airfield, shot down several helicopters and eliminated the Russian airborne units. The Russian armoured columns were assaulted by artillery fire and small mobile infantry teams equipped with anti-tank weapons. Ukraine's mobile SAM systems denied Russia the use of airspace, providing much needed freedom of manoeuvre for its ground troops and logistics.

When, on 9 April, Putin declared that his troops would retreat from Kyiv and instead focus on the Donbas, the 'special operation' had clearly failed. Russia reverted to attritional-style

29 CRS Report, *Emerging Military Technologies. Background and Issues for Congress* (Washington, D.C., April 2022).

30 Peter Singer, 'One Year In. What Are the Lessons from Ukraine for the Future of War?', *New American Century*, 13 March 2023, <https://www.newamerica.org/international-security/blog/one-year-in-what-are-the-lessons-from-the-war-in-ukraine-for-the-future-of-war/>.

warfare, including pre-modern siege warfare, encircling and pulverizing cities with massive artillery barrages. After costly urban combat, and horrific numbers of civilian casualties, cities such as Mariupol, Severodonetsk and Lyshichansk were conquered. While the defence of these cities cost the Ukrainians dearly too, it bought them time to bring Western artillery, howitzers and HIMARS launchers to the front. Ukraine succeeded to liberate Kharkov Oblast in September and the city of Kherson in November.

When winter conditions precluded further manoeuvres, both sides, but Russia in particular, found out that the massive number and variety of drones made it extremely risky to amass troops, artillery and armour near the frontline. Rocket artillery, too, wreaked havoc. US supplied HIMARS systems from summer 2022 onwards took out Russian SAM systems and forced Russia to place command centres and ammunition depots at a greater distance from the front aggravating existing command and logistical challenges. As a RUSI report concluded, 'There is no sanctuary in modern warfare. The enemy can strike throughout operational depth. Survivability depends on dispersing ammunition stocks, command and control (C2), maintenance areas and aircraft'.<sup>31</sup> As a result, well into 2023, along the long almost static frontline barrages of Russian artillery (sometimes firing 30,000 shells a day) and waves of Russian infantry smashed against well-developed Ukrainian defence lines, losing hundreds of soldiers and dozens of tanks, artillery and APCs daily.

Russia's air force, without air superiority, resorted to intensive missile and drone strikes against Ukraine's logistical infrastructure and, in the fall of 2022 and the winter of 2023-2024, against Ukraine's energy sector. While very destructive, these attacks failed to have a strategic impact due to shortages of missile stockpiles, relative inaccuracy of the strikes, increasing intercept rates (aided by supplies of Western air defence systems) and rapid repair capabilities. By Christmas 2023 Russia was estimated to have lost half of its deployed tanks and more than 10,000 armoured vehicles, as well as 360,000 soldiers.<sup>32</sup>

The defence had once again gained dominance over the offence, a reversal after three decades in which, at least in Western warfare, the offence had been dominant. The era of tank warfare seems over, the same seems to hold true for airmobile operations, and aviation near the frontline. The future role of air power, so dominant since Operation Desert Storm, must also be reassessed in the light of the effectiveness of large numbers of mobile air defence systems which had denied both sides the use of offensive air power above and beyond the frontline. The default solution was the use of cruise missiles, drones and hypersonic missiles, but Western air defence systems proved able to reduce their impact with interception rates rising to a stunning 80-90 per cent. Much as it was during the Cold War, the ability to maintain air denial suggests that, once again, in air warfare, if massed in sufficient numbers, air defence is now dominant at least against 4<sup>th</sup> generation aircraft, drones and missiles. This seems to validate warnings of the A2/AD problem for the West.

## The Past Is the Future?

It is unwarranted to use the Russo-Ukrainian war as a touchstone for critically assessing previous visions of future war or to argue for a radical overhaul of existing defence policies and investment priorities. Russia's initial failures have shaped the trajectory of this war. It assumed a divided Ukrainian population, a weak regime, and weak military resistance. Russia overestimated its own military capabilities, the frontline troops received orders far too late, too little coordination had taken place between the armoured units, and between these units and

31 Mykhaylo Zabrodskyi, Jack Watling, Oleksandr V. Danylyuk and Nick Reynolds, *Preliminary Lessons in Conventional Warfighting from Russia's Invasion of Ukraine. February–July 2022* (London, RUSI, November 2022). See also Mick Ryan, 'A Year of War, Part I', *Substack*, 20 February 2023, at <https://mickryan.substack.com/p/a-year-of-war-part-i>.

32 @DefenceHQ, 'Latest Defence Intelligence update on the situation in Ukraine', *Twitter*, 17 February 2023, 7:45 AM, <https://twitter.com/DefenceHQ/status/1626472945089486848>.



the necessary supporting artillery and air power. Logistics were not in order and the units crossed the border with their tanks and armoured vehicles in non-combat formations, directed by a weak, corrupt, and highly centralized command and control system. Troops lacked discipline and their equipment proved poorly maintained.<sup>33</sup> All this adds up as an explanation of the flaws observed in combined arms tactics and joint operations.

Russia's failures and Ukrainian successes also remind us of the continuity in war. Trenches, minefields, morale, intelligence, quality of command, all these key features are traditional and factors of warfare. While drones of all kinds by now are a new indispensable feature in the ecosystem of the battlefield, we also observe the usual action-reaction dynamics in which new weapon systems or tactics quickly inspire specific countermeasures in tactics, doctrine and defence systems. As a consequence, five to six sorties is the average life span of a drone. Russia's default strategy of attrition, too, harks back to twentieth-century interstate warfare dynamics. The realization that the West must be prepared for industrial warfare reminds us of the importance of what Michael Howard called the 'forgotten' dimensions of strategy.<sup>34</sup> Quantity of weapons systems, ammunition stocks, industrial capacity, spare parts, redundancy, sustainment are all strategic qualities. Also the rediscovery of Russia's

strategic culture of horrific total war originating from the Second World War indicates that the future of war always has deep roots in country's strategic history.

Indeed, in many respects, the war features worrisome paradoxes. It is post-modern as well as modern and sometimes pre-modern. It confirms predictions on major war that warned for the impact of emerging technologies. Land warfare in particular seems affected. The war in Ukraine also includes features of Cool War and Immaculate War. On the other hand, Russia's criminal, indiscriminate, horrific, destructive assaults on the identity of the Ukrainian people echoes tenets of pre-modern and modern style warfare and Sophisticated Barbarism, which involve brutal strategies the West has long discarded. This war, as a result, already ranks among 10 per cent of the bloodiest wars of the past 100 years. Mariupol fell after prolonged, almost mediaeval, siege tactics. City bombings and the long battle in Bakhmut show stark similarities to the battle of Stalingrad. The muddy trenches resemble those of the Somme in World War I. Indeed, as one scholar reflected, instead of high-tech warfare, prolonged massive attrition in interstate war may result in the 'primitivisation' of warfare.<sup>35</sup>

## When Multiple Futures Become the Present

Still, while in their pure form none of the five futures discussed in this chapter present 'the future', and will probably be wrong, they nevertheless serve to inspire fruitful analysis and experiments. Indeed, as the recent strategic history of the West suggests, Western militaries, in their obligation to prepare for future war, need to study the range of potential futures and understand the specific political, strategic, and operational dynamics of each scenario they deem likely to present itself in the not-so-distant future. As both Frank Hoffman and Robert Johnson note, the future of war is plural,<sup>36</sup> and presuming the future is singular that the armed forces can focus on exclusively will, as the past three decades have proven, often result in

33 Dara Massicot, 'What Russia Got Wrong. Can Moscow Learn From Its Failures in Ukraine?', *Foreign Affairs* 102, No.3 (2023) 78-93; Rob Johnson, 'Dysfunctional Warfare. The Russian Invasion of Ukraine', *Parameters* 52, No.2 (2022) 5-20, DOI:10.55540/0031-1723.3149.

34 Stephen Covington, *The Culture of Strategic Thought Behind Russia's Modern Approaches to Warfare* (Cambridge, Belfer Center for Science and International Affairs, Harvard Kennedy School, 2016); Alex Vershinin, 'The Return of Industrial Warfare', *RUSI*, 17 June 2022, at <https://www.rusi.org/explore-our-research/publications/commentary/return-industrial-warfare>; Michael Howard, 'The Forgotten Dimensions of Strategy', *Foreign Affairs* 57, No.5 (1979) 975-986.

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organisational amnesia; knowledge and expertise concerning other kinds of wars are lost.

At the time of writing another civil war is developing in Sudan, and in Mali Russia's Wagner Group is gaining influence in proxy-warfare style, Chinese fighter aircraft violate Taiwanese airspace on a daily basis, Hamas has drawn Israel in a bloody war in Gaza and Houthi rebels attack commercial shipping in the Red Sea with drones and anti-shipping missiles. Multiple futures simultaneously have become the present. These crises confirm dire predictions contained in visions of future war and push humanitarian wars – Western efforts to limit humanitarian suffering – to the background. Indeed, at the beginning of 2024 Western political and military leaders summoned their populations to be prepared for major war with Russia in the not so distant future, a future European nations and their militaries, although forewarned, had long dismissed as highly unlikely. ■