

# The Chief of the Air Staff's Reading List 2026



**Front cover image:**

617 Squadron Lightning (F-35B) jets operating from RAF Akrotiri. (9<sup>th</sup> Feb 2026)

F-35B Lightning, a 5th Generation, multi-role, stealth fighter, is usually based at RAF Marham. The Station is also home to a range of engineering support functions, from maintenance to frontline support.

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# Foreword

In 2026, the world remains a volatile, unpredictable and complex place; we live in an era of profound uncertainty and the most perilous period in the last 40 years. A point highlighted by His Majesty The King earlier this year in his address to the Joint Meeting of Congress in Washington DC:

**'We meet in times of great uncertainty; in times of conflict from Europe to the Middle East which pose immense challenges for the international community and whose impact is felt in communities the length and breadth of our own countries.'**

Today, we face multiple and multiplying threats at a frenetic and unpredictable pace. War remains on the European continent, instability endures in the Middle East, the US' focus on the Indo-Pacific is increasing, and the Space and Cyber domains are arguably already in conflict.

Great Power Competition is back.

Understanding Great Power Competition is critical to our own security and that of our allies and partners. A changing strategic environment is to a certain extent normal, but the scale and implications of this change are profound. Indeed, very few of us were in uniform, never mind born, when we experienced the last era of great power competition, but this shift will now dominate and define our careers and lives.

For military leaders, reading is a vital operational tool that collapses the timeline for learning: it upgrades our analytical tools, especially judgment and problem-solving abilities. Because combat and strategic decisions have



national consequences and directly risk human lives, we must use literature to learn from historical failures, build emotional intelligence, and develop the mental agility needed to outthink our adversaries. Reading shows us that in truth, history has a bad habit of repeating itself, and it is better to learn such lessons from reading, than by spilling blood or treasure.

As a result, the 2026 CAS Reading List builds on its predecessors to allow the reader to develop a better understanding of the world that the air and space domains must operate in, today and tomorrow. This collection of books will help to broaden the knowledge, thinking, and questioning of the world order to make air and space operators more agile, more integrated, and more ready. While Great Power Competition remains the main effort of this year's CAS Reading List, it is not the sole effort. The list also covers the wider aspects of air, space and cyber power, leadership, and capability, including nuclear and Integrated Air and Missile Defence – both areas of increased focus and a central part of my intent and priorities.

The first title in this year's list is *War and Power: Who Wins Wars – and Why*, in which the eminent Phillips O'Brien, this time, looks at Great Power Competition and questions what makes a Great Power, and proffers it's not necessarily just military strength.

*War 4.0: Armed Conflict in Age of Speed, Uncertainty and Transformation*, by Deane-Peter Baker and Mark Hilborne explores the impact of technology and new domains on future warfare.

As a study on a potential adversary, Kevin Rudd's *On Xi Jinping: How Xi's Marxist Nationalism is Shaping China and the World*, examines the ideologies of Xi and his approach to leading China not only domestically but on the international stage.

In *Deterring Armageddon: A Biography of NATO*, Peter Apps chronicles the evolution of the Alliance to date and where it might be in twenty or so years, with deterrence at its heart of collective defence.

*Preparing for War: Strategy, Power and Military Change* by Olivier Schmitt explores how modern militaries adapt, or fail to adapt, to evolving threats, technologies and political constraints.

Frank Close in his *Destroyer of Worlds: The Deep History of the Nuclear Age 1895–1965*, provides an explanation of how the strategic environment has been shaped by a scientific technology that became a military capability and consequently reordered politics and strategy.

*Blitzkrieg and the Russian art of war* by Andrew Monaghan provides an analytical study of how Russia's strategy in war fighting has evolved to the present day.

In *Space Shock: 18 Threats That Will Define Space Power*, the authors Peter Garretson and Richard Harrison test a number of threat scenarios, and although having a US focus is no less applicable to the UK.

*AI, Automation, and War: The Rise of a Military-Tech Complex* by Anthony King looks at the impact of artificial intelligence in warfare and how it will change the character of war. While in Matthew Ford's *War in the Smartphone Age: Conflict, Connectivity and the Crises at Our Fingertips* examines how the use of the everyday smartphone technology has been exploited to influence warfare and is now very much part of modern conflict.

*What Matters Next: A Leader's Guide to Making Human-Friendly Tech Decisions in a World That's Moving Too Fast* by Kate O'Neill applies her own experiences in business to examine the challenges for leaders in a digital world. While its very much a view from a civilian angle there are clearly relevant connotations to those in defence.

To conclude this year's list *Airpower and the Normandy Campaign* by Mike Bechthold covers the air campaign in Normandy and how air power was central to the victory that led to peace in Europe for a generation.

I hope you will find this year's selection of books interesting and stimulating.

A handwritten signature in black ink, appearing to read 'HSmyth', with a stylized flourish at the end.

**Sir Harv Smyth** KCB, OBE, DFC, ADC, MA RAF  
Air Chief Marshal, The Chief of the Air Staff



# Message from Director of Defence Studies (RAF)

I hope that you find the titles listed within this 2026 Reading List to be both interesting and highly relevant to your professional and personal perspectives. Most of the books should be made available for loan through unit libraries but may need to be ordered by individual units on demand. Also included is a list of recent Air Historical Branch (RAF) publications which can be accessed through the links free of charge. Additional relevant book reviews are included in the Air and Space Power Review during the year. If you discover a title which you feel is especially worthy of consideration for CAS's endorsement in his 2027 list then please get in touch with us at [CAS-ASDefenceStudies@mod.gov.uk](mailto:CAS-ASDefenceStudies@mod.gov.uk).

For all serving Regular and Reservist RAF personnel and RAF Civil Servants, if your reading inspires you to take a greater interest in Air, Space and Cyber Power, International Relations, Emerging Technology and Sustainable Development, as part of developing our Next Generation Royal Air Force, I would actively encourage you to consider applying for a Chief of the Air Staff's Fellowship. It is sure to be one of the most rewarding and stimulating decisions that you will ever take.

Details of our CAS Fellowships are published annually in a Defence Instructions and Notices (DIN) or can be found on the RAF Centre for Air Power Studies website at [www.raf.mod.uk/what-we-do/centre-for-air-and-space-power-studies/](http://www.raf.mod.uk/what-we-do/centre-for-air-and-space-power-studies/).



Group Captain John Shields PhD RAF  
Director of Defence Studies (RAF)

# The Chief of the Air Staff's Reading List 2026

## Contents

|   |    |
|---|----|
| War and Power: Who Wins Wars – and Why  | 2  |
| War 4.0: Armed Conflict in an Age of Speed, Uncertainty and Transformation                                    | 4  |
| On Xi Jinping: How Xi's Marxist Nationalism is Shaping China and the World                                    | 6  |
| Deterring Armageddon: A Biography of NATO   | 9  |
| Preparing for War: Strategy, Power and Military Change  | 11 |
| Destroyer of Worlds: The Deep History of the Nuclear Age 1895–1965  | 13 |
| Blitzkrieg and the Russian art of war   | 15 |
| Space Shock: 18 Threats That Will Define Space Power  | 17 |
| AI, Automation, and War: The Rise of a Military-Tech Complex  | 19 |
| War in the Smartphone Age: Conflict, Connectivity and the Crises at Our Fingertips                            | 21 |
| What Matters Next: A Leader's Guide to Making Human-Friendly Tech Decisions in a World That's Moving Too Fast | 23 |
| Airpower and the Normandy Campaign  | 25 |
| Air Historical Branch (RAF) – Recent Publications   | 28 |
| The Chief of the Air Staff's Reading List 2025  | 29 |

The Chief of the Air Staff's Reading List is edited and distributed on behalf of the Chief of the Air Staff by the Director of Defence Studies (RAF).

## War and Power: Who Wins Wars – and Why

By Phillips Payson O'Brien

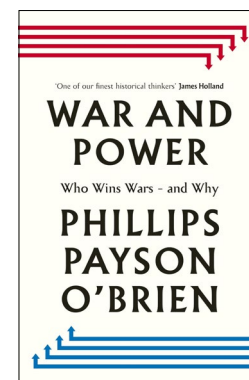
Publisher: Viking, 2025

ISBN: 978-0241744031, 288 pages

Reviewed by Group Captain Tom Walker

Vladimir Lenin is credited with saying, 'There are decades where nothing happens; and there are weeks where decades happen...'. As I reflect on the innate truth in that statement, I can only conclude this book *feels* important. Observing the evolution of contemporary geopolitics, perhaps the greatest emerging trend is the revival of narrow self-interest and imperial ambition even over decades-long partnerships and alliances. O'Brien, Professor of Strategic Studies at the University of St Andrews, is controversial from the outset, with his central premise: everything you know about Great Powers is wrong, and our assumptions about global politics and deterrence are flawed – perhaps fatally.

Readers already familiar with another of O'Brien's (brilliant) tomes *How The War Was Won* will recognise his bold, revisionist approach and, indeed, some recurring arguments. The centrality of air and naval control as a means to disrupt an opponent's war-making capacity appears writ-large, as does the war-winning advantage offered by the trifecta of resource mobilisation, production, and supply chain resilience. This last is worthy of note to everyone except logisticians, who knew it all along. Soldiers will be dismayed to learn they remain tertiary to victory as land-battles only reveal, where campaigns, leveraging the freedom of the air and maritime domains to target industrial strength and capacity, decide.



But, *War and Power* is not without problems. Take for example, events in recent months: the United States of America has mounted a sophisticated Special Forces raid to seize the President of Venezuela, pressured Denmark to cede Greenland, and launched punitive strikes on Iran to constrain its nuclear ambitions. All following publication of a National Security Strategy that placed hemispheric stability at the core of its national interests. Noting this, it might be tempting to conclude the US is clearly a Great Power. But withhold that judgement for now. O'Brien argues that traditional expectations of war outcomes based on military strength are less persuasive than explanations that account for 'full spectrum power' including economic, societal, structural, and partnership dimensions. Perhaps not a wild revelation. Definitions of what constitutes a Great Power are something O'Brien grapples with persistently, making it clear that common explanations citing war-making capacity fall short; for such a difficult sobriquet, O'Brien surely uses it often enough. His point here is that the physical might of the US does not guarantee its success in a major war when factors such as leadership ability, societal commitment, and supply chain resilience enter into the equation.

The argument left me concluding that, if Great Powers exist at all, they must be those nations able to create a favourable strategic environment using complimentary levers of power. This means that candidates would include not just the obvious big players like the US and

China, but also friends closer to home, such as Finland or Germany. Agree or disagree with that point, where O'Brien is excellent is in the second half of the book, where he outlines a treatise for operational warfighters. At risk of plot-spoiling, this carries not only a warning from history about future force design that left me feeling rueful about the merits of the Balanced Force, but also useful *bon mots* on sustaining warfighting, coalition-building, and the continued importance of the operational level of war. As a framework for thinking about the military instrument, it's instructive – although potentially because thinking about the operational level of war has become the academic equivalent of wearing socks and sandals for the last three decades. The key argument made here is about focusing on wars and not battles ('War is, in its essence, when the struggle over power moves from the perceived to the concrete'), something we risk diverging from as we digest the hot takes from the Russo-Ukrainian War and invest in AI-powered digital kill webs whilst talking more about targets than outcomes. If O'Brien has one message, it is that military practitioners must not beguile themselves into thinking about future conflict as a simple and straightforward relationship between military means and political ends. War transforms and metastasizes all it touches and we ought to be clear-eyed about that when we weigh up the price tag of deterrence.

O'Brien's conclusion, as a study of a potential major conflict in the Indo-Pacific offers a comprehensive pre-mortem of a US-China engagement that is deliberately inconclusive but offers a good overview of the respective strengths and weaknesses of the major combatants. Indeed, the book would be worth reading just for that, in some quarters. Finally, I don't see this book as canonical, in the same way that Paul Kennedy's *Rise and Fall of the Great Powers* is or was, but for any military professional looking for a contemporary working framework for operational warfighting, it should be on your reading list.

## War 4.0: Armed Conflict in an Age of Speed, Uncertainty and Transformation

By Deane-Peter Baker and Mark Hilborne

Publisher ANU Press, 2025

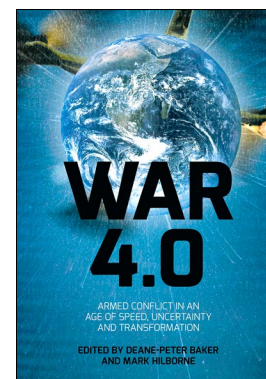
ISBN: 978-1760466817, 202 pages

Reviewed by Flight Lieutenant Conner J Adlington

*'Complexity, while not a new phenomenon, should be an expected condition of the operating environment.'*

The global security environment is an increasingly convoluted landscape of near-peer competition and sub-threshold grey zone conflict. The requirement to grasp the fourth industrial revolution of warfare has never been more acute. In *War 4.0*, Hilborne and Baker offer a pithy probe into this discourse. Well-placed to helm such a project, they pitch the topics in such a way that bridges the gap between academic theory and operational application. Further, they have curated a book which feels like a singular, cogent presentation rather than a collection of disparate essays; weaving a thread of relevance between chapters which not only keeps the reader engaged but demonstrates a convincing and coherent thesis.

The credibility of the curators is bolstered by that of its contributors, all of whom represent a high standing within their respective fields. The book covers just 202 pages, which include all of the many references and an index. The structure is ambitiously broad, but logically sequenced. Ten individually authored chapters range from high-level strategic and moral implications to the granular technicalities of emerging domains. Lessons are extracted from ancient outlooks on morality alongside challenging thought experiments on the use of lethal autonomous weapons. The physical and digital frontiers of the weaponisation of space and the scope of the



quantum revolution are explored and, in these sections particularly, the curation shines. Intricate topics do not exist in a vacuum but are contextualised with the surrounding discussions on information advantage and strategy to illustrate the complexities of the modern (and future) battlespace.

An easy criticism of the book is that some chapters are, simply because of the pace of development the book speaks to, a little outdated. Despite that, the premise of the book is hauntingly vindicated by recent events. Perhaps a little paradoxically, the older chapters do not weaken the utility of the book, but legitimise the arguments. It shows that the contributors correctly identified the underlying trajectories of conflict, before they manifested on the world stage. The legitimacy of the arguments are extended not by citing the most recent literature, but by the underlying logic and the predictions made of the changing nature of warfare.

The chapters cast a capacious enough net that complex ideas such as quantum bits or orbital mechanics can be conceptually grasped by a generalist through a shallow reading. It serves as a safe and unintimidating vehicle for exploring some daunting topics, often gated by overly specialist vocabulary. That said, the book does not sacrifice substance in the name of accessibility. The technical detail remains latent within the text, awaiting a more predatory reader. *War 4.0* is exceptionally

well-sourced, with references listed between each chapter. Structurally this allows a reader to investigate a topic further at the end of a chapter, then rejoin the overall narrative with minimal friction.

For both Royal Air Force personnel and the wider defence community, the topics addressed in *War 4.0* are non-negotiable. A commander will find immediate value in every chapter, but the utility is not restricted to those in leadership. Fluency in these topics across the whole force is essential if we want to be technologically literate and ensure we maintain our operational potency.

The professional aviator must be aware of the information environment, orbital assets, emerging technical capabilities, moral challenges posed by increasingly precise and remote weaponeering, and be capable of understanding where they sit within a wider strategy. This book provides the vocabulary and conceptual framework to participate in multi-domain integration. It challenges the reader to reflect on organisational blind spots and consider which recent events (and technological developments) may constitute 'Black Swans' and to what extent they will change the world.

In summary, this book is an invaluable and detailed resource that avoids an over-reliance on specialist military or academic terminology. It is a proportionately easy and genuinely enjoyable read despite the gravity of its subject matter. If you've read this review and still aren't convinced, read the ten page introduction of this (freely available) book and see if you still feel the same way. Whether you read a chapter a week or read the whole book in an afternoon, your literacy regarding the future of warfare will improve and perhaps more importantly, you'll be left with the feeling that *'predicting the nature of the future conflict environment may not be the appropriate goal'*.

## On Xi Jinping: How Xi's Marxist Nationalism is Shaping China and the World

By Kevin Rudd

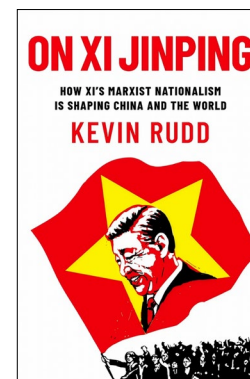
Publisher: OUP USA, 2025

ISBN: 978-0197766033, 624 pages

Reviewed by Corporal Katie Devenney

In *On Xi Jinping*, Kevin Rudd meticulously examines the ideological foundations of Xi Jinping's leadership and the significant implications for both domestic and international policies. Rudd elegantly argues that Xi's individual agency has been a major force in driving the People's Republic of China's (PRC) national direction. His primary aim is to decode Xi's ideological belief system - which he describes as a blend of 'Marxist-Leninist Nationalism' - questioning 'why' Xi has embarked on such radical changes compared to his post-Mao predecessors. Rudd emphasises the urgency of this inquiry, stating the stakes for the world are high, as the fateful threat of great-power conflict and the expansion of a new Sino-centric world order are most likely to be advanced under Xi's term.

Rudd's credibility significantly strengthens the book's analytical authority. As a former Australian prime minister and foreign minister, with prior diplomatic experience in Beijing and current service as ambassador to the United States, he brings a unique blend of practical statecraft and scholarly expertise. His fluency in Mandarin and deep familiarity with Chinese political culture allow him to engage directly with primary texts, rather than relying on mediated translations or secondary interpretations. The book's intellectual foundation is Rudd's University of Oxford doctoral research, where he drew on the expertise of prominent scholars and associates, such as Graham Allison, Joseph Nye, Rana Mitter and Paul-Irwin Crookes.



This synthesis of cultural literacy, political experience, and academic training enables Rudd to advance an understanding of Xi's ideology that is particularly valuable for Western policymakers and analysts operating under time constraints.

Unlike Rudd's earlier and more accessible *The Avoidable War*, this work is dense, academic, and demanding. Spanning 603 pages, 15 chapters, supported by nearly 1,000 footnotes and an extensive bilingual bibliography, the book can function as both a reference work and an analytical guide. Indeed, Rudd includes a 'cheat sheet' recommending key chapters for time-pressed readers seeking a focused understanding of his argument.

The book's structure conveys its analytical purpose, reflecting as an 'intellectual biography' of the ideology of Xi. The introductory sections define crucial concepts like 'ideology,' 'Marxism,' and 'nationalism,' situating Xi's worldview within the historical context of Chinese thought. Chapter 2 further elaborates these definitions, while Chapter 3 explores the evolution of Chinese ideological perspectives. Chapters 4 to 8 detail Xi's ideological shift toward Leninist policies, emphasising party control and state-led economics. Chapters 9 to 12 examine Xi's assertive nationalism, encapsulated in themes of the 'great rejuvenation of the Chinese nation,' and the transformation of global power dynamics. Chapter 13 reviews outcomes from the 20th Party Congress, while Chapters 14 and 15

discuss future domestic and international implications and trends. Rudd's conclusion - that throughout the remainder of Xi's term, the dominant ideological line will continue to prioritise party supremacy, constrain private-sector autonomy, and project Chinese power in ways designed to reshape the international order in accordance with the Chinese Communist Party's (CCP) values and interests - aligns with a body of scholars who took different methodological approaches to foresee the same trajectory.

Indeed, a key contribution of the book lies in its methodology and painstaking textual analysis, employed to attempt to peer through the opacity of the CCP. The study uses rigorous triangulation by cross-referencing, sequencing, and interpolating ideological, behaviour and policy shifts, identifying ideology not merely as rhetoric but as a causal driver of policy behaviour. Rudd's detailed textual analysis of ideological change includes elaborate extracts from Xi's speeches, helping Western readers familiarise themselves with the often illegible and formulaic language of CCP discourse, as well as Rudd's distilled analysis that avoids the 'poetic revisions' of many official translations. Additionally, Chapter 11's interviews of United Nations Security Council ambassadors provide unique insight through first-hand accounts of the major changes in PRC's UN policy, further evidencing CCP's new strategy of multilateral assertiveness, reinforcing Rudd's discourse analysis. Such methodological depth reflect Rudd's stated rationale for the project: 'it is time for those of us who have spent a lifetime studying, observing, and sometimes living in the Middle Kingdom to try to join the dots, to paint a wider and more intelligible canvas'.

In joining the dots, Rudd's analytical synthesis strings together several arguments that contribute to larger academic debates. The core of which is: Xi's ideological worldview - of 'Marxist-Leninist nationalism' - provides a guiding 'red thread' to the paramount leader's plans for PRC

and the world. Rudd argues that ideological causation - although not the only factor - is a significant force shaping Xi's political and policy programme in a hardline direction. As such, he further argues, Xi's ideological communications can serve as 'signals' pre-empting policy changes, although at times they are reflections (post facto) of policy shifts.

This framework has important implications for debates surrounding Taiwan. Rudd contends that although strategic, military, and economic calculations will factor into any decision to use force, it is the ideological dimension - rooted in historical materialism, dialectical reasoning, and a nationalist conception of 'manifest destiny' - that makes Xi's tenure particularly consequential. In this view, Xi's ideological commitments heighten both the stakes and the symbolic costs of action or restraint.

Rudd advances the cautiously optimistic argument that deterrence and diplomacy is likely to hold through the 2020s, given the risks of national humiliation associated with military failure. Yet there is also a lack of detail about what form this deterrence and diplomacy should take to be effective, particularly considering the rigid ideological trajectory the book itself documents.

Additionally, Rudd argues that 'China after Xi' will be less ideologically extreme (partly due to the consequences of Xi's extreme ideological 'overreach'). Despite the book's rigorous and convincing analysis regarding Xi's potential successors, and contextual elements pointing to a more centred post-Xi PRC, the book's core argument regarding individual agency creates an obvious counter-perspective to making such predictions.

Nevertheless, *On Xi Jinping* is a formidable and intellectually rigorous contribution to the Western study of contemporary Chinese politics. Its greatest strength lies in its insistence that Xi's individual agency and ideology

matters - not as mere propaganda, but as a coherent and influential framework shaping policy choices at the highest level of the CCP. Rudd's deep linguistic competence and cultural understanding allow him to decode ideological texts with a level of precision rarely achieved in Western scholarship. This aids in protecting against the pitfalls of projectionism, better equipping time-pressed Western policymakers, analysts, and leaders to navigate through what Rudd aptly refers to as the current 'decade of living dangerously'.

## Deterring Armageddon: A Biography of NATO

By Peter Apps

Publisher: Wildfire, Headline Publishing Group, 2025  
ISBN: 978-1035405794, 625 pages

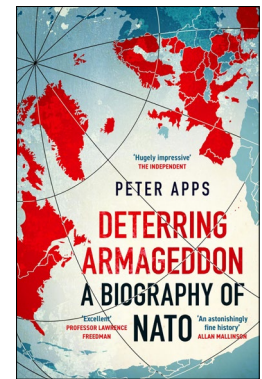
Reviewed by Wing Commander Guy Wood

Peter Apps' great grandfather fought on the Somme, his grandparents fought in the Second World War and as both a British Army Reservist and global affairs journalist, he is no stranger to the realities of international conflict. Apps' provenance enables him to balance intractable facts alongside an engaging and relatable narrative throughout this sizeable historiography. This highly immersive and compelling read is centred upon NATO's somewhat paradoxical constant, that of continual change. The book details NATO's often cyclical evolution from a limited western alliance borne from a necessity to deter an ambitious Russia, being 'committed to defensive action only, but built for confrontation', to its modern day 32 country political behemoth that, despite myriad global events, has retained both its original role and purpose, now framed as 'Defence and Deterrence of the Euro-Atlantic Area [but] able to fight tonight'. NATO, he argues, 'has its flaws, but it works'.

The choice of title descriptor, a biography, is not just an indicator of the chronological framework that structures the 501 pages across 30 well-balanced and similarly sized chapters, it is also a platform for Apps to make the content as human as possible, drawing the reader into the story of NATO as both organisation and at a stretch, organism. This two-pronged approach make for a seamless transition across the decades, but because of the depth of research – the reference section adds a further 85 pages to the book – each chapter deep dives into specific moments

and events, thereby allowing the reader to learn and contextualise the evolutions in what could be described as a reflective-real time. Notwithstanding the risks of having too much information to give, the book stays grounded in its purpose and the reader becomes invested in the story because the linkages between key protagonists and events are explained, amplified and, rather than dictate the linkages, Apps signposts the connections between each phenomena, allowing the reader to interpret, apply value and look forward to the next stage. This subtle balance pulls the reader into the narrative, and this results in a rarely found interactive element to this genre of book.

Accepting that anyone able to read this book will be on a sliding scale from aspirational young learner to a more reflective sage, it is undeniable that the events that have shaped NATO's evolution will have also shaped the reader's lives. Moreover, because this book covers issues ranging from the Berlin Airlift, through Cuba, Vietnam, Iraq and Afghanistan and ending with COVID and Ukraine, there is not a Baby Boomer, nor Generation Alpha, who cannot relate. Furthermore, because this book describes events through multiple lenses, i.e. politics and military, many readers will recognise, relive and enjoy reading about recent history that they could well have actively or passively participated within; if only to underline the point, the names Petraeus, Powell and Putin are as central to this story as Perestroika, Partnership for Peace and Pirates could be to those reading.



Impossible to capture the whole, it is reasonable to bracket the 75-year period covered by the book into three central themes: External, Internal and Next Steps.

Apps underlines his message that whilst change happens the resultant situation over time is generally the same. The pioneering advocates for a deterrence-based alliance to arrest Russia's dominance in the early 1940s, such as Bevin, Hickerson and Achilles. They had to galvanise a battle-weary, politically fractious and financially broken cohort of the willing into an ordered and meaningful military power, to avoid what Churchill described as Operation Unthinkable. The very nature of NATO from inception is a response to the external drivers that generate risk. Apps does an excellent job of explaining what students of international relations would recognise as the security dilemma, whereby powers continually jostle for ascendancy in the proverbial power game. Whether it is NATO's reluctance to go kinetic too early in Bosnia in the 1990s; expand its membership without antagonising Russia or agreeing to the forward positioning of US nuclear weapons on NATO territory, Apps reminds us that whilst NATO may not be directly or overtly involved in a crisis, it is and will continue to be, subject to the volatility of all external events.

NATO's internal development is less challenging to appreciate as the natural ebb and flow of organisational development is no different to that of other multi-national bodies, such as the UN. However, what the reader does get is a greater understanding of the politics and diplomacy that have shaped NATO. Summits, agreements, trans-Atlantic telephone calls and hastily arranged meetings between leaders in isolated locations all contribute to the NATO we now know, but not all is obvious. Examples at the strategic level include intra-NATO disagreement about participation in the Suez and Afghanistan and at the tactical level, naming conventions

and command chains have consistently been challenged. Of particular interest and perhaps significance within the zeitgeist of questioning state allyship, most readers will likely not know that Belgium is the home of modern NATO, not for the geographic and aesthetic reasons, but because the original NATO HQ was expelled from France in 1966, a truism that jars common understanding and illuminates the realities of building and maintaining multi-national, war-fighting ready organisations.

The final theme could be described as a look over the horizon. Whilst the concluding chapter focusses upon the period that takes NATO to 2049, the maxim that history repeats itself is evident throughout, without Apps ever lecturing the reader about it. NATO's story is symptomatic of the uncertainty and rapidity of global change, and it is with grim predictability that the book quietly lets the reader see a version of the future because Apps has unlocked the past.

Apps has written a terrific account of NATO's journey and in doing so, he has also provided the scholar and operator alike with a digestible, useable and welcome handbook for understanding why NATO remains so pivotal in our nation's strategic affairs.

## Preparing for War: Strategy, Power and Military Change

By Olivier Schmitt

Publisher: C. Hurst & Co (Publishers) Ltd

ISBN: 978-1805265269, 464 pages

Reviewed by Dr David Jordan

The demise of the Soviet Union in 1991 was a definitive end to the Cold War. After Saddam Hussein's bid to annex Kuwait had been crushed earlier that year, there were confident predictions of a 'New World Order'; a world, where liberal democracy increasingly became the norm and a 'rules-based order' drove state behaviour. States also started transferring their spending away from defence in the knowledge that the world was a much safer place.

Thirty-five years later, however, it is not! Intervention in both Iraq and Afghanistan became long, drawn-out insurgencies. The two campaigns generated a focus in counter-insurgency with the result that aircraft carriers, heavy armour and capable fighter aircraft all, apparently, becoming obsolete.

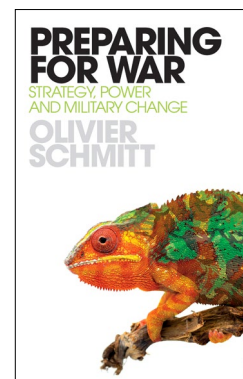
In many European countries, the belief that the United States of America would 'fill the gaps' in capability remained strong. However, as the Ukraine conflict enters its fourth year and the commitment of the United States to the security of Europe ever shakier, the question of how to meet today's challenges is at the forefront of thinking about defence and security.

It is to this debate which Olivier Schmitt contributes with his exceptionally valuable book, *Preparing for War: Strategy, Power and Military Change*. He endeavours to explain the dynamics of the balance of power, examining how militaries transform themselves in the face of new,

often considerable, challenges. He does this through an ambitious analytical framework of five key drivers of transformation: the international system; civil-military relations; the role of technology, and the nature and character of war itself. All are used to analyse the mechanisms and ways in which armed forces transform themselves (or fail) to meet future challenges. Some adapt well either under fire or facing the likelihood of conflict, while others remain resolutely configured to fight the previous war.

Schmitt notes that transformation of armed forces is driven by change within the international system and can be both proactive and reactive; although some countries manage to be neither. Civil-military relations thus matter greatly in setting the conditions under which transformation might occur. Schmitt uses the example of France establishing compulsory military service following the disaster of the Franco-Prussian War. While this helped to bind French society and increase focus upon defence, the resultant doctrine became dogma and difficult to challenge. Consequently, while France was able to build a strong national army prior to 1914, it was a military marked by inflexibility.

The need to adapt to changing norms is also highlighted effectively. Armed forces that appear to be regressive or out of touch with the societies they serve face challenges as a result. While a need to be different because of the



nature of military service can be cited, evolution of norms to ensure that the armed forces are seen as a career option is necessary: what might be condemned as ‘woke nonsense’ may in fact be essential to the ongoing viability of the militaries which introduce them. The argument that armed forces need to adapt is well made.

Schmitt moves on to consider technology as part of change, noting that there are sometimes issues with prestige. He cites the case of the Northrop F-20 Tigershark as but one example. The Tigershark was a promising development of the F-5E Tiger, offering a capable multi-role fighter aircraft at an affordable price – yet it gained no orders. The reason for this, as the book makes clear, is that while the F-20 was indeed a good aircraft, it was not as advanced as the F-15, F-16 and F/A-18. Nations preferred to purchase smaller numbers of the more advanced aircraft, rather than having more of the less complicated but still capable F-20.

Drones are another useful illustrative example of Schmitt’s point and the danger of assuming that one system or one approach to warfare is all that is needed to ‘transform’ into an effective war-winning force. Experience, Schmitt notes, ought not to be the sole tutor of armed forces seeking to transform. Schmitt supports the view that the lessons learned/lessons identified process is problematic. He posits that there is little sense in producing lessons identified if they do not change policy in some way, although one is minded to note that there are some instances where lessons learned are legitimately held to validate doctrine or tactics and procedures, only for it to become clear later that their validity is bounded by the context of operations.

Schmitt notes that while NATO has a sequential process which makes great sense in maximising the value of identifying lessons, this requires various ‘knowledge capabilities’ such as how to acquire knowledge, combining

it with extant knowledge and then disseminating and storing it for future retrieval. These are capabilities that might appear to be indirectly relevant to warfighting and thus ripe for cuts, but without them, the ability to utilise the lessons process effectively is diminished.

Even when knowledge capabilities are present, there are risks, which Schmitt notes in the US experience in producing their FM100-5, AirLand Battle manual. While FM100-5 underpinned much greater cooperation between air and land forces, Schmitt contends that it ignored the traumatic experience of Vietnam. The belief that counterinsurgency was something that the US would not do in future meant that the insurgencies in Iraq and Afghanistan became a major challenge.

Schmitt concludes that military transformation and preparing for war involves more than just militaries themselves. Change is ‘a matter of strategy of means’ and this must be part of a grand strategy involving diplomatic, economic and other means to deliver the conditions in which transformation and success can be achieved. Military change is, of course, important but not the only factor in effectiveness and ultimately success in using military force: transformation involves far more than armed forces introspectively cutting their cloth according to funding, but is a much broader activity within democratic societies. As we in the United Kingdom await the much-presaged ‘national conversation’ on defence, those likely to participate (or wishing to do so) in that discussion would be well-served by reading this book.

## **Destroyer of Worlds: The Deep History of the Nuclear Age 1895–1965**

By Frank Close

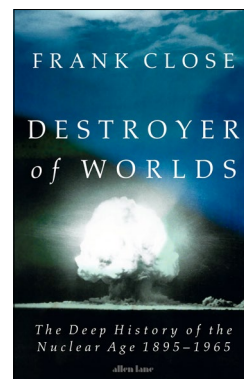
Publisher: Allen Lane, June 2025

ISBN: 978-0241700860, 336 pages

Reviewed by Wing Commander Victoria Williams

Frank Close's *Destroyer of Worlds* is an important and timely book for any reader, but it is especially valuable for those interested in air power. The reason is not that it offers a conventional account of bombing, deterrence doctrine, or Cold War force posture - it does not. Instead, it explains how the strategic environment in which modern air forces operate was created in the first place. In tracing the history of the nuclear age, from the discovery of radioactivity until the arrival of the thermonuclear age, Close, Emeritus Professor of Physics at the University of Oxford, shows how abstract scientific inquiry became military capability, and then how military capability reordered politics and strategy.

Close's main argument is both straightforward and powerful. The nuclear age did not suddenly begin in 1945 with Hiroshima and Nagasaki, nor even in 1942 with the Manhattan Project. It began much earlier, with the scientific unlocking of the atom. The book's real achievement is to show that the 'bomb' was not a single invention in the usual sense. It was the outcome of decades of experimentation, intellectual rivalry, international collaboration, misjudgement, insight, exile, and wartime effort. Close is telling the story of how a pursuit that began 'innocently and collaboratively' was overtaken by the politics of the 1930s and then by the military demands of total war, before progressing to the still more destructive thermonuclear weapon.



That long-view approach is what makes the book so worthwhile in an air power context. Too often, we think about transformative capability only at the point at which it becomes operational. Close reminds the reader that the most consequential military revolutions start much earlier, and often far away from defence. The scientists who uncovered the atom were not trying to solve a defence requirement, but they were doing fundamental research about matter and energy. Yet from that research emerged a capability that would fundamentally change strategy. What we can learn from this is that the next disruptive capability may not come from within military capability or procurement. It may emerge from civilian research in new areas like artificial intelligence, quantum technology, advanced sensing or autonomy and only later have military use.

Nuclear weapons altered direct attack completely. They did not just make bombing more destructive; they made it politically and strategically different. The scale of possible destruction concentrated into a single effect changed how governments thought about war, coercion, and national survival. Close does not reach this conclusion himself, because the book focuses primarily on science rather than doctrine. Even so, the connection is unmistakable. Nuclear capability first found its practical strategic expression through air power.

This book also matters because it reinforces an enduring lesson which is that capability often arrives before doctrine is ready for it. The physicists were not building a theory of deterrence, nevertheless once nuclear weapons existed, strategy was obliged to catch up. Political and military leaders were compelled to create concepts, organisations and postures appropriate to a capability whose destructive power outstripped previous strategic categories. Today, air and space forces are again operating in a world where technology is advancing rapidly, while frameworks, doctrine and investments lag behind. Close suggests that waiting for a fixed doctrine before engaging seriously with emerging capability can become complex.

The book is also strong on the human and institutional dimensions of scientific change. Although *Destroyer of Worlds* is fundamentally a history of physics, Close demonstrates that major strategic consequences often arise from intensely human factors. This is especially evident in the change from open, transnational scientific exchange to the secret, state-directed efforts of the wartime atomic projects. The early nuclear story was international, but the political shocks of the 1930s and the demands of war transformed collaboration into competition. Close reminds us that the relationship between open innovation and national security has always been challenging.

The ethical undercurrent running through the book also gives it real force. A scientific enterprise, initially driven by curiosity and discovery, culminated in the means to destroy cities. For an air power audience, this matters deeply. Air power has always had a complicated moral history because it promises reach and control while also exposing populations directly to violence. Nuclear delivery by air magnified that tension to the highest possible level. Close reminds us that the most advanced capabilities impose the greatest burden of moral judgment on the

institutions that use them. This is where *Destroyer of Worlds* feels especially relevant. At heart, it is a study of how revolutionary technology emerges before institutions fully understand what it will mean. That question is not confined to nuclear history. It sits squarely at the centre of present debates about autonomy, data, cyber operations, and the future character of conflict. The book's value lies in showing, that transformative capability is rarely neat, linear or immediately legible. By the time a technology's significance is obvious, much of the underlying change has already occurred.

*Destroyer of Worlds* deserves the attention of air-minded readers because it shows the origins of the current strategic world. Close shows that the nuclear age grew out of decades of scientific discovery whose military implications only gradually became clear. The most consequential changes in war often can begin before they're recognised, and the ability to understand new capability early, adapt intellectually, and connect science to strategy is vital - especially before events force them. *Destroyer of Worlds* shows how science, technology and strategic effect became inseparable in the age that air power helped define.

## Blitzkrieg and the Russian art of war

By Andrew Monaghan

Publisher: Manchester University Press, 2025

ISBN: 978-1526164520, 348 pages

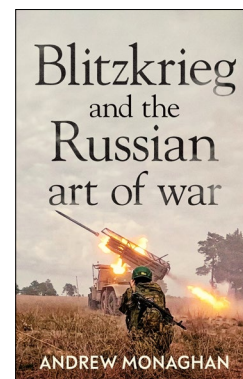
Reviewed by Flight Lieutenant George Hudson

The 2022 Russian invasion of Ukraine was described by many analysts and commentators as a 'twenty-first-century blitzkrieg', heralding the return to a previous generation of warfare. The decade prior saw another purported paradigm shift, characterised by 'ambiguity' and 'little green men'. In *Blitzkrieg and the Russian art of war*, Andrew Monaghan, a Senior Associate Fellow at the Royal United Services Institute, rejects this transitory, reactive approach to analysis. In its place, he offers a thoroughly researched chronology of the development of Russian strategy, their 'way in war', from the German wars of unification (1864-70) to the present day. During that 'long century', Monaghan argues that there have been four periods of substantive change in the development of Russian military strategy. The first coincided with the Five-Year Plan of the 1920s and early 1930s, with the second defined by the 'nuclear euphoria' of the 1960s. The third period saw the implementation of Gorbachev's 'defensive defence' doctrine in the late 1980s, before a new era of geo-economic competition in the 2010s.

The significant events and themes from each of these periods are described in detail, but the author's broader focus concerns the drivers of change. Monaghan's key deduction is that changes in Russia's 'way in war' are determined primarily by the shaping of grand strategy. He describes change as 'evolutionary rather than revolutionary', with the practical effects often taking years to manifest. Monaghan's final deduction is both the most

nuanced and the most particular to Russia. It concerns the tension, across the state and the armed forces, between a strategy of exhaustion and a lightning war (*molnienosnaya voina*). The latter is quite distinct from the Western understanding of blitzkrieg. Russian lightning wars are characterised by 'speed, surprise and weight of repeated blows'. If the first two elements are not sufficient to achieve the objective, the subsequent conflict is defined by attrition, explicitly demanding the resources of the state. This Soviet concept of lightning war is a legacy of Stalin's 'permanently operating factors', long-term determinants of military victory. Originally set out in February 1942 in an attempt to portray German successes as temporary, these factors encompass the economic, political and moral robustness of the state.

This profound distinction is provocatively employed in the title of the book, compelling both scholars and practitioners to reappraise their understanding of Russian military strategy. Monaghan discusses 'strategic culture' as a tool to account for the influence of customs, values, geography and history in shaping a state's approach. He supports the use of strategic culture as a lens, but cautions that, when mis-applied, it amounts to little more than 'one-dimensional depictions of authoritarianism and corruption'. These abstract caricatures lack an appreciation of the relationship between Russian strategy and Western thinking. Both Clausewitz and Jomini served as Russian officers, exerting similar influence on Tsarist, Soviet and



post-Soviet Russian thinking as they did in the West. In the opening chapter, Monaghan describes the development of the Russian art of war as having a 'contrapuntal feel, echoing Western military strategy while being framed against it'. With this vision of intertwined processes presented at the outset, the reader is encouraged to consider points of similarity and points of departure as they journey through 150 years of doctrine and strategy.

Differences in strategy and perspective can emerge and become entrenched, even when belligerents are engaged in the same event. The Eastern Front of the Second World War, or the *Great Fatherland War*, and the Russian reticence to adopt the Euro-Atlantic revisionist interpretation of blitzkrieg, is perhaps the best example. This example is followed by an insightful discussion on the distinction between history and the 'living past'. The latter is a consistent theme of Russian grand strategy, used to sanctify leaders and invest a sense of destiny and purpose. This book outlines the key junctures in Russia's living past, from the shifting influence of the party line (*partiinost*), to the 'dirt of immorality' exposed in the reforms of the 1990s.

In provoking thought about the layered formation of strategy, this book, part of a series on Russian Strategy and Power published by Manchester University Press, has clear utility for policymakers and strategists. It is particularly important, and timely, for those seeking a three-dimensional understanding of Russia. The lessons from this book may go some way towards mitigating the risks of mirror imaging. The Western military and intelligence communities were criticised for perceiving Russians to be 10 feet tall before the invasion, and 3 feet tall thereafter. This book helps us to see them as they are.

## Space Shock: 18 Threats That Will Define Space Power

By Peter A. Garretson and Richard M. Harrison

Publisher: Armin Lear Press

ISBN: 978-1968919009, 319 pages

Reviewed by Corporal Sean Castle

Building on the strategic warning presented in *The Next Space Race*, Peter Garretson and Richard Harrison's *Space Shock* serves as a pragmatic stress test for US space policy. It demonstrates that reacting to crises as they emerge carries consequences extending beyond lost economic opportunity to the erosion of strategic advantage in an increasingly contested domain. By subjecting a simulated National Space Council (NSpC) to 18 diverse threat scenarios, the book provides a diagnostic of existing strategic deficiencies. While framed through a US policy lens, the lessons are no less salient for the UK, whose national security and prosperity are likewise tethered to the space domain.

*Space Shock* derives its authority from two sources. First are the authors, co-directors of the American Foreign Policy Council's (AFPC) Space Policy Initiative: Lt Col (Ret) Garretson, founder of the Schriever Scholars Program and the Space Horizons Task Force, and Harrison, Director of the AFPC's Defence Technology Program and architect of the Strategic Primer initiative. Second is the composition of the simulated NSpC. By assembling participants with the gravitas to serve at senior government appointments, Garretson and Harrison ensure a high degree of policy realism. These experts subject the scenarios to a whole-of-government and industry stress test, highlighting the strategic, financial, technological, and regulatory realities confronting decision-makers.



The 18 scenarios are conducted across three independent workshops. Although the simulations lacked a dedicated red team, this was offset by the inclusion of a White House Press Secretary. The agitator role serves as a crucial source of friction, forcing the council to consider the second-order consequences of their decisions. The scenarios – spanning crisis escalation, space-based energy competition, lunar industrialisation, and space safety – are followed by comprehensive NSpC assessments and recommendations. Each includes a roadmap of cross-sector responses spanning immediate and long-term timelines, which the authors evaluate for their viability.

A significant challenge highlighted in the scenarios is the political passivity imposed by the inherent ambiguity of the space domain. Slow attribution and the dual-use nature of many space technologies obscure intent, leaving leaders reticent to respond until events are fully understood. The scenarios also highlight a range of counterspace threats, from destructive anti-satellite attacks to co-orbital dual-use systems capable of surveillance, interference, or disablement. Enhancing space domain awareness emerges as a recurring recommendation, both to reinforce deterrence through assured attribution and to provide decision-makers with the clarity required for timely action. The council also frequently advocated new legal norms and arms-control agreements alongside accelerated development of defensive and offensive capabilities, highlighting current shortcomings across multiple fronts.

The asymmetry in long-term planning is highlighted in every scenario, whereby episodic and reactive US responses risk ceding first-mover advantage to China's sustained, decades-long strategy. The scenarios emphasise that leadership in space will largely depend on technological development in areas including space-based solar power (SBSP), in-space assembly and manufacturing, lunar and asteroid resource extraction, and reusable heavy-lift launch systems, among others. Government–industry partnerships are repeatedly recommended to harness the commercial innovation required to keep pace with China. This urgency is echoed in the UK's Space Strategy and its subsequent Industrial Plan, which likewise emphasise industry as a key enabler of UK space power.

The combined economic and security implications are particularly evident in the discussion of SBSP. Reliance on infrastructure controlled by China would grant Beijing leverage over energy supplies. Crucially, the same infrastructure also functions as a dual-use system capable of intercepting ballistic missiles while under the guise of a clean energy source. Furthermore, the first mover to secure finite lunar regions or exploit asteroid resources would capture significant economic gains and shape the norms in an increasingly industrialised space domain. The later scenarios further suggest that leadership in space may also be defined by capabilities in space safety, including space rescue operations and asteroid deflection. As in several earlier scenarios, these crises stress the importance of effective communication to reassure the public and US allies, ensuring that accidents do not erode public confidence or derail strategically important space initiatives.

The NSpC discussions provide a balanced perspective when examining the strategic friction between the US and its adversaries, which is evident in the example of

US plans for a space-based Iron Dome. While the US frames the system as defensive, NSpC discussions acknowledge that China interprets it as a destabilising capability threatening its own interests, illustrating how defensive investments can be perceived as escalatory by rival powers. By incorporating these perspectives, the authors highlight the security dilemma inherent in the space domain and the propensity for its increased weaponisation.

Overall, the premise of *Space Shock* is convincing and well substantiated. It serves as a thorough diagnostic of contemporary space power strategy set against the backdrop of real-world geopolitical tensions. The authority of the assembled NSpC members ensures that the resulting cross-sector policy responses are both comprehensive and realistic. As such, the book's premise is equally salient for any nation dependent on space for prosperity and security, including the UK. As this book demonstrates, neglecting proactive space strategy risks remaining reactive to adversarial threats and unable to compete industrially, making it essential reading for policymakers and strategists responsible for shaping the future of space power.

## AI, Automation, and War: The Rise of a Military-Tech Complex

By Anthony King

Publisher: Princeton University Press

ISBN: 978-0691265148, 240 pages

Reviewed by Group Captain Keith Slack

A lot has been written about the automation of war, autonomous weapon systems, killer robots and artificial intelligence in recent years. The oft-perceived uncontrollable revolution within the field of technology, artificial intelligence and automation has led some to conclude that there is a degree of inevitability that humans will lose control to machines. It provides a version of the future where science fiction writers thrive. Other commentators challenge this position on the grounds of inevitability. What is clear, though, is that most, if not all, writers on this topic espouse the fundamental shift in military affairs because of technological advancement, and specifically AI.

This book provides a detailed analysis of the impact of AI and automation on the conduct of war. It is written by Professor Anthony King, Director of the Strategy and Security Institute at the University of Exeter. A sociologist by background, he has been advising the armed forces for over 20 years and has written extensively on warfare, command and the impact of technology. It is easy to see, therefore, why this book is so compelling as it deftly and convincingly navigates complex issues around AI, automation and warfare to argue that machines are not about to take over and humans will remain in control.

The first five chapters set the scene for the remainder of the book. King takes the reader on a thoroughly gripping tour of where we are at now and the debate about what

it means moving forward. The notion of a 'Robot War' is explored in detail but he proposes that we should analyse what is happening today rather than what commentators think is happening or may eventually happen based on their preconceived views. The analysis explores how: AI is being used in military operations today; armed forces have reorganised themselves to exploit AI; it has changed the character of war; and how it might change war in the next ten years. A brief history of AI then informs a useful summary of AI strategies published by states and alliances, with a focus on the United States, the United Kingdom, NATO and Israel. The concept and boundaries of a military-technology complex is then explored, providing a convincing argument of the rapid shift in power and influence across the defence policy and strategy ecosystem. The first five chapters culminate with a focus on what King describes as an emergent 'Special Relationship' between the armed forces and technology companies – a relationship that continues to deepen and which forms the basis of much of the remainder of the book.

The next three chapters root the analysis of what is happening today in three distinct case studies – AI and planning, AI and targeting, and AI and cyber operations. Each chapter explains how adoption of AI has supercharged planning processes, target identification and execution, and near-instantaneous operations in cyberspace, not by automating war, but by processing massive amounts of data at speed to enable effective



decision-making by commanders. Specific and recent examples bring this to life marvellously, providing the reader with insight into operational and tactical actions in recent conflicts in Ukraine and the Middle East, all informed by AI. However, each chapter also highlights the limitations of AI, espousing the fundamental role that humans play in creating the technology in the first place, iterating it in response to identified issues and challenges, and then exploiting its outputs in the conduct of war. AI is but one tool in the toolkit.

The premise of this book is threefold: first, AI cannot fully automate war because it cannot replace human judgement, strategy formulation, execution of operations or negotiation across the defence, political and international landscape; second, we are on the cusp – if not in the middle – of another military revolution, comparable to the invention of gunpowder or utility of air power, specifically in the areas of planning, targeting and cyber operations; and third, that the concept of a human-machine team gives the machine too much agency, and that it is more appropriate to talk about the rise of a military-technology team across the armed forces and commercial enterprise, which will deliver the most significant change to the future conduct of war.

It is the advent of the military-technology complex that King focusses on most. He recognises that a narrative around this complex is ‘banal’ when compared to a narrative describing a future world order of killer robots and automation of warfare. Nonetheless, and perhaps most importantly, the argument over how this complex is reversing the Weberian settlement of states having a monopoly of the legitimate use of physical force is most interesting. The notion of a civilian-military settlement and major reformation in the defence sector is underpinned by the example of Ukraine, where technological companies directly, and on a quasi-independent basis, enabled

military functions at scale and speed following the Russian invasion. King describes this as the ‘quasi privatisation of national defence strategy itself’ and, in contrast to views about automating war, argues that AI has not ‘automated strategy, but politicised it’.

In closing, views about the future are offered by King. War between two AI-enabled superpowers is the doomsday scenario. It exceeds the scale and scope of anything seen so far. In this scenario, King rightly argues that AI is not magic, but it will be fundamental to victory, and it requires organisational reformation across the defence sector. Whilst we should all hope that war between two AI-enabled superpowers never happens, if it does, we better hope that our side has a more advanced, integrated and agile military-technology complex as espoused by King than our adversaries. This will determine which humans are controlling the robots and AI systems in the future. A sobering but compelling call to arms if ever there was one.

## War in the Smartphone Age: Conflict, Connectivity and the Crises at Our Fingertips

By Matthew Ford

Publisher: C. Hurst & Co (Publishers) Ltd, 2025

ISBN: 978-1911723998, 291 pages

Reviewed by Flight Lieutenant Joshua Davies

In *War in the Age of the Smartphone*, Matthew Ford explores how the rapid global adoption of mobile devices has reshaped modern conflict. Far from being neutral tools of communication, smartphones now blur the boundary between civilian and combatant, inserting ordinary people into the kill chain in ways previously unimaginable. While much recent attention has focused on offensive and defensive cyber operations, Ford argues that this is only one part of a broader transformation driven by digital technology. As an Associate Professor in War Studies at the Swedish Defence University, Ford draws on his research into technology and warfare to examine the profound influence that smartphones exert on contemporary conflict.

A central question running through the literature is how smartphones provide 'a ringside seat on the destruction even as [people] go about their everyday lives'. With increasing global connectivity and near universal access to the internet, war is now observable in real time, searchable and shareable by anyone, anywhere. Ford convincingly demonstrates how this constant exposure to conflict imagery shapes public opinion and complicates political decision making, as governments struggle to regulate or suppress real time battlefield content. A recurring theme in the literature is the shifting balance of power, away from governments and toward technology corporations, which now control the platforms that determine whether wartime images are broadcast, restricted, or removed.



Ford emphasises that 'users and their smartphones are not only shaping how we learn about war; they are also shaping the conduct of war itself'. Central to this claim is the rise of Open-Source Intelligence, a concept that appears throughout the literature. As smartphone technology has advanced, the ability to capture and transmit battlefield relevant information has shifted from state institutions to ordinary civilians. Imagery, geolocation data, and short video clips, once the domain of military ISR assets, can now be collected and distributed instantly by anyone with a mobile device.

Ford highlights how this crowdsourced intelligence can feed directly into military decision making. One striking example is the Ukrainian ePPO app, which enables civilians to report sightings of Russian aircraft, missile launches, or troop movements. Such data can then be integrated into targeting processes or used to cue defensive systems. Does this raise a critical ethical and legal question and does participation in apps like ePPO make civilians part of the kill chain? Ford argues that the traditional boundaries separating civilians from combatants are becoming increasingly porous, a trend that is 'in dire need of renewed attention' from policymakers, militaries, and international legal frameworks.

One area that Ford briefly discusses and arguably should have explored in greater depth, is the growing problem of deepfake media. As synthetic imagery and AI generated

video become more sophisticated, distinguishing genuine battlefield footage from fabricated content is increasingly challenging; thus, consequently having significant implications for public understanding of conflict. The information environment surrounding Ukraine and the recent US–Iran war, for example, has been saturated with AI generated clips, manipulated images, and fabricated statements circulating on social media platforms. These distortions complicate the public’s ability to discern reality from misinformation and raise urgent questions about how societies can maintain trust in digital evidence. In this respect, Ford’s otherwise compelling analysis might have benefitted from a deeper engagement with the role of deepfakes in shaping both perception and policy.

In summary, *War in the Age of the Smartphone* stands out as a significant and timely contribution to contemporary war studies. Ford demonstrates with clarity and precision that smartphones are not peripheral to modern conflict but central to how it is witnessed, interpreted, and increasingly conducted. His analysis will be especially valuable to scholars of security studies, policymakers grappling with the legal and ethical implications of civilian digital participation, and military professionals seeking to understand how information flows now shape operational environments. The literature also offers an accessible entry point for general readers interested in how everyday technologies are transforming the character of war.

While Ford’s focus on open-sourced intelligence and the civilian combatant boundary is both compelling and original, the impact would have been even greater with deeper engagement with emerging challenges such as deepfakes and synthetic media. Nonetheless, Ford succeeds in reframing the smartphone as a decisive actor in contemporary conflict rather than a passive communication tool. His work ultimately expands the

field by urging a reconsideration of long standing assumptions about who participates in war, how information becomes weaponised, and what it means to be a civilian in an age where the battlefield is always within reach.

## What Matters Next: A Leader's Guide to Making Human-Friendly Tech Decisions in a World That's Moving Too Fast

By Kate O'Neill

Publisher: Wiley, 2025

ISBN: 978-1394296422, 253 pages

Reviewed by Squadron Leader Lauren Kerlake

Digital technology has given leaders more information, more capability, and more choice, but not more clarity. For Defence leaders, the challenge is whether we shape its influence or risk being shaped by it. How well do we understand the influence technology and how confident are we that new digital capabilities are improving cohesion and effectiveness, rather than simply changing how work looks? This book offers practical guidance as a leadership aid rather than a technical manual, helping leaders engage more deliberately with these challenges. Its underlying argument is that the defining challenge of the modern era is not simply keeping pace with technology, but exercising sound judgement and making decisions that balance immediate pressures against longer-term consequences.

Kate O'Neill is the successful author of six books, the CEO of her own technology and strategy consulting company and is known as the 'tech humanist'. With a background in linguistics, she sought to identify and teach the benefits of being able to consider and translate technology for humans. Drawing on experience with companies such as Google and McDonald's, she presents approachable and engaging examples. Although written predominantly from a civilian perspective, *What Matters Next* maps convincingly onto Defence challenges in the most part. This book is timely given we are in a moment of acute relevance for leaders grappling with accelerating technological change.

O'Neill's primary concept is the 'Now-Next Continuum', a model designed to bridge the gap between what matters now (current realities, constraints, risks) and what is likely to matter next (future consequences, second-order effects, and emergent harms). Rather than advocating either technological acceleration or excessive caution, she argues for ethical acceleration: moving quickly, but not beyond our understanding of consequences. As a risk-focused organisation, consequence is immediately relatable. However, moving at pace, especially outside of a war-footing, will challenge the best-intentioned leader and some scepticism in the reality of applying the advice in our organisation would be unsurprising.

Supporting the aforementioned model are two associated tools: the 'Insights-Foresights' model, which encourages leaders to move from partial data toward actionable strategic insight; and the 'Harms of Action Versus Harms of Inaction' framework, which reframes risk not as something borne only by bold decisions, but as something equally generated by delay, hesitation, or avoidance – i.e. not making a decision is still making a decision. These frameworks will feel conceptually familiar for leaders accustomed to balancing operational risk, public accountability, funding, and long-term capability development (amongst others). The book's strength lies in articulating these trade-offs in accessible language integrating ethics, organisational culture, and human impact rather than treating them as external constraints.



The emphasis on through-life thinking, connecting past decisions to present effects and future outcomes, strongly resonates with Defence capability cycles, bringing home the reality of ownership and accountability, where early decisions can lock in ethical, technical, financial, legal, and strategic debt decades later. Similarly, the emphasis on unintended consequences, ecosystem effects, and decision debt aligns with Defence experience of long-term platform risk and legacy system constraints. Most will find something to relate to here, and while no simple solutions are offered, the frameworks help structure decision making and how to make peace with the reality.

Importantly, echoing Defence's current thinking, O'Neill rejects simplistic 'human versus machine' narratives. Instead, where people feel their jobs are threatened by tech, she advocates complementary roles: machines as processors and accelerators; humans responsible for contextual judgement, ethical arbitration, and the attribution of meaning. This framing could be particularly useful when navigating debates about automation in military systems where human-in-the-loop, human-on-the-loop, and human-out-of-the-loop decision making are a point of direct relevance to Defence AI adoption where bias, accountability, and explainability remain live concerns.

Especially effective is the treatment of leadership behaviour under uncertainty. O'Neill stresses the advantage of asking better questions rather than seeking perfect answers aligning well with military mission command principles. Her critique of over-optimisation and metrics divorced from meaning will resonate with leaders grappling with performance indicators that inadequately capture legitimacy or human impact.

The personal approach, grounded in O'Neill's own experiences, makes the leadership challenges relatable and

achievable to tackle. Part Three: A Leader's Guide to the Future, addresses the challenge of asynchronous working and an AI-driven environment where trust is essential. Human skills must be honed, arguing that leaders must bring human advantage through curiosity and empathy. It is now too easy to hide behind a screen and ChatGPT; a stark reminder to those of us who may have neglected our people-focused training.

The book's leadership lens is undeniably rooted in civilian organisational contexts where profit is often the aim. Discussions of inclusivity, empathy, and collaborative decision-making are persuasive but wouldn't always fit the reality that Defence decision-making often occurs under adversarial pressure, time compression, imperfect information, and other nuances. While O'Neill acknowledges urgency and high-stakes environments, the structural constraints (e.g. legal and political) that limit discretionary choice in military contexts, is not considered.

*What Matters Next* is a thoughtful discussion strongly adding the tech angle to contemporary leadership discussions. Its principal value lies in sharpening strategic judgment: encouraging leaders to interrogate multiple flavours of assumption, weigh action against inaction, and maintain human responsibility as technology accelerates. This book makes a complex topic easier to digest and apply in practice, with models and frameworks that are easily accessible and memorable, a useful text for leaders tackling the increasing importance and reliance on technology.

Advisable reading for tech luddites, still useful for seasoned tech leaders; and, if in neither category, worth reading Part Three if leading a digitally enabled team feels increasingly like managing people who are present but not always engaged.

## Airpower and the Normandy Campaign

By Mike Bechthold

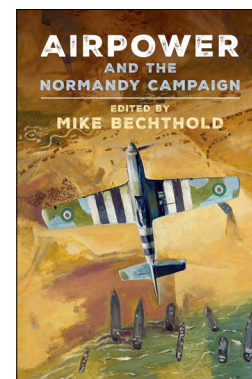
Publisher: Naval Institute Press, 2025

ISBN: 978-1682478271, 354 pages

Reviewed by Dr David Hall

D-Day, 6 June 1944, and both the build up to the Normandy landings and the three-month-long campaign that followed them are familiar subjects for many readers interested in the Second World War as well as the directing staffs and students at most Western military academies and staff colleges. Normandy is well trodden ground for battlefield tours and staff rides and campaign studies exercises. Eighty years on, numerous books on the campaign are still published each year, reflecting the ongoing interest and research into these significant historical events. Almost every aspect of the fighting on the beaches, Allied troops and formations large and small advancing inland, and the commanding officers, soldiers, and equipment of these units has been covered in exhaustive detail, virtually lionising the armies and the generals that found themselves on the victorious side of the campaign. The substantial support provided to them by Allied air and naval forces is often overlooked, or even not mentioned at all. *Airpower and the Normandy Campaign*, edited by Mike Bechthold, is a much-welcomed corrective to the hoary narrative of the campaign fixated on ground battles. Bechthold and air power scholars from Britain, Canada, Australia, and the United States critically examine the role of air power before and during the Normandy campaign, making a strong case that air power was the essential enabler that made the Allied victory possible.

Dr Bechthold is an official historian with the Royal Canadian Air Force History and Heritage Office. He has



enjoyed a long and highly productive academic career. For his most recent book, *Airpower and the Normandy Campaign*, he has assembled an impressive international group of academic and official historians, air force officers, and air power experts, including our own recently retired Head of the Air Historical Branch (RAF), Sebastian Cox, and a former Director of Defence Studies (RAF), Chris Finn. The wide-ranging and diverse expertise of all the contributors gives this much-neglected subject exceptional breadth and depth. Well written, deeply researched, it is an outstanding collection on the wider aspects of air power in the Normandy Campaign.

The book begins and ends with two gems. Bechthold's 'Introduction' is an erudite background to the controversy of air support in the Normandy Campaign and his 'Concluding Thoughts' summarise the themes of the collection's chapters and identify many aspects of the air campaign that would benefit from further research. Both are essential reading.

The main body of the book is divided into two parts: the periods before and after D-Day. Part I consists of five chapters that address the preparations for the Normandy campaign. The key topics covered are air superiority and the role of air power in Normandy, the Transportation plan to degrade German combat effectiveness and logistics, the morale of American heavy bomber crews, and Allied efforts to negate German radar before Operation Overlord.

Part II, larger with eight chapters, provides an in-depth examination of air operations from D-Day onwards. The main themes include air control during Operation Neptune, heavy bomber support for ground operations, the development of the Allied tactical air support system in Normandy, the psychological effects of air power on soldiers' morale, the highly controversial Allied strategy to bomb French civilians, and the Luftwaffe's ineffective antishipping operations. Collectively, all the chapters provide new and original insights and nuanced appraisals of the role of air power in the Normandy Campaign.

One of the book's most valuable attributes is that it addresses air power's strengths and limitations. Air power was a notoriously blunt and inaccurate weapon in the Second World War. Providing effective air support for Allied armies in Normandy was difficult on many levels: command and control; inter-Service rivalries and personal relationship; Operational design and tactics; and technological. These challenges were often exacerbated by unrealistic expectations of what air forces could realistically do to support the army. Most soldiers expected air power to deliver immediate effects – destroy the enemy in front of them and pave the way to victory. Air forces were better at dislocating or disrupting the enemy, helping friendly army units by facilitating their actions rather than defeating the enemy for them. Through trial and error, several heated exchanges, and practical compromises, the Allies created an effective, but not perfect, air support system during the Normandy Campaign.

Air power was central to the Allied victory in Normandy. Furthermore, our knowledge of the campaign is incomplete without a greater focus on the role of air power. Those who are planning or are about to go on a staff ride in Normandy must read *Airpower in the Normandy Campaign*. It should be the first book on the essential reading list of all future Normandy campaign studies,

battlefield tours, and staff rides. Understanding the role of air power is fundamental to a more accurate and complete story of the Normandy Campaign.



## **Air Historical Branch (RAF) – Recent Publications**

### **Royal Air Force Command and Control, 1982-2014**

<https://www.raf.mod.uk/what-we-do/our-history/air-historical-branch/post-coldwar-studies/raf-command-and-control-1982-2014/>

### **The Royal Air Force and UK Air Power over Iraq and Kosovo, 1997-2000**

<https://www.raf.mod.uk/what-we-do/our-history/air-historical-branch/post-coldwar-studies/raf-over-iraq-and-kosovo-1997-2000/>

### **The Royal Air Force and UK Air Power in Operation Telic, Iraq 2003**

<https://www.raf.mod.uk/what-we-do/our-history/air-historical-branch/post-coldwar-studies/the-royal-air-force-and-uk-air-power-in-operation-telic-iraq-2003/>

### **The Royal Air Force in Operation Shader: Air Combat and ISR Support in Operations against the Islamic State, 2014-2019**

<https://www.raf.mod.uk/what-we-do/our-history/air-historical-branch/post-coldwar-studies/the-royal-air-force-in-operation-shader/>

### **The Royal Air Force and Airfield Air Defence Since 1933**

<https://www.raf.mod.uk/what-we-do/our-history/air-historical-branch/second-world-war-thematic-studies/ground-based-air-defences/>

### **Eurofighter Typhoon Part 1: Cold War Origins, 1983-1990**

<https://www.raf.mod.uk/what-we-do/our-history/air-historical-branch/post-coldwar-studies/eurofightertyphoonpart1coldwarorigins1983-1990/>

### **Defence Policy and the RAF, 1970-1979**

<https://www.raf.mod.uk/what-we-do/our-history/air-historical-branch/regional-studies-post-coldwar-narratives/raf-and-defence-policy-1970-1979/>

### **Defence Policy and the RAF, May 1979-April 1988**

<https://www.raf.mod.uk/what-we-do/our-history/air-historical-branch/regional-studies-post-coldwar-narratives/british-defence-policy-and-the-royal-air-force-may1979-april1988/>

### **Defence Policy and the RAF, May 1988-April 1992**

<https://www.raf.mod.uk/what-we-do/our-history/air-historical-branch/regional-studies-post-coldwar-narratives/defence-policy-and-the-raf-may1988-apr1992/>

## **Contents: The Chief of the Air Staff's Reading List 2025**

### **Why War?**

By Richard Overy

Publisher: Pelican, 2024

### **The Return of Great Powers: Russia, China, and the Next World War**

By Jim Sciutto

Publisher: Dutton, 2024

### **The New Cold War: How the Contest Between the US and China Will Shape Our Century**

By Robin Niblett (2024)

Publisher: Atlantic Books, 2024

### **The World According to China**

By Elizabeth Economy

Publisher: Polity Press

### **The Taiwan Story: How a Small Island Will Dictate the Global Future**

By Kerry Brown

Publisher: Viking, 2024

### **Downfall: Prigozhin, Putin and the new fight for the future of Russia**

By Anna Arutunyan & Mark Galeotti

Publisher: Ebury Press / Penguin Random House, 2024

### **The Air War in Ukraine – The First Year of Conflict**

Edited by Dag Henriksen and Justin Bronk

Publisher: Routledge, 2025

### **Weapons in Space: Technology, Politics, and the Rise and Fall of the Strategic Defense Initiative**

By Aaron Bateman

Publisher: The MIT Press, 2024

### **Nexus (A Brief History of Information Networks from the Stone Age to AI)**

By Yuval Noah Harari

Publisher: Fern Press, 2024

### **Marshal of the Royal Air Force Sir Charles Portal: One of the Greatest Allied Leaders of WW2**

By Richard Milburn

Publisher: Air World, 2023

### **The Strategists: Churchill, Stalin, Roosevelt, Mussolini and Hitler – How War Made Them and How They Made War**

By Phillips Payson O'Brien, London

Publisher: Viking, 2024

### **How Big Things Get Done: The Surprising Factors Behind Every Successful Project, from Home Renovations to Space Exploration**

By Bent Flyvbjerg and Dan Gardner

Publisher: Macmillan Business, 2024

The views expressed by the reviewers in this list are theirs and theirs alone. Inclusion of a particular book within the reading list should not be taken to mean that the Royal Air Force or the Ministry of Defence endorses the contents. Manuscripts with challenging and even contrarian views will be included in order to stimulate thinking, discussion and debate.







# The Royal Air Force Centre for Air and Space Power Studies

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