

The Chief of the Air Staff's Reading List 2025



Front cover image:

Lightning (F-35B) from 617 Squadron, RAF Marham, prepares for night flying training exercises whilst on Operation ACHILLEAN.

Operation ACHILLEAN is a proof-of-concept deployment of NATO's 5th generation maritime strike capability, comprising of F-35 carrier strike, Merlin and Wildcat helicopters. All elements of Operation ACHILLEAN will be complementary of NATO and JEF activity, as the UK underscores its commitment to safeguarding European security.

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Foreword

In 2025, the world remains a volatile place; we live in an era of profound uncertainty and the most perilous period in the last 40 years. We have enjoyed the peace dividend born out of a Cold War victory and a 30-year focus on counterinsurgency operations, fighting far from home, with a secure home base, no existential threat to our nations, and with limited impact on the national purse.

Today, we face multiple and multiplying threats. War has returned to the European continent, instability endures in the Middle East, and the US' pivot to the Indo-Pacific. Great Power Competition is back on the agenda. Understanding the change is critical to our future success. Great Power Competition is not a new phenomenon but very few of us were not born, never mind in uniform, when we last experienced this type of strategic environment, but it may well define our careers. As a profession of arms, we must cultivate a force that thinks, understands, and operates in this emerging strategic environment. The 2025 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 year's Reading List focuses on Great Power Competition, both in theory and specifically against the two major actors challenging the status quo – China and Russia. This collection of books will hopefully broaden the understanding, thinking and questioning of the world order and direction of travel. While Great Power Competition is 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 power, including space, cyber, leadership, and ethics.



Regardless of today's unpredictable machinations the list of titles still provides an insightful examination and commentary in several pertinent fields that will be useful and interesting to the reader.

The 2025 Reading List opens with the esteemed historian Richard Overy's latest offering – *Why War?* Overy takes a more holistic view of warfare and analyses why humans are predisposed to wage war, what are the drivers and the motivations behind such behaviour examining a wide range of contributing factors.

In *The Return of Great Powers: Russia, China and the Next World Order* Jim Sciutto provides an analysis of the shifts in global geopolitics and the rise of China and Russia as a challenge to the United States-led domination.

With the US pivoting towards the Indo-Pacific region, Robin Niblett's book, *The New Cold War: How the Contest Between the US and China Will Shape Our Century* offers a more focussed insight to US-Sino relations albeit ones that are changeable and unpredictable.

Adding further insights into China is Elizabeth Economy's *The World According to China* which provides a broad overview of President Xi's assertion of power, and China's efforts to influence the World Order since the start of COVID.

Many fear that the catalyst and location for military escalation between the US and China is the island of Taiwan. In Kerry Brown's *The Taiwan Story: How a Small Island Will Dictate the Global Future*, the author presents an insight to the history of the island and how it has become a pawn within the international geopolitics game of chess between China and the United States.

With the US increasingly focused in the Pacific, it is imperative that we, in Europe, understand the resurgent Russia. In *Downfall: Prigozhin, Putin, and the new fight for the future of Russia*, Anna Arutunyan and Mark Galeotti catalogue the rise and fall of the key individual behind the Wagner group who at one stage had the West transfixed on what he would do next. In addition to looking at the individual, the book also offers us an insight to the workings of the Russian state under Putin.

Covering both great power competition and our profession of arms is *The Air War in Ukraine – The First Year of Conflict* edited by Dag Henriksen and RUSI's Justin Bronk. The authors present an astute analysis of the lessons from the early air war.

With the continuing importance of space *Weapons in Space: Technology, Politics, and the Rise and Fall of the Strategic Defense Initiative* by Aaron Bateman offers a useful insight into what was colloquially referred to as 'Star Wars'. Here he uses a wealth of sources offering analysis in a contemporary context.

Artificial Intelligence is becoming more prevalent in our society and *Nexus*, by Yuval Noah Harari provides an

insightful look at the evolution of information technology and the increasing use of Artificial Intelligence and its potential consequences and impact.

The leadership element of this year's Reading List starts with *Marshal of the Royal Air Force Sir Charles Portal* by Wg Cdr Richard Milburn, one of our CAS Fellows. The author has published his PhD thesis, which looks at Portal as a strategist and his key characteristics, and relationships with others around him, that made him such a significant and effective strategic leader during the Second World War.

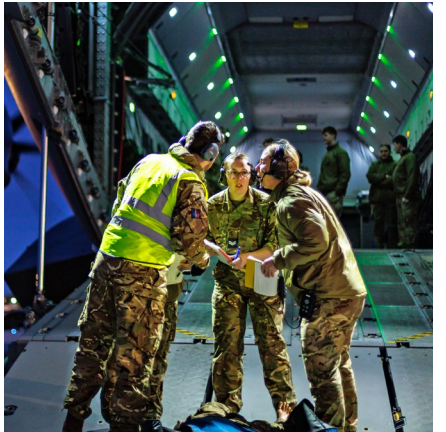
Continuing the theme of strategic leadership is Phillips O'Brien's most recent book, *The Strategists*. The St Andrews University professor's book looks at grand strategy using five leaders from the Second World War as examples, exploring traits that didn't necessarily conform to the norm at the time.

How Big Things Get Done: The Surprising Factors behind Every Successful Project from Home Renovations to Space Exploration by Bent Flyvbjerg and Dan Gardiner offers insight to project management success regardless of the scale of project, and while not a panacea to achieve a successful outcome it offers another approach whatever your level of involvement might be.

I trust that you will find this year's selection of readings interesting and stimulating.



Sir Rich Knighton KCB ADC FREng
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 2025 Reading List to be both interesting and highly relevant to your professional and personal perspectives. Most of the books are available for loan from unit libraries and are also accessible in e-book format at the MOD Whitehall on-line library (<https://ebookcentral.proquest.com/auth/lib/mod/login.action>) – opening an account is straightforward, simply requiring your personal MOD email address to register. A wide range of publications are available for you to enjoy, with new titles being introduced throughout the year. Also included is a list of recent Air Historical Branch (RAF) publications which can be accessed through the links free of charge. If you discover a title which you feel is especially worthy of consideration for CAS's endorsement in his 2026 list then please get in touch with us at 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 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/.



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

The Chief of the Air Staff’s Reading List 2025

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Why War?

By Richard Overy

Publisher: Pelican, 2024

ISBN: 978-0241567609, 400 pages

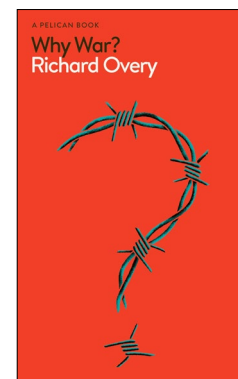
Reviewed by Squadron Leader Chris Kay

Many readers will be familiar with Richard Overy's extensive range of work on military history, most notably his works on the air campaigns of the Second World War, including *The Battle*, his widely acclaimed account of the Battle of Britain. Having spent much of his career analysing the specific circumstances surrounding military campaigns, he sets himself a much more ambitious task in his latest book, *Why War?* which aims to answer the question of why humans seem predisposed to wage war at all. In the Preface, Overy draws upon his experience of studying the deadliest conflict in human history, the Second World War, and how it was that nations which regarded themselves as advanced civilisations opted to engage in such a cataclysmic armed conflict. The book is divided into two parts: the first looks at drivers for conflict, which predispose humans towards warfare and part two looks at other motivations, which may offer incentives for humans to wage war. Whilst not explicitly stated, the division implies that Part 1 addresses factors which 'force' humans towards war, whilst Part 2 covers factors by which humans 'choose' to wage war.

Part 1 provides a survey of different disciplines which have sought to examine this question. Chapters on biology, psychology, ecology and anthropology look, in turn, at whether there is a genetic component to warfare, whether warfare stems from deep rooted psychological impulses, whether it results from the need to shape

environments or whether it stems from social pressures. Part 2 looks at the role of resources, belief, power and security in incentivising war. In doing this, he uses a broad interpretation of what war is, including inter-group conflict as well as using historical evidence from more formal and recent conflicts to support his arguments.

Overy draws upon a very impressive range of scholarship in his task, examining archaeological evidence from before recorded history, which suggests that human groups have always used deadly violence against each other since they first formed familial and social groups. He also draws upon biological studies involving violence amongst other primates, which suggest that there are evolutionary reasons for group violence. In places, his descriptions can make for gruesome reading, as when he refers to the ritual desecration of bodies by warrior societies, during the psychology chapter, and the ritual impulses which led Central American civilizations to engage in harrowing forms of mass sacrifice during the chapter on belief. Whilst, for practical reasons, the division of the book into chapters dealing with each of the factors separately makes sense, the abiding impression is of the interconnectedness between the explanations offered by the different disciplines. However, the arrangement of the book allows for some novel insights into what drives humans towards group conflict. The conclusion suggests that conflict is likely to persist as a facet of human experience, an assertion borne



out by the crop of wars which have occurred since the dawn of the current millennium.

Whilst *Why War?* does not provide substantial grounds for optimism regarding the future of our relationship with warfare, its approach in synthesising material from such a range of different academic disciplines is illuminating and an important contribution to war-focussed scholarship. This exercise is especially pertinent in the light of the strategic shock caused by the onset of the Russo-Ukrainian War in Eastern Europe, a link which Overy makes in his concluding paragraphs.

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

By Jim Sciutto

Publisher: Dutton, 2024

ISBN: 978-0593474136, 368 pages

Reviewed by Wing Commander Jim McPartlin

In *The Return of Great Powers: Russia, China, and the Next World War*, Jim Sciutto presents a timely and incisive analysis of the shifting dynamics in global geopolitics, focusing on the resurgence of Russia and China as formidable challengers to the United States' post-Cold War hegemony. As CNN's chief national security correspondent, Sciutto leverages his extensive experience and access to provide a compelling narrative that intertwines reporting and interviews from the field with strategic assessments.

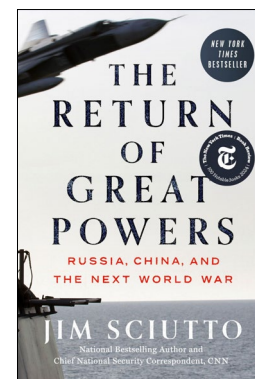
The book opens with an acknowledgment of the end of the unipolar world that followed the Soviet Union's collapse in 1991. Sciutto posits that the Western hegemony of the past three decades have given way to a more fragmented and less predictable international order, reminiscent of the great power rivalries of the early 20th century. This new era is characterised by the revisionist actions of Russia and China, both seeking to reclaim perceived historical entitlements and expand their influence on the global stage.

Turning to Russia first, Sciutto provides an in-depth analysis of Russia's military actions in Ukraine, portraying them as a real-world experiment in great power warfare. He provides a detailed account of the events leading up to the conflict, the strategic miscalculations of Russian leadership, and the resilient defence mounted by Ukraine. Through interviews with Ukrainian officials and civilians, Sciutto captures the human dimension of the war and

uses it to emphasise that Russia's aggression has not only destabilised the Euro Atlantic region but has also energised NATO and prompted member states to reassess their defence postures and commitment to collective security, particularly focusing on the seismic shifts in strategic outlook in Finland and Sweden.

Outside the Euro Atlantic, Sciutto delves into China's geopolitical ambitions, particularly concerning Taiwan. He draws parallels between Russia's actions in Ukraine and China's posture toward Taiwan, suggesting that Beijing is closely observing the West's response to Moscow's aggression as a gauge for its own potential moves. Sciutto highlights China's military modernisation efforts and its preparations for a possible forcible reunification with Taiwan, underscoring the global ramifications of such a scenario. He emphasises that Taiwan's strategic importance extends beyond regional security, affecting global trade and technological supply chains. In interviewing several Taiwanese military officers he manages to portray just how seriously those who will be expected to defend Taiwan take the threat from China.

The Return of Great Powers also explores the transformation of modern warfare. Sciutto illustrates how conflicts now involve a mix of 20th century strategies, such as trench warfare, alongside 21st century technologies, such as drones, and how state and non-state actors employ a blend of conventional and unconventional tactics to



achieve strategic objectives. This hybrid approach reflects the complexities of current military engagements and the challenges they pose to conventional defence mechanisms. A significant portion of the book is dedicated to the renewed focus on nuclear capabilities among great powers. Sciutto discusses the potential for a new global nuclear arms race, emphasising the risks associated with escalating tensions and the modernisation of nuclear arsenals. He underscores the absence of the diplomatic safety nets that existed during the Cold War, raising concerns about the potential for miscalculations and unintended escalations.

Sciutto also addresses the role of middle power states and their significance in the evolving geopolitical landscape. In doing so he provides a narrative to illustrate that great power competition is not only about the great powers themselves but involves a web of alliances and rivalries that shape international relations. Using North Korea as an example, he explains how it serves as a strategic partner to Russia and China, thereby influencing regional stability and global security calculations. The book, however, would have benefitted from a deeper exploration of regional powers and the role countries like Saudi Arabia, Iran and India play in providing an arena for great power competition. Additionally, an analysis of the role multinational trade and security institutions such BRICS (Brazil, Russia, India, China and South Africa) and the CSTO (Collective Security Treaty Organisation) play in the changing geopolitical landscape would have added depth to the discussion.

Somewhat journalistic in its style, the book provides an easy to understand account of complex geopolitical issues that will appeal to a broad audience of experts and newcomers to geopolitics and international relations alike. As the great powers begin to navigate a new world order the book serves as a reminder that maintaining peace and

stability in an increasingly complex system is becoming more and more difficult to do and underscores the importance of strong alliances and collective security.

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

By Robin Niblett (2024)

Publisher: Atlantic Books, 2024

ISBN: 978-1805462118, 192 Pages

Reviewed by Flight Lieutenant James Langan

In *The New Cold War* Sir Robin Niblett argues China and the US are reversing into an impending confrontation. While he regards their current dynamic as a non-zero sum, Niblett avoids endorsing a fatalistic Thucydides Trap. He contends this 'Cold War will be nothing like the last one'; costly warfare can still be prevented, in part through the agency and influence of the rising Global South.

The current catalogue of Great Power literature espouses the return of geopolitics as the cause of 21st century conflicts. Whilst Niblett addresses this, his key contribution to the debate is the assertion that ideology lies at the heart of Cold War 2.0. However, the reference points of this century's Cold War differ from the last, the frictions of communism vs capitalism have been supplanted by autocracy vs democracy. In a comprehensive 164 pages Niblett guides the reader through the exposition of his thesis. He assesses the sources of China's rise and America's decline, expands on the influence of medium powers such as Russia, the EU and South Korea, and explains the growing exuberance of the Non-Aligned. Sir Robin's 15-year tenure as Director of Chatham House positions him to provide such an incisive analysis.

The book begins with the origins of US/Chinese discontent. While his argument rests upon an ideological premise, Niblett substantiates his thesis with well researched economic data. He first distinguishes an ascent of China, from the former Soviet Union, noting the lack of

natural resources in comparison, with Beijing importing 'over 70 per cent of its oil and nearly 50 percent of its gas'. This dependency partly explains its ferocious maritime expansion in the South China Sea, particularly regarding Taiwan, amid fears of US backed containment. In contrast the sources of *Pax Americana's* decline are entirely self-inflicted, such as the embrace of China into the WTO and the discourse toxification of its own *body politic*. America's corrosive partisan politics is nothing new, however a novel development is the way internal divisibility undermines 'its global role as the pole around which other democracies can confidently gather'.

The book also advocates for the increasing influence of medium powers such as Russia, the EU and South Korea, at the expense of Great Power bipolarity. Despite its historic status as a former Cold War hegemon, Russia finds itself embittered by defeat, its economy once 'the third largest in 1990 has fallen to the tenth largest in 2022'. Europe, the previous epicentre of Cold War 1.0 remains united through opposition to Russia, yet ambivalent towards China. The EU's conflicting policy trifecta sees China as 'competitor, partner and strategic rival'. Meanwhile, in the Pacific, South Korea balances joint military exercises with the US and its economic ties to China, its largest trading partner, to the tune of '\$155billion/annum'.

Chapter 8 on the geographically discursive Non-Aligned adeptly captures the complexities of this new Cold War.



'Comprising 65% of the world's population and 30% of its GDP', the Non-Aligned, ranging from India to Indonesia, exploit the dynamism of Great Power politics for their own advantage. Furthermore, they use their autonomy to drive regional trade initiatives free of hegemonic influence. The Association of Southwest Asian Nations (ASEAN), for instance, boasts a \$3.6 trillion market value whilst Africa's Continental Free Trade Act incentivises cross border trade between its 54 countries. The historic proxies of the previous Cold War are influential players of the new one.

Niblett further elucidates the revanchist Russia-China axis, asserting their partnership is 'not just about geopolitics - it's about ideology'. The author contends both nations espouse a central belief of the rights of the state over the rights of the individual. Their world view is shaped by the failures of democratic enfranchisement in Iraq, Afghanistan and Libya compounded by the internal disruptions of Brexit and the January 6th, 2021, assault on the US Capitol. This ideology drives Russia's urgency to establish a bulwark against the eastward expansion of European democracy. It also explains Beijing's motivation to neutralise 'the missile of democracy aimed at the legitimacy of China's one-party communist system'.

In the final chapter, Sir Robin presents five principles to moderate the excesses of Cold War 2.0. These include avoiding a self-fulfilling prophecy, promoting peaceful economic cooperation and mobilising the liberal democracies. Notably, he excludes India from the latter calculus, proposing to expand the G7 into a G9 by including Australia and South Korea. This new coalition would 'account for 50% of global GDP and over 60% of global defence spending'.

The author's independent variable challenging prognosis is the reliance on America's fortuitous assembly. A year since the publication of *The New Cold War* and the US

appears to be distancing itself from allies and alliances not strengthening them. It further remains unclear if the Trump Administration is pursuing any form of ecumenical ambition. The nascent phase of Trump 2.0 seems, superficially at least, to more closely resemble the ideology of China or Russia. One problem is that of expression, with serious issues of foreign policy getting reduced to mere slogans, which are then open to misinterpretation and invite deceit. This complication is a broader concern and not just limited to Niblett, it is dangerous to rely on any succinct metaphor to interpret the complexities of current affairs - it produces something understandable yet oversimplified.

One highlight of the book is the concise yet discerning economic evaluation of the Trump 1.0 legacy; however, the organising logic is not developed to a coherent conclusion. There is an inconsistency in the author's use of economic data to quantitatively support his 'ideology' argument, rather than the qualitative use of speeches and strategic documents. Trump yields to a cathartic use of tariffs against China as retribution for 'taking advantage of America'. Yet this strikes as more economically expedient and less about ideological conviction. Furthermore, the crucible of Niblett's thesis centres on the totemic significance of Taiwan while Arctic Great Power competition remains absent from his calculus. At the time of writing the US has debased its relationships with Greenland and Canada over concerns for Arctic access, a strategic shift that does not reflect the prioritisation of Taiwan.

The New Cold War is best read as a concise yet comprehensive summary of today's geopolitical challenges. Any military officer wishing to understand the basics of current affairs should use this text as essential reading. The book is expertly referenced with quantitative data that enhances the reader's awareness

of the economic drivers underlying geopolitics. The book is highly recommended. The world presently stands on the precipice of an uncertain and unfolding era. Until its defining characteristics are clear, many will draw parallels to historical precedents to understand it. It remains far too early to tell if Sir Robin is right, but if he is wrong and this epoch is not *The New Cold War* then what is it?

The World According to China

By Elizabeth Economy

Publisher: Polity Press

ISBN: 9781509537501, 207 pages

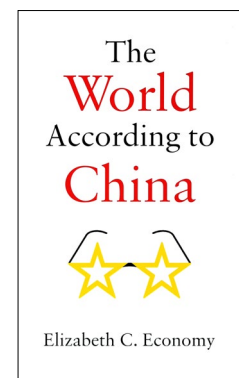
Reviewed by Squadron Leader Gareth Bradley-Sessions

Elizabeth Economy is a noted China analyst and a senior fellow at Stanford University's Hoover Institution and a former senior China advisor at the US Dept of Commerce. *The World According to China* follows her previous impressive work (*The Third Revolution: Xi Jinping and the New Chinese State*, Oxford University Press: 2018), and her regular podcasts through the Hoover Institute which positions her to provide insights into China's policy developments domestically and internationally.

Written in 2022, Economy's book is aimed at the general audience and contains seven chapters over 207 pages with effective diagrams and a useful index. At its core, it serves to examine President Xi's assertion of soft and sharp power to extend Chinese influence to affect the World Order.

The book begins in the chaos of the COVID-19 pandemic, illustrating how the pandemic served as a challenge and opportunity for Xi and the Chinese Communist Party which through their 'mask diplomacy' positioned China as a global leader in pandemic assistance. This sets the scene in chapter two for Xi's assertion of soft and sharp power, demonstrating numerous cultural, financial and media levers used to reshape global perceptions and policies in China's favour: the Top Gun 2 jacket censorship is but one example given. The third and arguably most insightful chapter delves into Xi's goal of creating a unified China and the importance of its sovereignty explaining the strategic and symbolic significance of territories local

to China (Hong Kong, Taiwan and the South China Sea). The belt and road initiative follows this, outlining the purpose of the initiative as a multifaceted tool for extending China's economic and political influence across low- and middle-income nations, and the leverage this affords China in securing strategic supply lines manifesting their sphere of global influence. Supporting this influence Chapter 5 unpacks China's concerted efforts to achieve technology supremacy and global leadership through 'Made in China', the role of Huawei and the race for AI dominance. Structural challenges to the World Order are analysed next, with China manoeuvring to lead various UN agencies to serve their narrow interests and present 'alternative values' such as those towards human rights. Additionally, China's creation of International Institutions like the Shanghai Cooperation Organisation and the Asian Infrastructure Bank bypass US economic leverage presenting alternative structures to those of the Western led World Order. Also in this chapter is the reference to the significance of the 'Arctic security dilemma', illustrating China's presence and influence towards the region, presenting themselves as a 'near arctic power'. The final chapter provides a potted history of US foreign policy towards China from the 1950s onwards before signposting policy options for the US albeit in 2022. In this Economy suggests reinforcing the Western value-centric framework, seeking new economic opportunities and pull nations into the US's 'bigger tent'.



Whilst the book is an easy read and well-presented the content mainly recaps major policy developments in the country with sources predominately drawn from the news and media, which is disappointing for a foreign policy expert of Economy's standing. Furthermore, the book reflects the US 'Washington-consensus' towards China, albeit four years ago during the Biden administration. This is presented in its heavy US-bias and dilution of agency to other groups like the EU, ASEAN and the Global South.

What Economy's work misses are the academic or theoretical insights especially around realist arguments, as espoused by International Relations theorist John Mearsheimer, and structural power such as Allison's *Thucydides Trap* (*Destined for War: Can America and China Escape Thucydides's Trap?* Houghton Mifflin Harcourt: 2017) which would have added richer depth and analysis to Xi's activities and ambitions. Furthermore, the book would have greatly benefited with some insights into China's social, economic and political problems, especially corruption, levels of debt and the significant demographic challenges that affect Xi's aspirations. All factors that are potentially accelerating Xi's strategic timelines such as the reunification of Taiwan.

Whilst *The World According to China* is light on analysis and strategic depth it is ideally suited as a primer on China for professional military education students. Noting the pace of geo-politics and the dynamic nature of Trump's second term, albeit early at this time of writing, such a succinct and accessible book on China should be welcome providing a useful start point for studies.

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

By Kerry Brown

Publisher: Viking, 2024

ISBN: 978-0241694305, 272 pages

Reviewed by Group Captain Keith Slack

Taiwan is a geopolitical powder keg. As a small island off the east coast of China and with a long and complex history, it has the potential to embroil the two most powerful nations on earth into a war – potentially a nuclear war – that could alter the course of human history and arguably affect every human being on the planet. That is why this book matters, and why it should matter most of all to those working in defence and security. Understanding the dynamics behind a complex triangular relationship between the US, China and Taiwan is as important as it is hard to achieve.

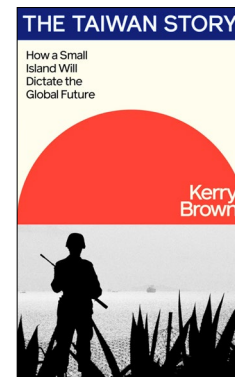
The Taiwan Story provides a detailed analysis of the history of Taiwan, the current situation and tantalizes the reader with possible scenarios that may unfold in the future. Its author, Kerry Brown, has huge experience in Chinese studies and Chinese politics as a result of governmental work in Beijing and then academic work across a range of institutions. He is, therefore, a leading expert on this issue and writes from a position of the utmost credibility – and it shows. The book provides a masterful canter through Taiwan's history and interconnectivity with China and the US, culminating in the final chapter where he outlines the Taiwan challenge in the twenty-first century.

The first three chapters provide an overview of Taiwan's history, what it is like to live on the island, and the events that led to the islanders increasingly feeling more and more Taiwanese. Combined, they outline how the

Taiwanese and Chinese are becoming more distinct and how they have ended up with very different societal values, political systems, and economic models. As a result of the Korean War and increased US involvement, the Taiwanese issue was elevated to a 'confrontation between fundamentally different views of the world order' and an expansion from 'matters of merely local importance to issues of global relevance'. Today, this relevance is more acute and greater than ever. It has become perhaps the most strategically important and consequential relationship on the planet.

The next four chapters move the reader through the nuances of this relationship, including the economic implications of a war, the relations between China and Taiwan and between the US and Taiwan, to scenarios that may unfold if a cross-strait war started. One word matters here – superconductors. Taiwan produces around 90% of the world's superconductors. In the event of a cross-strait war, superconductor production would reduce sharply at best, and stop altogether at worst, thereby delivering unparalleled disruption to global supply chains and economic turmoil across the world. As a result, some refer to Taiwan's superconductor production as a 'silicon shield'; and it may turn out to be Taiwan's greatest security guarantee.

The premise of the book is that we must preserve the strategic stalemate and political ambiguity that has



prevailed for the past 70 years if we are to avert war. It is this stalemate that has prevented either side from declaring its hand and forcing the other to act in response. Brown acknowledges that maintaining this position is becoming increasingly difficult in a context where three separate, but intertwined factors are coming into play. First, China is becoming bolder, more confident, stronger militarily and seemingly more impatient to achieve unification with Taiwan. Second, the Taiwanese are increasingly ardent in their conviction of their right to independence and are becoming increasingly emboldened to press this right. Third, the west, led by the US, is increasingly divided and lacking in self-confidence, with American domestic politics potentially forcing the issue with some officials pressing for recognition of Taiwan as a sovereign state.

To make matters worse, Brown expertly explains how all three of these factors are intensifying and views are becoming more entrenched. Certainty is becoming more readily apparent, and in some respects replacing positions of long-held ambiguity. For example, claims of impending conflict are becoming more frequent, with the publicly stated timeframe for the outbreak of war shorter and shorter, and those making the claims more senior in their respective political institutions. All of this is increasing the risk of geopolitical entrenchment that would end the policy of stalemate and ambiguity, polarise views further, and potentially make war a more likely outcome.

Of relevance to the defence and security analyst, Brown unpacks the potential options, including tolerating China's claims, accepting Taiwanese independence, a federal arrangement for China and Taiwan, all-out war, or a dialogue-driven conceptual framework between China, the US and Taiwan. Of all of these, only the option of stalemate and strategic ambiguity is given any credence and likelihood of success – ultimately because the desire

for security and economic prosperity are the only factors that unite China, the US and Taiwan.

Understanding Taiwan's story, as Brown has laid out so clearly and explained with such authority, is critically important to understand today's complex web of interconnected international geopolitics. In an increasingly uncertain and unpredictable world, all bets are off with regards how the story unfolds, but one would have to agree with Brown's analysis that stalemate and ambiguity might be the only realistic prospect of averting war and global economic meltdown. As he concludes with his final four words, 'anything else is insanity'. Let's all hope that sanity prevails.

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

By Anna Arutunyan & Mark Galeotti

Publisher: Ebury Press / Penguin Random House, 2024
ISBN: 9781529927351, 262 pages

Reviewed by Wing Commander Paul Withers

Downfall: *Prigozhin, Putin and the new fight for the future of Russia* charts the rise and fall of Yevgeny Prigozhin, who became infamous for his leadership of the Russian Private Military Contractor (PMC) group Wagner, and the Internet Research Agency (IRA), which has been responsible for the widespread dissemination of disinformation. Arutunyan and Galeotti present an authoritative and fascinating account of Prigozhin's rise from petty criminal to influential warlord, who outlived his usefulness to Russian President Vladimir Putin and ultimately paid the price with his life.

Anna Arutunyan is a journalist, born in Russia and educated in the USA, who worked as a reporter and editor in the Russian media, before leaving Russia after the full-scale invasion of Ukraine. Latterly, she has worked in US think-tanks and is the author of several books on Russia. Mark Galeotti is a well-known British observer of contemporary Russia, an Honorary Professor at the UCL School of Slavonic and East European Studies, and is a prolific author and blogger; his previous work has included *Putin's War: From Chechnya to Ukraine* (featured in CAS' Reading List 2023).

The book is presented in ten chapters, as a chronology of Prigozhin's life and career. It tracks his rise and eventual fall, from lowly street thug to an entrepreneur who reaped the benefits of lucrative free market opportunities, and his relationships with powerful figures in Russian government

and society. The authors note that his early life was not marked by the typical deprivation that might lead to a life of crime, rather he was born into the Soviet middle-class intelligentsia, a son of a widowed Doctor. He enjoyed a boarding school education full of opportunity, but instead he chose a life of crime. A conviction as an 18-year-old led to street gang involvement, and later a 13-year sentence in a labour colony. After his release in 1990, as post-Soviet era capitalism started to offer new opportunity, Prigozhin established himself as a hotdog salesman. This led to businesses as a restaurateur and food distributor, resulting in him later gaining the moniker 'Putin's chef' but 'the truth was he was never anyone's chef. He was not a cook but an entrepreneur and opportunist'.

His business successes were based upon building relationships with those in power and the authors note that it is 'not that money could buy you power so much as that power got you money'. His place in the hierarchy was not as a member of the small group of hugely wealthy oligarch friends who surrounded Putin, rather he was in a lower tier, the real 'backbone of Putin's system... the mere millionaires, the 'minigarchs'. These minigarchs needed to keep proving their usefulness to retain the favour of those who held the real power.

After setting out Prigozhin's rise as a successful catering entrepreneur, the book then tracks a new venture to defend his reputation and business interests through



the establishment of the IRA. Prigozhin realised that 'narratives, opinion and spin we're going to be valuable new commodities in the (dis)information age'. Whilst the IRA initially focussed on the internal narrative, countering opposition to Putin, it eventually became an international news story, accused of interference in the 2016 US election. The IRA was responsible for placing 3,500 paid advertisements on Facebook, which focussed on societally divisive issues, eventually leading to 13 Russian IRA employees being indicted by the USA. It is difficult to prove the extent to which the IRA contributed to the electoral outcome, particularly as the IRA's interventions were 'arguably a drop in the toxic ocean of existing American social media hysteria'.

Prigozhin will probably be most remembered for his ownership of the Wagner PMC group. Despite mercenaries being illegal in Russia, Wagner offered the state foreign policy options with a thin veil of deniability, but it was the Russian state's treatment of Wagner fighters that led to Prigozhin's very public rebellion and ultimately to his downfall and death. Initially the leadership of Wagner was shrouded in mystery, with Prigozhin's involvement only becoming known long after the group's establishment in 2014. Wagner started by reasserting Moscow's authority among the various militias operating in the occupied Ukrainian Donbas region, violently eliminating those separatist warlords who had 'become inconvenient for the Kremlin'. Wagner's operations expanded to Syria, the Central African Republic and Sudan, establishing its reputation for extreme brutality.

The authors note that Wagner was initially sidelined in Russia's full scale invasion of Ukraine, but after the so-called 'special military operation' failed to meet its initial objectives, Prigozhin was called into action and by mid-2022 he had amassed around 25,000 Wagner fighters in Ukraine. Wagner sustained huge losses in the battle

for Bakhmut and bolstered their ranks with convicted criminals. Prigozhin's leadership of Wagner became public, and he was made a Hero of the Russian Federation. He used his fame and public platform to criticise those at the centre of the Kremlin elite including Defence Minister Shoigu and Chief of the General Staff Gerasimov. Prigozhin's condemnation of these close allies of Putin included accusing them of restricting ammunition supplies to his Wagner fighters and sending his 'boys' into 'the wasteful meat wave assaults'.

On 23 June 2023, an armoured Wagner convoy crossed from Ukraine back into Russian territory in a rebellion that saw them seizing control of several towns and heading to within 200 miles of Moscow before Prigozhin called a halt. Before stopping to seek a deal with the Russian authorities, Wagner's actions had caused a mass exodus of oligarchs from Moscow. Three months later an aeroplane carrying Prigozhin and his associates disintegrated in mid-air killing all on board.

Downfall makes an important contribution to Western understanding of Russia. Not only does it analyse Prigozhin's role as both troll master and mercenary commander, but it also sheds greater light on the workings of the Russian state under Putin. Arutunyan and Galeotti contend that the story of Prigozhin, his downfall, and his legacy are 'a portrait in Putinism'. The book elucidates Russia's development through a brief period of nascent post-Cold War democratic transition, to becoming a corrupt kleptocracy and resurgent international pariah, attempting to impose its will on its neighbours and the wider world.

The Air War in Ukraine – The First Year of Conflict

Edited by Dag Henriksen and Justin Bronk

Publisher: Routledge, 2025

ISBN: 978 1032593111, 252 pages

Reviewed by Wing Commander Mike Page

The Air War in Ukraine – The First Year of Conflict is a detailed account of how and why the air war in Ukraine developed so differently to expectations. Co-edited by Lieutenant Colonel Dag Henriksen, Research Director at the Royal Norwegian Air Force Academy, and Professor Justin Bronk from the Royal United Services Institute, the anthology presents defence specialist analysis of a vast collection of sources to explain many facets of the air war. Some are familiar, some novel and innovative.

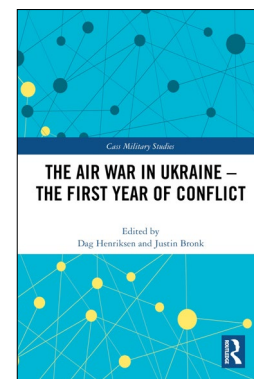
Although its coverage is broad, it is not complete, and the editors highlight some significant gaps. First, it is written without inputs from Russian sources making it a partial account. Second, detailed accounts of Ukrainian fixed- and rotary-wing operations and tactics have been omitted to avoid benefitting Russia. The same limitation applies to Ukrainian command and control and the use of space assets in support of intelligence, surveillance and reconnaissance (ISR). Despite these caveats, it is a significant work covering some of the most important aspects of the air war and with pertinent lessons relevant outside this conflict.

The book's central theme relates to the absence of overwhelming and decisive airpower that is fundamental to Western operations. NATO's airpower doctrine of destroying the enemy's Integrated Air Defence Systems (IADS) to gain air superiority to provide cover and surveillance for the ground war has not been achieved

by either side, resulting in the 'grinding land combat' of artillery, infantry, tanks and small UAVs. This book examines how and why a numerically superior Russian air force (VKS) failed to leverage its advantages and how the war developed differently to pre-war predictions.

The first chapter sets the stage for enduring war; Russia's failure to achieve an easy win by toppling the Ukrainian government. Surprised by Ukraine's national resilience, fighting spirit, military competence, and ingenuity, Russia equally surprised in its inability to correctly employ its superior VKS within a cohesive plan. When its audacious push on Kyiv was unsuccessful, the Russian military's failure to prepare for sustained large-scale combat operations became apparent and decisive as the fight developed. Poor planning and a lack of mission command stifled Russian force employment and resulted in a withdrawal of forces from Kyiv and a re-focus on East Ukraine where the fight continues to this day. The employment of air power, both good and bad, are assessed in later chapters.

Chapter 2 describes Russia's doctrine of 'non-contact war', what western forces call hybrid warfare, including cyber, info ops and sabotage to soften the enemy ahead of a 'shock and awe' VKS air campaign. In reality, 'incompetent air campaign planning' within a Russian Special Services construct meant air power was poorly applied to specific tasks supporting ground forces, thus not achieving decisive conditions, such as destroying Ukrainian IADS.



Subsequent chapters describe the failure of both sides to 'break the enemy with long-range precision fires', Russia's operational disaster of failing to capture the Hostomel air head close to Kyiv, the evolution of the air war into a state of mutual air denial, the critical role of ground-based air defence in shaping air operations and the significant and highly innovative maturing of 'Drone War' over Ukraine. This chapter is a powerful analysis of the 'crucial' role of UAVs in this conflict, and an inflection point for ISR, attack and electronic warfare.

The final *Epilogue* chapter summarises the book's operational, tactical, air superiority and conceptual lessons. Some are directly relevant to the UK and NATO, some less so, but all are thought-provoking and provide insight into why the three-day special military operation continues three years later and has dragged so many other nations in on both sides. Had Russia used air power effectively and also captured the air head, things may be very different now.

A more comprehensive analysis from the Russian perspective would be welcome and help fill some of the gaps of why Russian air power failed, but military students and practitioners alike will enjoy this partial account of the application, and misapplication, of air power on the modern battlefield. Alternatively available as a Kindle Edition.

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

By Aaron Bateman

Publisher: The MIT Press, 2024

ISBN: 978-0262547369, 325 pages

Reviewed by Wing Commander (Retired) Gerry Doyle

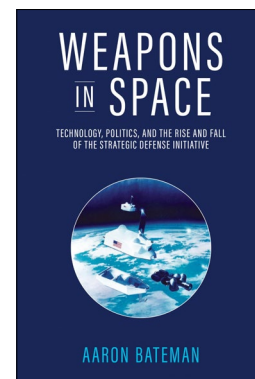
Aaron Bateman's book on 'Star Wars', or more properly the United States' Strategic Defence Initiative (SDI), is important and timely for several reasons. Firstly, it serves as a reminder of historical events and their context that may be fading from memory. Bateman also provides an insight into this his assertion that the assessment of any technological project should not only consider technical risk, and the steps being taken to overcome it, but also the extent to which it complies with, or challenges established policy positions. Finally, the author demonstrates the wealth of online sources now available to historians analysing and recounting military and security programmes, particularly those originating in the United States. The book expands the literature on SDI significantly; the other major work on the programme by Donald Baucom¹ was an 'inside view', written by an official USAF historian. This gave him unique insights into its gestation, but although with a perfectly sound focus on the roots of US military space activities its early publication date mean that Bateman's more recent publication is relevant and welcome.

SDI was a project instigated by President Ronald Reagan during his first term in office (1981-85) and developed during his second (1985-89). Bateman begins by situating SDI in the context of Cold War nuclear deterrence theory and on the changing fortunes of *détente* between the two superpowers, while noting the early lead in exploitation of space for military purposes by the USA (most notably here

in satellite reconnaissance). This left the USA determined not to endanger this lead by provoking the development of anti-satellite weapons.

He then considers President Reagan's early advocacy for a new approach to missile defence, rooted in his sincere concerns about nuclear deterrence as a strategy, particularly at a time when both sides of the Cold War were developing novel weapons such as mobile Inter-continental Ballistic Missiles (ICBMs). This led to his public announcement of SDI in March 1983. The author notes that SDI was largely Reagan's personal initiative, rather than the product of development within a Service or Agency and that this lack of bottom-up development and interagency endorsement impacted the programme as controversy about it intensified.

Despite Reagan's enthusiasm for SDI, Bateman correctly highlights the difficulty in defining what it was developing from and into – by no stretch of the imagination was it a single platform or system. Rather it was a loosely defined 'system of systems', most of the components carrying significant technical risk in their development, but also carrying 'policy risk', in that testing them would possibly infringe on disarmament agreements and endanger ongoing associated negotiations. Bateman also devotes a chapter to analysing the attitudes of US Allies, in many cases torn between worry that support would implicate them in militarising space, and the allure of



¹ Donald R Baucom, *The Origins of SDI 1944-1983* (Lawrence, KS: U Kansas Press, 1992).

collaborating on fundamental SDI research. As proposed, SDI would have embraced multiple novel technologies, leading to spiralling costs and development delays. President Reagan had meanwhile managed to secure a significant measure of disarmament agreement with the USSR and had come to the end of his terms of office. Succeeding US administrations continued to explore the possibilities of missile defence as Reagan had envisaged, but the change of administration, the developing collapse of the Soviet Union and the lack of enthusiasm (including budgetary enthusiasm) for resolving the outstanding issues led to SDI morphing into a vastly reduced programme. Traces of it can still be found today, but by no stretch of the imagination do they resemble President Reagan's original ambitions.

The key point made by the author is, in this reviewer's opinion, that the SDI failed for policy and strategy-related as much as for technical reasons. The technical challenges in developing it were such that the chances of whatever strategic imperatives initiated the project still being relevant at the end of the development cycle must have been very remote indeed, and in fact changes came quickly. Arms Control agreements were achieved, the Soviet Union crumbled, and although Russia inherited its nuclear mantle, the strategic backdrop was changed substantially. The views of NATO allies had arguably not been considered enough when SDI was conceived, and Bateman provides an excellent overview of the tensions driven into public view by differing national positions. Finally, the SDI project was forever mired in the conundrum that any effective ballistic missile defence system would inevitably have utility as an anti-satellite system, and thus could be seen as provocative and destabilising. This was becoming apparent just as greater tactical use of space systems was becoming practical. Whether that was a significant factor to a critic then depended on their opinion of what those tactical uses were, and whether the

'other side' were more or less likely to be disadvantaged in any anti-satellite exchange.

Lastly, this book illustrates the wealth of material that is now available to historians online; a glance through the notes will highlight the extent to which the author has been able to exploit declassified online archives, particularly those of the Central Intelligence Agency and the National Reconnaissance Office in the United States. Anyone undertaking work on Cold War history, and especially those seeking information about American policies, perspectives and official histories might wish to examine the extent to which these sources have contributed to this work.

In summary, Dr Bateman has provided a valuable insight into a little-understood programme. He has delivered an insightful analysis of the subject, highlighting political, military and strategic factors in very accessible prose. *Weapons in Space* provides the analysis arguably impossible in earlier works, placing it in its contemporary context. As such, it is highly recommended.

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

By Yuval Noah Harari

Publisher: Fern Press, 2024

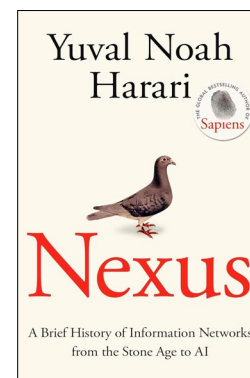
ISBN: 978-1911717096, 528 pages

Reviewed by Wing Commander Andy Mitchell

The tagline for *Nexus* is disarming: 'A Brief History of Information Networks from the Stone Age to AI'. One could reasonably expect this to be a book dominated by history, dominated by a look back over our shoulders at things gone past. Tweed jacket with leather patches vibe. But, as Harari notes in his prologue, 'History isn't the study of the past; it is the study of change'. Given the mountainous change that AI – perhaps now in its mere foothills – could bring, 'Nexus' eschews the tweed for a cyberpunkian clarion call to awareness: AI is *here*; AI is *rapidly evolving*; AI has *agency* (fundamentally different to any prior information technology or network); AI's *nonhuman intelligence* is opaque and *alien* to us; and there is a *major risk* that AI might not 'make wise decisions and create a better world'. If this sounds akin to prophetic doom-mongering, that's no accident. Harari – a philosopher holding an Oxford DPhil in History and currently serving as a Distinguished Research Fellow at Cambridge's Centre for the Study of Existential Risk – consciously draws parallels between AI's apotheosis and the draw of mythologies down the ages, be they organised religion or dangerous modern mythologies such as Nazism, Stalinism, and Populism. But Harari is not a populist leader who invites you to simply place your faith in him: he builds his case with well-articulated, well-structured and logically sound arguments, grounded initially in a clear historical context that prepares the reader for all that follows: he situates AI in a historical perspective so that humans – who love stories – can engage in the

conversation. Harari's standing as a best-selling author is clearly well-deserved if his prior works were similar in style to this one – 'Nexus' aims to be accessible to all, and rightly so: 'Given the magnitude of the danger, AI should be of interest to all human beings'.

Nexus opens with a compelling, clear and provocative prologue where Harari contrasts the 'naïve view of information' (the more information there is, the greater the likelihood of finding truth) with the 'populist view of information' (information leads to power, information is a weapon). He notes there is value in both (oversimplified) views, but the simplification provides a useful door through which nuance then follows. The rest of the book is structured in three parts. The first part considers historical human networks and information technologies. This provides a welcoming embrace of historical richness, but more importantly outlines key concepts that are then leveraged in the following two parts of the book. Harari outlines 'technologies' in the social-science sense of the term; this is not 'tech' geekery – 'stories' or narratives are presented as a foundational information technology, and 'democracy' is broken down and considered in terms of information flows and networks. This is hugely powerful, a valuable reminder (lesson?) that democracy, in its full sense, involves far more than citizens casting votes to elect officials. For many years now, I have viewed rhetoric about 'defending democracy' – often implied as the simple 'ability to elect one's government' – as hollow



and dangerously close to valourising 'elections' rather than 'good governance'. Harari outlines the importance, in a well-functioning democracy, of information flowing freely across multiple channels with strong self-correcting mechanisms (checks and balances) that tend to protect against the concentration of power in ever-smaller circles. In that sense, 'defending democracy' is a much sounder proposition, and one that could even run counter to the idea of blind support for a popular (populist) vote. In that sense, 'Nexus' is an absolute must-read to better engage with the sort of populism we have been witnessing since the 2010s, and to think about the information-exchange conditions (now being eroded) under which democracy can flourish: 'Democracies die not only when people are not free to talk but also when people are not willing or able to listen'.

The second part aims to show that – with the creation of AI – humankind is hurtling forward with a whole new kind of information technology whilst not really considering the potential consequences. In considering AI's downside, Harari resonates with the tone set in Mustafa Suleyman's *The Coming Wave* (featured in CAS' Reading List 2024). *Nexus* is not a wash-rinse-repeat; it was written over the same timeframe as Suleyman's work and provides meaningful engagement with and alongside it. I recommend reading both works, but would recommend any newcomers to begin with 'Nexus' and then move on to *The Coming Wave*. The key points are made well: AI is not the same as *any* prior (dumb) information technology. AI has agency, AI can bring new creations into being, AI is 'always on' (constant stare, no need to sleep...) and AI is fallible: the classic logical error of confusing correlation with causality can be made pervasively, prejudicially, and potentially without recourse to any meaningful challenge via human-driven organisations that are unable to meaningfully understand a nonhuman 'alien' form of intelligence.

The third part – as well as a truly excellent epilogue – considers the potential impact of AI on our global politics (and all that falls out from there). In the same vein as Suleyman, Harari considers the potential impacts of AI on – or exploitation of AI by – both democratic and totalitarian governments. Pitfalls are well-highlighted in both cases, with the most sobering arguably being the potential ability of AI – through increasingly active misinformation and disinformation – to fundamentally erode the conditions that have underpinned recent history's liberal democracies. For anyone who delves into X or other platforms, this could feel incredibly familiar (and disconcerting). In 'The Silicon Curtain' – a term I had not heard coined before, but I have now begun to pick up on in other sources – Harari outlines the potential for human networks to diverge in a way that runs totally against globalist theories of increasingly greater interaction, interdependence, and (hopefully) mutual understanding (or at least tolerance). AIs educated and raised in very different traditions, running from wildly different base code and different physical chipsets could lead to significant divergence between their associated 'human networks' (nations, trading blocks, other groupings) – the Silicon Curtain.

Nexus is an absolute 'must-read', and a 'must-read' that should skip to the top of one's bedside pile of yet-to-read tomes. Harari's observations that 'We are now at the critical moment of AI canonisation' and 'in the era of AI the alpha predator is likely to be AI' demand this engagement. As a 'call to awareness', *Nexus* is first-rate.

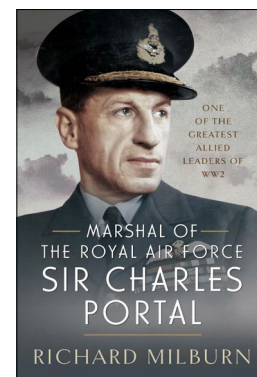
Marshal of the Royal Air Force Sir Charles Portal: One of the Greatest Allied Leaders of WW2

By Richard Milburn

Publisher: Air World, 2023

ISBN: 978 1 39904 439 4, 232 pages

Reviewed by Group Captain (Retired) John Alexander RAuxAF



Richard Milburn's study of Charles Portal, Britain's wartime Chief of the Air Staff from October 1940 to the end of 1945, provides fresh insight into Portal's part in the strategic direction of the Second World War. The work is the result of the author attending the prestigious School of Advanced Air and Space Studies (SAASS), the US Air Force's school for strategists, and the subject of his doctoral research when selected for SAASS' PhD programme, rather than a conventional biography. As the author explains, the genesis for the research was his surprise at President Dwight D. Eisenhower's description of Portal as 'the greatest of all war leaders – greater even than Churchill' and his admission that, although then a wing commander with twenty years' service in the RAF, he was barely aware of Portal. As the author notes, Portal, like his fellow wartime Chiefs of Staff for the bulk of the war, Admiral Sir Dudley Pound (who died in 1943) and General Sir Alan Brooke, did not write biographies, unlike many allied operational commanders who controversially did, although Brooke's diaries were published latterly. Portal's previous biographer was the former RAF official historian, history teacher and prolific author Denis Richards' *Portal of Hungerford*, published in 1977.

The book's thesis is that Portal's effectiveness as both Chief of the Air Staff and a member of the Chiefs of Staff Committee, responsible for the military strategic direction of the war, was the result of his personality traits including

intelligence, patience, collegiate approach, and above all his ability to develop trusting relationships with other key leaders. The book's structure is simple and effective: a chapter on each of Portal's key strategic relationships during the war, with brief chapters on Portal's life and career covering the First World War, interwar years and after the Second World War, and a substantial conclusion. The key relationships are those with Winston Churchill, Portal's political leader as the Prime Minister, Minister of Defence and chairman of the War Cabinet; General Sir Alan Brooke, Portal's main strategic peer as the Chief of the Imperial General Staff from 1941 to 1945 and chairman of the Chiefs of Staff soon after; Air Chief Marshal Sir Arthur Tedder, his main RAF operational commander as Air Officer Commander-in-Chief (AOC-in-C) Middle East Command, later allied theatre air commander, and then Eisenhower's Deputy Supreme Allied Commander, Supreme Headquarters Allied Expeditionary Force; General Hap Arnold, his US Army Air Force counterpart; and his most 'challenging and prickly' subordinate Air Chief Marshal Sir Arthur Harris, AOC-in-C Bomber Commander from April 1942. All of whom are briefly introduced within the book.

Each chapter provides insights into why Portal was successful by analysing his key challenges, using as evidence Portal's own words from his personal archive at Christ Church College, Oxford, alongside other primary sources, and a range of secondary sources. Thus, Portal's

correspondence when dealing with Churchill's constant challenging of the Chiefs of Staff and his extraordinary working hours is examined to find Portal used patient, consistent and calm argument, arguably more effectively than Brooke and Pound. Portal also realised the importance of unity amongst the Chiefs as Churchill would never overrule them if unified. Hence, although Portal and Brooke continually argued about the effectiveness of strategic bombing or air support, they always presented a unified front when they had to, and their different personalities complemented each other. Milburn cites Churchill ordering the disastrous intervention in Greece and Crete in 1941 and the Dodecanese campaign in 1943 when the Chiefs were divided. The author highlights that nevertheless Brooke and Portal remained friends and respected each other. Portal's relationship with Tedder was the easiest of those examined, although they did not know each other beforehand. Portal mentored and protected Tedder, particularly from Churchill, who initially thought Tedder, who was older than Portal, a poor choice. Meanwhile the brutally honest Tedder provided Portal with evidence to use with Churchill and the other Chiefs regarding inter-service co-operation. The relationship evolved such that Tedder was Portal's choice as his successor as Chief of the Air Staff. Milburn argues convincingly Portal's charisma and charm were most apparent when building a relationship with the initially Anglophobic Arnold that came to underpin all allied operations. Portal chose the determined and diligent Harris for Bomber Command, and according to Milburn showed incredible patience in dealing with Harris' obstinance and rudeness to others.

Whereas many biographies are hagiographic, Milburn notes Portal's failures such as the costly and ineffective fighter sweeps over France in 1941 or his choice of Air Chief Marshal Sir Trafford Leigh Mallory as commander of the Allied Air Expeditionary Force. The book only briefly

mentions the role of Air Chief Marshal Sir Wilfred Freeman as Portal's mentor and there is no mention of Portal's relationship more generally with subordinates, although neither is the focus of the book.

The book is strongly recommended for the expert and more general audience alike. The book achieves its aim. For the expert the book reflects its doctoral research, and the guidance of renowned US air power scholars such as Dr Tami Davis Biddle, examination by the current Director of Defence Studies (RAF), Group Captain John Shields, and Seb Cox, then Head of the Air Historical Branch, who permitted access to the Portal Archive at Christ Church, which the book makes excellent and original use of. The book adds to our knowledge on Portal, and supports a revisionist understanding of him, whereby, according to Dr Philips Payson O'Brien in *How the War was Won*, Portal was the only British Chief of Staff who understood the war as a vast, global sea, land and air campaign. For the more general reader the book is written in a readily accessible and non-academic style, with an introduction, pre-war chapters and aftermath based on secondary sources to provide context.

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

ISBN: 978-0-241-69632-3, 544 pages

Reviewed by Dr David Hall, DPhil (Oxon), FRHistS

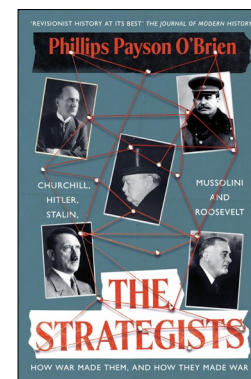
What is grand strategy and how is it made? Despite a few dissenting voices, there is consensus in military academies, governments, and universities that grand strategy is a state's long-term plan for achieving its national interests. That it emerges from a well-thought-out and linked process of 'ends-ways-means' agreed and implemented by the state's political, financial, military, and industrial leaders. It seems logical, even essential when fighting a world war, but Phillips Payson O'Brien, in his engaging and provocative book, *The Strategists*, on the five dominant grand strategists of the Second World War, demonstrates that this was an illusion. The strategists themselves were neither compelled nor constrained by their state's decision-making bureaucracy and high-ranking military leaders. For better or worse – Churchill, Stalin, Roosevelt, Mussolini, and Hitler – planned and fought the war the way they wanted.

To understand how strategy was made, O'Brien avers, we must understand the strategist. This is a bold and even controversial thesis. It shatters the assumption that states in war act upon something comprehensible such as national interests or the greater good, and that they are guided through the chaos by rational actors making prudent decisions that inform far-reaching courses of action all worked out through the multi-layered structures of government. Grand strategy in the Second World War did not follow this pattern. It was highly individualistic and idiosyncratic. The five strategists, all strong, ego-

driven leaders, either crushed or outmanoeuvred challenges to their power, and often saw their strategic plans put into action.

The Strategists begins with several practical definitions that establish a strong foundation for O'Brien's analysis. He defines strategy as an implemented decision which starts a dynamic process. It is dynamic because the enemy always has its part to play. Grand strategy is a decision put into action by an authority that has no superior entity to which it must defer. Typically, this is a commander-in-chief or dictator, exemplified by the five strategists discussed in this book. Moreover, grand strategic actions are creative steps that determine later choices. The creation and allocation of the armed forces, actions that are above and later influence the conduct of operations on the sea and the battlefield and in the air.

The book is divided into two sections. The first half covers the early life experiences of the five strategists, their personal involvement in war, and the creation of their strategic mindsets. Chapters focus on each strategist in turn, setting the stage for how their perceptions, preferences, and prejudices affected their strategic choices once they became the leader of their respective nation during the Second World War. None of the strategists are impressive and this section vividly illustrates how biases and character flaws adversely influenced their conduct of the war. The second and slightly larger half of the book is



a detailed examination of the strategic choices they made and how these choices determined the outcome of the war. Chapters in this section follow a loose chronological order of the key campaigns mostly in the European and Mediterranean theatres of operation. The focus is always on the strategists, how they coped with the dynamic part of strategy-making during the ebb and flow of the war. The book concludes with the three victorious Allied strategists clashing amongst themselves over their increasingly divergent visions of the post-war world.

The Strategists expands on themes O'Brien introduced in his earlier works *How the War Was Won: Air-Sea Power and Allied Victory in World War II* (2015) and *The Second Most Powerful Man in the World: the Life of Admiral William D Leahy, Roosevelt's Chief of Staff* (2019). Material (resources and technology) and control of communications (air and sea) are singled out as the fundamentals that mattered most in war fighting much more than winning land battles.

The most successful strategists, O'Brien says, are those who cope best with the dynamic process of challenge and change. For him, this was Roosevelt. He did not have a romantic view of war like Churchill and Mussolini. Nor did he see war as a contest of ideologies or willpower. Roosevelt had a practical and pragmatic view of the world and war, the latter he believed was always decided by money, equipment and strategy, and control of the sea. He formed these ideas when he was a young schoolboy, enthralled by the ideas he absorbed from Admiral Alfred Thayer Mahan's book *The Influence of Sea Power Upon History*. After the First World War, Roosevelt added control of the air to his strategic thought, prioritising the creation of large air-sea forces over land forces. This force structure, O'Brien concludes, along with the massive resources the US provided to Britain and the Soviet Union, is why the Allies won the Second World War.

Not everyone will agree with O'Brien's conclusions or his assessments of the five strategists. This is one of the book's strengths. The author challenges the reader to examine personality and process, the five strategists and Clausewitz's strategic paradigm ends-ways-means. The result is a thoroughly enjoyable read and a full and imaginative analysis of grand strategy and the conduct of war. It is a book that should be read by staff college students and directing staff, scholars, defence practitioners, and anyone who has an interest in how grand strategy is made and hopes to avoid the many ways to get it wrong.

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

ISBN: 978-1035018956, 304 pages

Reviewed by Corporal Bradley Fletcher RAuxAF

Project management is often considered a science, consisting of tools and structured practices which enable one to make informed decisions that affect the time, cost and performance required for delivering a new endeavour. Popular wisdom is that the more complex the endeavour, the more complicated the management tools you need, the more specialist skills that are needed to use them, and the larger investment in time needed to get the maximum value from them. However, there are those that see managing projects, especially when they are at the higher end of relative complexity, as more of an art, where it is the 'softer' skills that are more important to ensure a successful outcome - such as leadership, negotiation and setting the right culture across the team. From a seasoned project director for High-Speed Rail 2 (HS2) to an average Joe/Jane building a shed in their garden, what all will agree on is that when managing a project, you want to focus your time on what is most important, and do it in a way that secures the most benefit towards a successful outcome. Although there are numerous project management textbooks out there, there are few that provide tips of the science and art of project management which are relevant to all.

Flyvbjerg and Gardner's *How Big Things Get Done* offers a compelling and data-driven analysis of project management, particularly within the realm of large-scale endeavours. It reflects Flyvbjerg's background as an economic geographer, with various published books on

megaprojects. The book challenges conventional wisdom in a widely accessible format by focusing on the pervasive issue of project overruns and the importance of realistic planning. The book provides a practical, easy-to-remember, and easy-to-use tool for making more accurate, less bias-prone projections and avoiding the pitfalls of overly optimistic time/cost estimates. Their approach relies on the power of 'reference class forecasting', where instead of meticulously working out the costing of a complex project, one can get more accurate results by seeking cost estimates from other, similar projects, classifying those projects by their main parameters (i.e. higher quality output, more structurally complex, more uncertainty) and figuring out the relative low, medium and high cost estimates based on those difference. Additionally, the book underscores the role of organisational culture and human factors in project success, emphasising the need for a collaborative and open-minded work environment across any endeavour. While the focus on large-scale projects may limit its direct applicability to smaller-scale initiatives, the authors do an admirable job of highlighting in an every-man way how the underlying principles of planning, risk management, and stakeholder engagement remain relevant across a broad spectrum of projects. Other practices presented include psychological awareness for identifying bias, iterative planning and how to unify teams to a common goal.

While *How Big Things Get Done* offers valuable insights, it is not without its shortcomings. Firstly, the generalisability



of its findings. Flyvbjerg and Gardner primarily focus is on UK/US projects, potentially to cater for the book's expected audience, but makes no attempt to rationalise diverse cultural and economic contexts (particularly in developing countries). The next critique is the limited range of project types and scales presented in the book. The authors examine a wide range of projects and concludes that their findings are equally applicable to them all, i.e. infrastructure, IT, and research projects etc. There is a degree of 'cherry-picking' and oversimplification here to get their point across that only certain tools and practices are useful regardless of the type of the project involved. However, more questionable, is the extent to which the scale of projects will change their deliverability remains unresolved throughout - until some specific observations are shared in the last chapter on the importance of modularity. The rate that accuracy of estimates decreases as they scale, the extent of exponentiality, or the thresholds where having accurate time / cost estimates become disproportionately difficult to manage using their proposed approaches are all left for the reader to decide. Undoubtedly, this is an editorial decision to achieve brevity, but it does leave the book feeling unfinished and unsubstantiated in what it concludes.

Despite the lacking methodological rigour behind what the authors choose to highlight, the tools and techniques introduced are practical, allowing for differing types of project complexity (structural, socio-political, and emergent) which are harder to account for when looking at what will influence the success of projects. Many of the sources for these complexity drivers are by definition external and limited in how they can be controlled, but Flyvbjerg and Gardner's central thesis – that one should focus less on modelling these unknowns and instead properly identify them and learn from their past effects - is sound advice for all those seeking practical knowledge

that can be universally applied to new project endeavours. In summary, the authors do achieve what is promised, distilling, and presenting impactful yet accessible case studies into a set of tools and practices that many will learn from, and no doubt use both professionally and otherwise – albeit the 'price' for achieving this has been neglecting many of the artful elements of project success. *How Big Things Get Done* is well suited to either those seeking a primer into the science behind project management and how to avoid common mistakes, or as a refresher to those that are seeking a differing perspective on the topic.

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/>

Contents: The Chief of the Air Staff's Reading List 2024

Conflict: The Evolution of Warfare from 1945 to Ukraine

By David Petraeus and Andrew Roberts

Publisher: William Collins

Getting China Wrong

By Aaron L. Friedberg

Publisher: Polity

The Coming Wave

By Mustafa Suleyman and Michael Bhaskar

Publisher: Bodley Head

Quantum Supremacy: How the Quantum Computer Revolution Will Change Everything

By Michio Kaku

Publisher: Doubleday Books

The Origins of Victory: How Disruptive Military Innovation Determines the Fates of Great Powers

By Andrew F. Krepinevich

Publisher: Yale University Press

How to Survive a Crisis: Lessons in Resilience and Avoiding Disaster

By David Omand

Publisher: Viking

How States Think: The Rationality of Foreign Policy

By John J. Mearsheimer and Sebastian Rosato

Publisher: Yale University Press

The New Makers of Modern Strategy: From the Ancient World to the Digital Age

Edited by Hal Brands

Publisher: Princeton University Press

The Future of Geography: How Power and Politics in Space Will Change Our World

By Tim Marshall

Publisher: Elliott and Thompson

Leadership: Six Studies in World Strategy

By Henry Kissinger

Publisher: Allen Lane

Command: The Politics of Military Operations from Korea to Ukraine

By Sir Lawrence Freedman

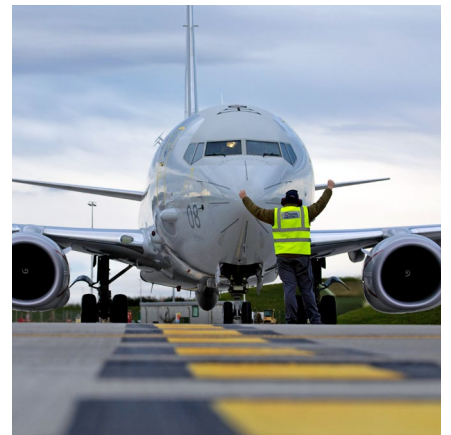
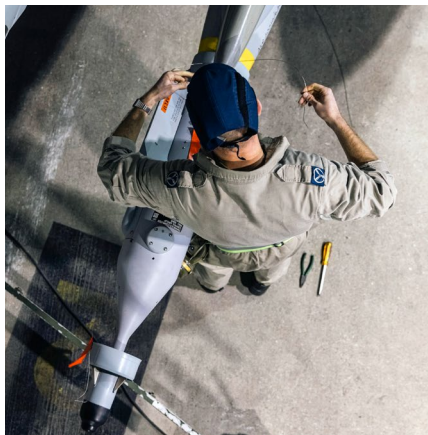
Publisher: Allen Lane

Winkle: The Extraordinary Life of Britain's Greatest Pilot

By Paul Beaver

Publisher: Michael Joseph

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.



Notes

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The Royal Air Force Centre for Air and Space Power Studies

<https://www.raf.mod.uk/rafcasps>