

The Chief of the Air Staff's Reading List 2019-20



Front cover image:

2019 marked the retirement of the iconic Tornado from active service with the RAF. A series of farewell flypasts, culminating in a nine-ship formation over East Anglia, celebrated this outstanding aircraft's 40 years of service.

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Foreword

It is my great pleasure to introduce the 2019-20 Chief of the Air Staff's Reading List, and the ten outstanding books that it contains. By design, my recommendations are not limited only to titles devoted to air and space power, but extend into the equally important and relevant spheres of strategy, leadership, intelligence and cyber. In creating this selection of recently published titles, this year's Reading List provides a superb blend of historical insight and innovative projection to inform our future thinking.

Although the Royal Air Force's centenary celebrations are now behind us, the legacy continues to inspire, not least in the literary domain. In *The Royal Air Force: The First One Hundred Years*, John Buckley and Paul Beaver succeed in providing a commendably concise volume replete with interesting anecdotes and precise analysis. The result is an authoritative, yet highly readable book, which speaks to the challenges of the future while providing a fitting tribute to the past.

A specific episode of the Royal Air Force's history which has hitherto been given insufficient attention is the Western Desert Campaign of 1940-1941. In *Flying to Victory*, Mike Bechthold delivers an insightful analysis of the campaign from an air perspective, highlighting the challenges of forging a genuinely 'Joint' military endeavour. The author emphasises the contribution of an often-overlooked commander, Air Commodore Raymond Collishaw (a Canadian First World War ace), and the importance of the relationship he formed with his British Army counterpart, General Richard O'Connor.

One personality who needs no introduction is Sir Winston Churchill. In his superb biography, *Churchill: Walking with Destiny*, Andrew Roberts paints a wonderful portrait of the



life of a leader surely unmatched in modern British history. I commend this particular biography of Churchill to you, not only because of the huge influence he had on the life (indeed, survival) of the Royal Air Force in its early days, but also because it is a study of the pivotal difference that one individual can make – a lesson that has relevance to us all.

From the other side of the political-military interface, Air Chief Marshal Sir Richard Johns' autobiography, *Bolts From The Blue*, provides a frank account of his service between 1957 and 2000, recording the many joys and occasional frustrations he experienced on his journey to becoming the Chief of the Air Staff. It is not only an entertaining read, but is, for its historical importance and the sage advice the author imparts, a most valuable gift to the Service.

Leadership itself is analysed in *Leaders: Myth and Reality*. Retired US General and former ISAF Commander Stanley McChrystal and his co-authors deliver a profound analysis of leadership, which centres around the idea that 'leadership is not what you thought it was'. They take an original approach and their conclusions should give us all pause for reflection.

At the zenith of leadership are those who command the art of strategy. In *On Grand Strategy*, the world-renowned Cold War historian John Lewis Gaddis explores the difficulties of formulating strategy, using fascinating case studies and analogies, and providing a framework to aid decision-making in an era of growing complexity and uncertainty. Meanwhile, Patrick Porter's *Blunder: Britain's War in Iraq*, makes for thought-provoking and at times uncomfortable reading, but his forensic analysis of British strategic culture in the early 21st Century makes an important contribution to the debate on Britain's interventionist posture in that era.

The centrality of intelligence to decision-making, and the role of intelligence agencies as tools of national power, are some of the themes explored by Christopher Andrew in *The Secret World: A History of Intelligence*. The book is a monumental work of history, but one that also provides instructive insight into how modern liberal democracies can compete against their adversaries in today's technology-rich world, without compromising their own values.

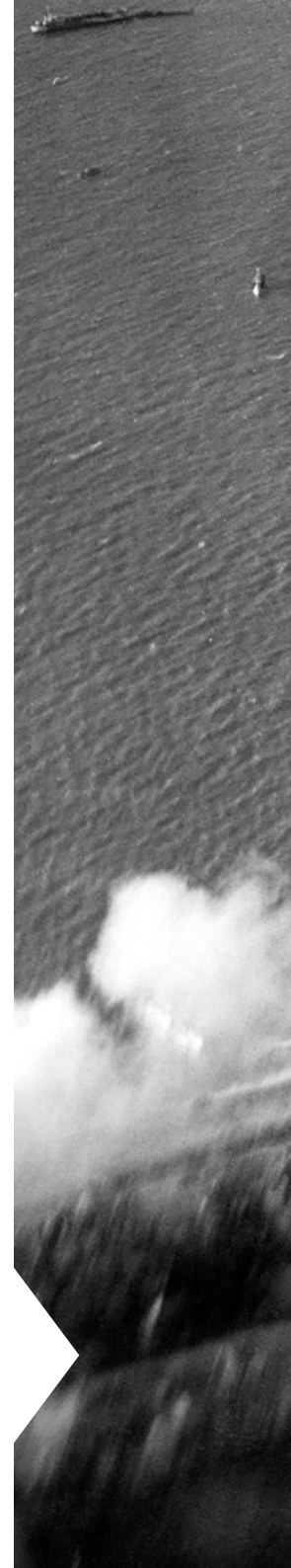
The final two recommendations stay with the theme of new technology. *Small Wars, Big Data* explores the information revolution which is taking place in modern conflict, and how commanders should harness it to aid their decision-making. Meanwhile, in *LikeWar: The Weaponization of Social Media*, the authors argue that social media is changing the battlefield itself.

This is my last Reading List as the Chief of the Air Staff, so I would like to take this final opportunity to encourage you to find the time to think, reflect and read. By preparing yourselves through the study of air and space power, leadership and strategy, you will be equipping yourself, in whatever professional roles you go on to fulfil, to lead the Royal Air Force successfully into the future.



Sir Stephen Hillier KCB CBE DFC ADC MA RAF
Air Chief Marshal
The Chief of the Air Staff

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2019 marks the 75th anniversary of the D-Day landings. This photograph, taken by an RAF tactical reconnaissance aircraft on D-Day, is an aerial view of the British 3rd Infantry Division assaulting Queen White beach, Sword Area, 6 June 1944.
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Message from the Director of Defence Studies (RAF)

For those of you serving in the RAF (and Defence more widely), I should like you to know that the titles on this and previous years' reading lists are available for loan from unit libraries and many are also available in e-book format at the MOD online library (<http://ebookcentral.proquest.com/auth/lib/mod/requestAccount.action>). Opening an account is straightforward (it simply requires your personal MOD email address to register), and provides access to a treasure trove of books, all for free. New titles are made available throughout the year, so if you find any gems that you consider are worthy for CAS' consideration in next year's list, please get in touch with me at enquiries.dds@da.mod.uk.

For all serving RAF personnel, if your reading inspires you to take your study of Air, Space and Cyber Power further, may I encourage you to consider applying for a CAS' Fellowship, details of which can be found on the RAF Centre for Air and Space Power Studies website at: <https://www.raf.mod.uk/rafcasps>.



Group Captain James Beldon
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The Chief of the Air Staff's Reading List 2019-20

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The Royal Air Force: The First One Hundred Years

By John Buckley and Paul Beaver

Publisher: Oxford University Press, 2018

ISBN: 978-0-19-879803-3, 288 pages

Reviewed by Wing Commander James Parker

The centenary year of the RAF saw the publication of several books chronicling the history of the Service. However, *The Royal Air Force: The First One Hundred Years*, stands out from the crowd. Condensing one hundred years of RAF history into a manageable volume would be a challenge for lesser authors, yet John Buckley and Paul Beaver succeed because of their skill in melding insightful strategic assessments with genuinely fascinating historical and contemporary details. This ensures a new and authoritative perspective on a story whose essentials are relatively well-known.

The author of several other notable books, including *Monty's Men: The British Army and the Liberation of Europe 1944-5*, which won the Templer Medal in 2014, Buckley is Professor of Military History at the University of Wolverhampton. His cooperation with Beaver, who spent five years as editor of *Janes Defence Weekly*, and is an Honorary Group Captain in the Royal Auxiliary Air Force, has resulted in an informative and highly readable book. Structured into 12 chapters, the book addresses the full breadth of RAF history from inception to the present day, conveying the authors' premise that the three greatest influences on the RAF have been technology; finance and resources; and the connection between air power and national strategy.

The book begins by outlining the formation of the Service, highlighting many points of interest, some of which may



also amuse the reader. Many will be aware that a major driver for the formation of the RAF was the public perception that the United Kingdom was vulnerable to German aerial attacks, but it is probably less well-known that 'the damage to the economy caused by German bombing was around one per cent of [the damage] caused by rats' (p. 22). The second chapter turns to 'Imperial Policing in the Interwar Era', noting that by 1920 the Service had been reduced to some 30,000 personnel and 20 operational squadrons, and that there loomed the distinct possibility of it being broken up. However, Trenchard's vision of the RAF ensuring Imperial defence through cost-effective air control and policing ultimately proved to be the Service's saving grace, despite its limitations in terms of political and human cost. The following chapter on 'The Road to War' introduces Thomas Inskip, 'a relatively unknown and colourless character in British history but [one who] was to prove critically important' (pp. 51-52) as the Minister for the Coordination of Defence in 1936. In essence, despite arguments to the contrary, Inskip prioritised the production of fighters over bombers. Rightly, the better-known developments of this period are also detailed, including the development of an integrated air defence network as well as the growth of both the RAF's budget and the UK's aero-industry.

Given the authors' view that 'the RAF's role in the Second World War remains its most important and vital contribution to the survival and progress of the British

nation' (p. 143) it is logical that three chapters, comprising one-third of the book, are devoted to the period 1939-1945. Furthermore, they identify a number of key lessons that remain relevant today. These include the fact that both the quantity *and the quality* of aircraft available to each protagonist are important factors in assessing the likely outcome of a confrontation, as evidenced in 1940; and that air superiority is an essential prerequisite for providing ground forces with close air support, as shown by the Western Desert Air Force under Air Vice-Marshal Coningham. Most theatres of the war are well-covered, particularly the tribulations and successes of Coastal Command, though more on the use of air power in the fight against the Japanese would have made interesting reading. A standalone chapter is dedicated to 'The Bomber Offensive' against Germany. This book offers far more than a bland recounting of the official line; indeed, Beaver and Buckley acknowledge the unease surrounding the Strategic Bombing Offensive. Nevertheless, they conclude that 'actions have to be understood in the context of the war' (p. 119) being one of national survival. Moreover, they recognise that in today's age of great precision it is easy to be critical of the past. As such, it is worth considering that the 1941 Butt Report highlighted that only one-third of bombs came within five miles of their intended target, largely due to the inefficiency of the navigation aids and bomb-aiming technologies in use at the time. Also covered in detail is Operation Chastise in May 1943, one of the most famous bombing raids ever conducted, and the Dambusters' audacious achievements are all the more impressive in terms of accuracy when set against the other operations conducted at the time.

History from 1945 to the present day is outlined in several short chapters covering the RAF's entry to the nuclear age; its role in the Cold War and post-Cold War environments; and ending with a chapter on 'War in the Gulf and Other Not So Small Wars: 1990 to the Present Day', which

concludes by recounting the trilateral strikes conducted against suspected chemical weapons facilities in Syria in April 2018. Any overlap between the chapters is minor, and the authors paint a convincing picture of the RAF playing a crucial role countering the Soviet threat as well as taking part in numerous campaigns across the globe. For example, the development of the V-Bombers and other iconic jets of that period is covered with the same enthusiasm as tales of Spitfire-on-Spitfire engagements in the first Arab-Israel conflict, the strategic implications of the Blackbuck bombing raid during the Falklands War as well as the success of precision strike during the First Gulf War. The importance of allies is made clear, primarily the United States, and more recently the French through the 2010 Lancaster House Treaty. In the final chapter which considers 'Future Proofing the RAF', the authors argue that the 'RAF continues to struggle against the public perception that RPAS [Remotely Piloted Air System] is some kind of futuristic, dystopian and chilling weapon system' (p. 238). More positively, they highlight that the RAF is keen to grasp the cyber and space domains, notably through a Rapid Capability Office at Headquarters Air Command that fully embraces and expedites technological change.

In conclusion, this book is extremely readable and offers something for everyone, from those with little knowledge of RAF history to the veritable enthusiast. To attempt to cover the history of the RAF in a single volume was ambitious, but the authors have succeeded admirably and have produced a fitting tribute to the world's oldest independent air force.

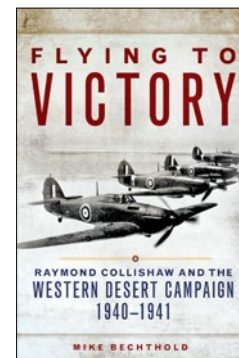
Flying to Victory: Raymond Collishaw and the Western Desert Campaign, 1940-1941

By Mike Bechthold

Publisher: University of Oklahoma Press, 2017

ISBN: 978-0-8061-5596-8, 296 pages

Reviewed by Dr Ian Gooderson



A detailed analytical study of the Western Desert campaign of 1940-41 from the air perspective is long overdue. So too is a scholarly acknowledgement of the contribution of Canadian-born Air Commodore Raymond Collishaw to the success of one of the most remarkable campaigns fought by British and Commonwealth forces during the Second World War. In *Flying to Victory* Mike Bechthold, who teaches history at Wilfrid Laurier University in Ontario, fills these gaps by skilfully integrating a thoroughly researched campaign study with a balanced and convincing depiction of Collishaw as an effective joint-minded air commander. Chronologically structured, the book provides a detailed narrative of the air operations of the early desert campaigns while charting Collishaw's role in developing British tactical air support doctrine at this critical formative stage of the war when experience – and often hard lessons – of long-term value was gained.

Bechthold's introduction provides a useful survey of the scholarship on the early desert war and of how Collishaw has been perceived by historians. There is also a detailed summary of Collishaw's eventful career before the Second World War, from which readers will gain an appreciation of his professional development and of the extent of his joint experience, from First World War naval pilot and high-scoring fighter ace, to commanding the RAF's Number 202 Group in the Western Desert in 1940-41. This journey included considerable ground attack

experience on the Western Front in 1918, service in Russia during the post-revolution civil war, working with the Army in anti-insurgent operations in Iraq, his attendance at RAF Staff College, and service with the Navy as the RAF Air Officer aboard the carrier *HMS Courageous*. Collishaw also gained a good deal of command experience in the Middle East, and it is clear from Bechthold's study that Collishaw was well placed to play a key role when, in 1940, it became an active theatre of war.

Subsequent chapters detail the early war significance and operational context of the Western Desert and the threat posed by the Italian forces in Libya to the British position in Egypt. Then follow two chapters examining Operation Compass in detail. This was the audacious British and Commonwealth offensive launched against the Italians in the Western Desert in December 1940. Originally conceived as a five day attack to clear Italian positions from Egypt, the exploitation of its initial success meant that Compass ended only two months later with the expulsion of the Italians from Cyrenaica. Although overshadowed by later events Compass remains a military victory with few parallels. A force of no more than two divisions – some 31,000 British and Commonwealth troops of Major-General Richard O'Connor's Western Desert Force, working closely with Collishaw's 202 Group – and the Royal Navy, destroyed an Italian army of fourteen divisions and its supporting Air

Force, captured some 130,000 prisoners, nearly 500 tanks, over 800 guns and thousands of motor vehicles, while sustaining less than 2,000 casualties. Had it not been for the political decision to denude North Africa of land and air forces to support the ill-fated campaign in Greece, the victory may have been even greater. It is operationally conceivable, though logistically debatable, that the 500 mile advance achieved might have been extended even further to seize Tripoli and secure the North African shore. Bechthold does Compass full justice, and he provides a fascinating case study of how the aggressive and innovative employment by Collishaw of his limited number of fighter and bomber squadrons gained and retained the initiative over the numerically superior Italian Air Force and facilitated the Army's success. Very much capturing the character and spirit of this remarkable campaign, he describes how at one stage Collishaw made use of the single modern Hurricane fighter at his disposal, how the challenges of maintaining mobility and offensive momentum across the desert were overcome, and how much depended upon the perseverance of personnel and the exploitation of captured materiel. 'Enemy trucks were crucial to keep the supply lines open', he writes, 'aircraft ran on Italian aviation fuel and dropped Italian bombs, and the men dined on Italian rations' (p. 102). His account of Compass is of particular value in analysing it as a joint air-land campaign integrated in planning and execution and based upon the strong RAF-Army relationship fostered by Collishaw and O'Connor; a campaign such as the British would not achieve again for many months.

Later chapters detail why this was so. Operation Compass was followed by a sharp reversal of fortune. In February 1941, the first German units of what would become the Afrika Korps landed in Tripoli to bolster the Italians and their commander, Erwin Rommel, lost no time in taking the offensive against the by then depleted, exhausted and over extended British and Commonwealth forces,

for whom the desert war now took on a very different character. The gains of Operation Compass were rapidly lost as the British and Commonwealth forces were pushed back into Egypt. For them the remainder of 1941 in the Mediterranean was a time of frustration and defeat, under the pressure of which the RAF-Army relationship that had made Operation Compass possible broke down into mutual recrimination and distrust over the issue of air support. In May, the island of Crete was lost to the Germans and efforts to defeat Rommel in the desert, including the offensives Operation Brevity (May 1941), and Operation Battleaxe (June 1941), were failures. Bechthold charts these events objectively and clearly, retaining his focus on the air aspects in appropriate context for readers to gain a comprehensive understanding of the causes of failure. By taking his study beyond Collishaw's departure from the Middle East after Battleaxe to the eve of a further offensive, Operation Crusader (November 1941 – January 1942), which would also fail to defeat Rommel, he shows how through often bitter experience the joint operational and tactical proficiency and air-land integration necessary to defeat a formidable opponent was eventually achieved.

As with a good historical campaign analysis, *Flying To Victory* raises themes of enduring relevance. The determinants of successful air-land integration emerge clearly enough but perhaps more importantly so does their fragility. The rapid transition from the brilliant success of Operation Compass to near disaster and the long road back to an effective RAF-Army partnership is a particularly useful study of how circumstances can enable prejudice, misperceptions and entrenched views to resurface, so that the lessons of experience are ignored and efficiency undermined. Readers will also appreciate the significance of personalities and command relationships. One of the book's most interesting themes is why Air Marshal Tedder,

who became Air Commander-in-Chief Middle East in June 1941, seemed to lack confidence in Collishaw despite his successes, sought to replace him at the earliest opportunity and actually did so after Operation Battleaxe. Bechthold deploys the available evidence to show that Tedder, in his own words, considered Collishaw 'an awful bull in a china shop' who had 'no conception whatever of the administration without which operations cannot function' and who 'goes off half-cock in an appalling way' (p. 163). In effect, Tedder seems to have believed that Collishaw was too aggressive, at the expense of his squadrons, and that he lacked the administrative skill needed for high command in a campaign against the Germans. Bechthold convincingly challenges this view of Collishaw, and readers are likely to feel that it was largely unfounded. Collishaw was an aggressive commander at a time when scant resources had to be exploited to the limit in order to achieve success, but he was not a reckless one. In *Flying To Victory* Bechthold gives Collishaw his due recognition as a successful air commander whose air campaigns 'would provide a template for future army-air operations' (p. 187) but it is not for this reason alone that the book should be read. Both scholars and military practitioners will gain valuable insights from a period of the desert war that has remained comparatively neglected, particularly in terms of an analysis of air power, but which offers useful case studies both of what can be achieved by joint action backed by mutual trust and a willingness to cooperate, and of the consequences when they are lacking.

Churchill: Walking with Destiny

By Andrew Roberts

Publisher: Allen Lane, 2018

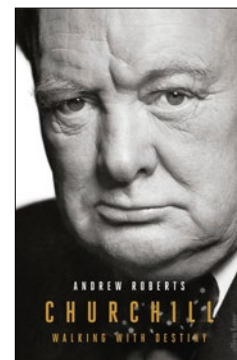
ISBN: 978-0-241-20563-1, 1152 pages

Reviewed by Wing Commander Helen Wright

I felt as if I were walking with destiny, and that all my past life had been but a preparation for this hour and for this trial... I was sure I should not fail.

These words, describing Churchill's own feelings upon becoming Prime Minister in May 1940, provide the foundation for this book. The quote is from the final paragraph of Churchill's 1948 volume *The Gathering Storm*, but Churchill had expressed similar feelings to the Canadian Prime Minister at the Quebec Conference in 1943, when victory in the Second World War could not be assumed. In *Churchill: Walking with Destiny*, Andrew Roberts seeks to explore the validity of Churchill's idea that his formative experiences had uniquely equipped him for the challenges of his wartime premiership.

By any definition, a biography of Churchill is a huge undertaking. Not only are there over 1,000 titles already on the shelf, including several volumes by Churchill himself, but the subject is enormous. Churchill's output was prodigious: Roberts estimates that Churchill published 6.1 million words in 37 books, and delivered 5.2 million words during public speeches (p. 972). A towering figure, whose rich and varied life spanned nine decades, he was a soldier, correspondent, politician, sportsman, historian, orator, inventor, artist, and adventurer, whose life was so inextricably bound with the image of Britain and the Empire that many viewed his passing as the end of an era. As an acclaimed expert



on Churchill, Roberts is well-equipped for the daunting task of distilling Churchill's life to a single volume.

A Fellow of both the Royal Society of Literature and the Royal Historical Society, he has a PhD from the University of Cambridge, and is the author of several prize-winning books. Churchill figures prominently in several of these – notably in *Masters and Commanders* and *The Storm of War: A New History of the Second World War* – but this book is different from his others in that it explores the joy and sadness of Churchill's personal life, as well as the triumphs and tragedies of his public life.

In researching the book, Roberts made use of over 40 new sources, many of which are not in the public domain, such as the Chequers visitors' books for 1940-45 and 1951-55. He was granted permission to use the Royal Archives at Windsor, and was accorded the rare privilege of unfettered access to the private wartime diaries of King George VI. Aside from the introduction and conclusion, the book is structured into two roughly equal halves, charting Churchill's life chronologically. *Part One: The Preparation*, covers Churchill's childhood; his army career and time as war correspondent; his first forays into politics; his opposition to appeasement; and concludes with him being installed as Prime Minister in May 1940. The chapters covering his time as a young officer in British India, and his service in the Boer War, are particularly enjoyable, conveying both the excitement and the danger, as well as Churchill's audacity and

physical courage. *Part Two: The Trial*, covers Churchill's period in office from 1940 to 1945; his electoral defeat and time in opposition; his second premiership from 1951 to 1955; his retirement years; and his death in 1965.

Those familiar with Roberts's work will know that he is not shy with his opinion, yet will explore competing viewpoints in great detail before rejecting them. Thus, his work is a gripping and entertaining read, founded in detailed research and carefully-crafted argument. Roberts makes no secret of his admiration for Churchill, but this is not unconditional adulation. He extols Churchill's virtues but does not shrink from acknowledging his vices. He deals at length with the many mistakes Churchill made in his career, not least the ill-fated Dardanelles adventure, the misjudged decision to rejoin the Gold Standard, and the disastrous Norway Campaign. He also critically analyses other incidents, emphasising that they must be viewed in the context of their time and contemporary events.

This is indeed a wonderful book, which is beautifully presented, with maps, charts, and photographs, and which will appeal to a wide readership. Those who know a lot about Churchill will enjoy the anecdotes and perspectives provided by the new sources. Others will simply enjoy it as an incredible portrait of a life lived with energy, vitality, and purpose. Both audiences will value Roberts's unique perspective, imagination, and engaging writing style: as Dominic Sandbrook observed in *The Sunday Times*, this is 'a terrific book, which bursts with character, humour, and incident on almost every page'. Roberts beautifully encapsulates the great sweep of Churchill's life, particularly the raft of incidents and accidents which Churchill had to survive just to be present in the House of Commons in 1940. To read his story as a continuous narrative is to be humbled and to marvel at the intensity and diversity of Churchill's experiences.

Beyond being an enjoyable read, there are many reasons why members of the Service should read this book. Churchill had a lifelong love of innovation and originality. He took flying lessons in 1912 when aviation was in its infancy. A one-time Secretary of State for Air, he was a champion of the RAF long before he immortalised it in his famous speeches of 1940. He is intertwined with the history of the RAF and its place in the public imagination. But perhaps the most important reason why the book should be read is that Churchill was arguably the greatest figure of the 20th Century, and because the story of his life – and the difference that a single individual can make to the course of events – should serve as an inspiration to all.

Roberts notes that 'in a survey of 3,000 British teenagers in 2008, ... twenty percent of them thought Winston Churchill to be a fictional character' and observes that it is in fact 'a tribute that people think of him, insofar as they know about him at all, as someone whose life story could not possibly be true... [because it] seems so improbable that a single person could have lived such an extraordinary life' (p. 982). The book might indeed cause the reader to ponder whether great men are born or made, and to wonder whether perhaps, in the case of Winston Churchill, the answer is that great men make themselves. As Roberts concludes, 'although Churchill was indeed walking with destiny in May 1940, it was a destiny that he had consciously spent a lifetime shaping' (p. 3).

Bolts From The Blue

By Sir Richard Johns

Publisher: Grub Street Publishing, 2018

ISBN: 978-1-911621-09-6, 320 pages

Reviewed by Group Captain James Beldon

In its centenary year, the Royal Air Force was treated to a tsunami of publishing attention, but of the many titles surfing the wave of public interest in the Service, only a few, including Professor Richard Overby's *Birth of the RAF 1918* and Patrick Bishop's *Air Force Blue*, seem in their own right to have broken genuinely new ground and look set, therefore, to stand the test of time on merit rather than coffee table appeal alone. Another, and perhaps the most important of all, is Air Chief Marshal Sir Richard Johns' masterly example of an autobiography, *Bolts From The Blue*. Launched after the bunting and logos of RAF100 had been consigned fondly to the souvenir drawer, Sir Richard Johns' book served as a literary bolt from the blue itself: it is, in this reviewer's opinion, the most significant contribution to the Royal Air Force's historiography made by one of its senior commanders for many years.

By any definition, *Bolts From The Blue* is an enjoyable read: Sir Richard's personality and sense of humour shine throughout, and engagingly propel the reader along. There are some colourful, and occasionally surreal, vignettes, which inform and amuse in equal measure — his 500-knots duel with a Yemeni tribesman and a bizarre mess ball committee meeting in the middle of nowhere are examples of the latter! Contained within the prose too is ample evidence of Air Chief Marshal Johns' determination and 'stickability'. Whilst the title of Sir Richard's book is derived from his interpretation that he was fortunate to be delivered a great number of

opportunities by chance, the reader cannot but reach a different conclusion than that this was a man who took a unique road to the top of the Service he regarded as the best in the world, and which the Service ultimately regarded him as the best it had. Both were right, and Sir Richard's account bears testimony not only to the 43-year epoch in which he served, but to the ethos of potential, merit and recognition that has been the sacred bond exemplifying the Royal Air Force and its people for more than a century.

There was no assured destiny for the young Richard Johns to reach air rank when he joined the Royal Air Force as a Cranwell flight cadet in 1957; but the door was open, as it was, indeed, for his fellow intake member, Michael Graydon, who as Air Chief Marshal Sir Michael Graydon would later precede him as Chief of the Air Staff in the 1990s. But reflecting six decades after his experience of Cranwell in the 1950s, Sir Richard offers a not uncritical, but nevertheless balanced, assessment of the College in those days; somewhat tellingly he states bluntly that he 'did not enjoy his first year at Cranwell', and his critique of some of the staff there is deservedly sharp. Furthermore, the wastage rate during training was simply ridiculous and economically scandalous — imagine today an initial training system with a 50% suspension rate! Nevertheless, and one surmises that this is true for all who have gone through tough initial military training of one sort or another, it cultivated 'that certain bloody-



mindedness which is the bedrock of determination to succeed.' It is this comment, perhaps more than any other in the book, that calibrates the reader's assessment of Dick Johns' rise to the top: because, although the author's inherent modesty and entertaining prose are apt in seducing the reader into believing that each career step he took forward was a fortuitous 'bolt from the blue' or evidence of his 'talent for good luck', there are reminders throughout the book which point to the steel core of a man with whom the buck stopped at each level of command he held. All will enjoy the sections dealing with Aden (his descriptions of flying at ultra-low level among the terraced mountains are simply a joy), and those officers approaching or serving in mid-level command appointments will find something useful to extract from every sentence concerning his command of 3(F) Squadron and as Harrier Force Commander and Station Commander of RAF Gütersloh in Germany.

Sections of the book concerning staff and ground-based command appointments are no less interesting, nor the exposure of the challenges he faced any less revealing. Throughout, he is absolutely frank, and his ability to take in the full historical sweep of events is extremely useful to the military scholar. For example, he provides a superb insight into Britain's response to Turkey's invasion of Northern Cyprus in 1974 and offers a succinct and interesting comparison of British strategic myopia in departing Aden in the manner it did in 1967 with the British withdrawal from Iraq in 2009.

Sir Richard's account contains a wide-ranging cast, from the Prince of Wales — whom Flight Lieutenant Johns served as qualified flying instructor — to Prime Minister Margaret Thatcher, Sir Michael Palin, and every senior figure in Defence and the Royal Air Force in the 1990s. It is fair, I think, to say that Sir Richard was not enamoured with the political class (with the notable exceptions

of Margaret Thatcher and the team of Ministers under George Robertson in the 1997 New Labour Government). He was certainly frustrated by the relative lack of authority he considered the Service Chiefs of Staff could wield, which may come as a surprise to more junior members of the Service today.

A genuinely 'joint' officer — after all, he is the proud son of a Royal Marines officer — Sir Richard Johns was the epitome of the professionally adept, ruthlessly efficient airman, who could 'mix it' credibly with his peers from each Service (including the Civil Service). He was the product of a Royal Air Force flying and staff education system that prepared him well for every level of command, and to which he made considerable personal investment himself — not least through the creation in 1998 of *Air Power Review*. Notwithstanding, throughout *Bolts From The Blue*, one never loses touch with the young Richard Johns, whose love for flying was just as evident on his final sortie in a Hercules with his son Douglas at the end of his career as it was the beginning. One absolutely gets the sense that the thrill of flying such a wide variety of types (with the possible exception of a Romanian MiG-21!) more than adequately compensated for the occasional tribulation.

Through his autobiography, Sir Richard has made another — perhaps his most valuable — gift to the conceptual capital of the Royal Air Force. Entertaining and persuasive, such carefully distilled advice has found superb form in the shape of *Bolts From The Blue*.

Leaders: Myth and Reality

By General Stanley McChrystal (US Army, Retired), with Jeff Eggers and Jason Mangone

Publisher: Portfolio Penguin, 2018
ISBN: 978-0-241-33632-8, 480 pages

Reviewed by Group Captain Paul Taylor

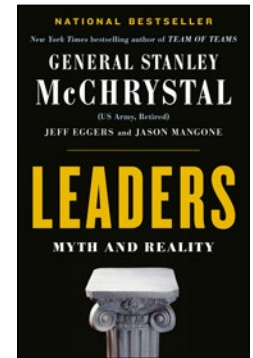
Many will 'know' Retired US Army General Stanley McChrystal from Brad Pitt's depiction of him in David Michôd's 2017 satire, *War Machine*. However, anyone who has witnessed General McChrystal's lectures or who has read his previous book, *Team of Teams*, will know that in the lecture theatre or in print, he is far removed from Pitt's portrayal. Profound and erudite, his thoughts on leadership invariably hit the mark; this book is no exception. But does it take the study of leadership further? And does his grand claim that 'leadership is not what you thought it was, and never was' stand up to scrutiny?

In *Leaders: Myth and Reality*, General McChrystal and his co-writers ponder the perennial question, 'What makes a leader great?' He attempts to answer the question by analysing the myth and reality of 13 famous leaders from all walks of life, ranging from corporate CEOs to politicians. To do so, he uses a model by 'Plutarch', a 1st Century Greek-turned-Roman historian who wrote *Lives*, a profile of 48 Greek and Roman personalities; the book was a best-seller in the 19th Century, second only to the *Bible* in the USA. McChrystal employs a similar analytical model to examine the leadership approaches of more-modern paired leaders who share experiences or traits – the Founders, Geniuses, Zealots, Power Brokers, Reformers, and Heroes. McChrystal aims to use their stories to challenge traditional leadership models, but is careful to stop short of prescribing how to lead. He sets out the limits of the book from the off, stating that the

book will not simplify leadership but will underscore its complexities, and will help towards providing a general theory of leadership.

McChrystal begins by explaining that the myth of great leaders rarely matches the reality. He uses the example of Leutze's famous romantic painting of George Washington standing heroically in a fragile rowing boat crossing an icy Delaware river on his way to attack the British forces; he argues that the reality was likely to have been very different. He also profiles General Robert E Lee, the lionised Confederate general, who was worshipped for his string of audacious victories against a stronger opponent in the US Civil War. But the reality did not match the myth: Lee fought for an unjust cause and against his own solemn oath to his nation. Furthermore, despite his great victories, Lee failed in his duty to sustain his fighting force, some 80% of which, at the height of the war, suffered as casualties from disease or battle. McChrystal argues that we live with the myths and buy into them because we are human, because they make sense and they fit our human view of reality; but, he argues, this viewpoint is unhelpful to honest analysis.

The book uses 'great' leaders as its research sample – it becomes obvious that the subjects were not necessarily great at leadership, but were leaders who had a significant impact on history. The one obvious criticism that could be levelled at a book about such leaders is that it perpetuates



the leader-centric view of leadership – Thomas Carlyle’s so-called ‘Great Man Theory’ of leadership – where humans are seduced by the simplicity of leadership being attributable to individual brilliance. This supports the traditional view of leadership as a process in which an individual influences a group in a certain context towards some defined result. McChrystal acknowledges the potential criticism that the book might perpetuate the ‘Great Man Theory’, but attempts to draw out broader leadership lessons from the examples. He argues that leadership is more than the leader him/herself and the leader is more part of a complex adaptive system in which leadership is an ‘emergent property’ of the leader’s interaction with the context of group agency, networks and followership. (Note: the concept of agency is the impact of individuals or groups on outcomes, events or systems). His conclusion, that leading is more about being part of a feedback loop within a system than it is about being at the top of a command chain, is entirely valid. He then proceeds to apply his evidence to attempt to burst three big myths of leadership. The Formulaic Myth suggests that there is a recipe for good leadership, but he counters that most of his example leaders display the opposite behaviours of those expected of classic leadership. The Attribution Myth suggests that traits and attributes of individuals are the main factors in leadership, but the book’s evidence rejects innate traits as definitive factors; indeed, the simplest test here is that many ‘Great Men’ he reviews are in fact great women! Finally, the Results Myth claims that leaders are great because of their achievements, but the book demonstrates that we see leadership as being as much about what our leaders symbolise or the culture they create than in what they accomplish. He deduces that we need a theory of leadership that better accounts for real human behaviour, not the myth-based biased view. He concludes this convincing section with the memorable line, ‘We’re not capable of leading like the legend of

Churchill... even Churchill was not capable of leading like the legend of Churchill’.

McChrystal then takes the analysis to the next level and redefines leadership as a dynamic system of leaders, context and followers, in which the influence of each varies with the situation. On the basis of his evidence, the book succeeds in supporting his theory. However, one cannot get away from the feeling that the limited sample of ‘great’ leaders means that the approach is still leader-centric; his argument would be more compelling if he had used more examples of ‘everyday’ leaders. In limiting his evidence to significant historical figures and the agency of the individual, his context is not directly relatable to the military context of multiple layers of leadership. In focusing on ‘great’ leaders, the analysis misses a huge swathe of everyday sub-leaders who make a difference to team and organisational performance as part of an adaptive system. The RAF is not just about the Chief and his followers – it gets its strength from its complex interwoven network of multiple leaders and followers synergistically interacting at all levels. Furthermore, McChrystal’s model of the leader as just one node in a three-way system of leader-followers-context may be too passive for the military context. The Tedder Leadership Academy is developing the idea that the increasingly complex and challenging 21st Century context will demand a shift towards a requirement for even greater power for the leader within the system, where the leader’s drive raises the overall level of performance of the system and impels it in the desired direction. In the contemporary operating environment, leadership as an ‘emergent property’ may just not be enough.

Overall, the book adds a great deal to contemporary leadership debate. Unusually for a book on leadership, it is also highly entertaining and generally educating.

I know of no other study of leadership that enlightens its audience on leaders as diverse as Walt Disney, Coco Chanel, Margaret Thatcher and Einstein. This naturally appeals to the airport bookshop buyer, but it also provides valuable broader insights into leadership styles and concepts. While many of the examples are not directly relevant to the military reader, the discussion of generic leadership concepts is, and this book makes compelling reading for all students of leadership. McChrystal's 'new' model of leadership is convincing for his sample set, and supports his initial thesis of 'leadership is not what you think it is'; it may not entirely align with the RAF case, but there is value in having this debate. Arguably the book's greatest value lies in the evidence that there is no fixed template for good leadership – leaders who achieved great outcomes (in the form of results, symbolism, or a culture of belonging or excellence) often did so against the grain of classic leadership traits or attributes. That said, it emerges that they all displayed some of the fundamental behaviours, to greater or lesser degree, of aspiration, authenticity, integrity, connection, resilience and courage. For all potential or actual leaders, conforming to a list of generic behaviours will not guarantee success, but seeking excellence in these behaviours can only help on your leadership journey; the rest is up to you!

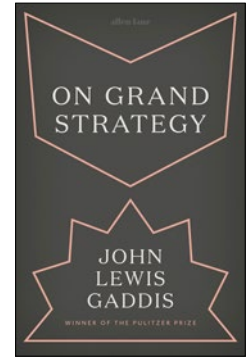
On Grand Strategy

By John Lewis Gaddis

Publisher: Allen Lane; 2nd Edition, 2018

ISBN: 978-0-241-33312-9, 384 pages

Reviewed by Air Vice-Marshal Chris Luck



For many, particularly students of the Cold War period, Gaddis needs no introduction. His *The Cold War; A New History* is a masterpiece in historical scholarship of the period. Despite the brilliance of *The Cold War*, it is peculiar that many reviews of *On Grand Strategy* centre on the merits of Gaddis's other work, rather than on the virtues of this book.

As it turns out, *On Grand Strategy* stands on its own two feet without the need to reference past works. Gaddis has taken the sum experience of his scholarship and applied it to the grand sweep of strategic history; Pericles, Xerxes, Octavian, Elizabeth I, Napoleon, Lincoln, Wilson, Franklin D. Roosevelt and their opponents are all leaders subject to his historical case-studies.

Among the strategic thinkers analysed in Gaddis's masterclass are: Thucydides, Archilochus, Sun Tzu, Machiavelli, Clausewitz, Tolstoy, Isaiah Berlin and F. Scott Fitzgerald. Gaddis uses Archilochus's *Hedgehog and the Fox* to frame his argument for strategic excellence; the hedgehog knows 'one big thing', while the fox knows 'many small things'. Gaddis argues that the successful strategist must simultaneously grasp both the 'one big thing' and the 'many small things'.

Gaddis defines grand strategy as ensuring that ambition is aligned with capabilities because 'ends can be infinite' whereas 'means can never be.' This is uncontroversial

today and more commonly reflected in our lexicon as 'ends, ways, and means'. Grand strategy has an overarching goal – the 'one big thing' that Archilochus's hedgehog knows – but getting to the goal requires a vast amount of activity that is almost infinite in complexity and unexpected turns, which are facilitated by the 'many small things' that the fox knows. Gaddis illustrates this point by likening the hedgehog's view to using a 'compass bearing' to reach the required destination while ignoring all other considerations. The fox may not know the overarching direction of travel but his common sense tells him to go around the topographical swamps and traps he encounters rather than become mired in them. However, knowing the direction but ignoring the reality in between is a path to disaster, but so is knowing exactly what to do in detail but with no end in mind. Gaddis lays out through his case studies that to be a successful strategist is to combine in a 'single mind the hedgehog's sense of direction and the fox's sensitivity to surroundings' while 'retaining the ability to function.' However, combining the two in just one mind is difficult in the extreme.

The message is clear that having a goal and a theory of victory is fine, but the real world has an annoying habit of interfering. Gaddis unashamedly uses Clausewitz to explain the 'friction' of the real world, and in doing so goes a long way to rehabilitating Clausewitz from the usual clumsy and harmful raiding of his *On War*. Clausewitz is

clear that war without political goals (the big idea) is just violence, and that fog and friction make the seemingly easy very difficult to achieve. To see your way through, Clausewitz states that the commander needs 'Coup d'Oeil'. Today we call this 'commander's judgement', based on experience and theory and informed by net assessment. Clausewitz was the first to grasp what today is taught as 'non-linearity' and 'chaos theory' ('for the want of a nail a shoe was lost...' or the flap of a butterfly's wings leading to storms) and to postulate that, to minimise friction (and therefore risk), we needed a theory of war to guide us.

Friction manifests itself across time, space and all scales. The grand strategist must hold a compass bearing across the three while avoiding the traps in between. Not losing sight of the goal whilst at the same time sensing and responding to risks and opportunities that friction brings is an art. Gaddis tells us through his book that in the real world a leader who cannot reconcile the perspectives of both the hedgehog and the fox will not succeed.

Theory allows us to not have to start afresh, but is not a substitute for the real world. Theory allows us to cut through the endless complexity of the real world as a sketch. But this simplification is not worth anything if it is totally dissociated from experience, and history is a great store of experience. Therefore, theory, experience and judgement combined is the antidote to anecdote and assumption being used to underpin strategic thinking.

Gaddis has written a book reflecting his years of teaching strategy, with historical cases to give us a masterclass in understanding why it is and will always be difficult. Importantly, he has not abandoned us, but instead has given us a framework through which to interpret, analyse and adapt our thinking to cope with complexity and the uncertainty that flows from it.

For this reason alone it is a must read for policy decision makers and practitioners alike.

Blunder: Britain's War in Iraq

By Patrick Porter

Publisher: Oxford University Press, 2018

ISBN: 978-0-19-880796-4, 256 pages

Reviewed by Lieutenant Colonel James Chandler

This is an important book. Despite the passing of over 15 years since hostilities began and the publication of numerous historical accounts, academic analyses and public inquiries, a general understanding of the real issues behind Britain's intervention in Iraq remains elusive. There is a real danger of collective amnesia. As people seek 'closure' from an unpopular episode in recent history, the UK risks developing what Geraint Hughes calls 'Iraqnophobia', where lessons from Britain's most significant military-strategic failure since Suez in 1956 are lost amidst a natural desire to forget and 'move on'. In *Blunder: Britain's War in Iraq*, Patrick Porter seeks to correct this reflexive impulse. In one of the first major pieces of scholarly work on Britain and Iraq since the Chilcot Inquiry, Porter explains why Britain's intervention should be considered an epic blunder that exposed the limits of Western power and ended in nothing but defeat (p. xi-xii).

Porter makes his case convincingly and as a result his book is both breathtaking and ground-breaking. Breathtaking in the comprehensive and incisive manner in which he compiles his argument; ground-breaking in the way the argument exposes misconceptions and delusions. As Porter explains, Iraq has been too readily dismissed as an anomaly, as if its failings could never again feature in more morally charged military actions of tomorrow. Porter challenges this thinking in the starkest of terms. For him, Britain's war in Iraq was a failure because

the underpinning ideology was fundamentally flawed. As he explains, this ideology was universally held, rarely challenged and remains entrenched in Western thinking today – including within military circles. It is for this reason that Porter's book is more than just another retro-case against invasion and why all military professionals, irrespective of service or seniority, should be familiar with its contents.

Porter, a professor of international security and strategy at the University of Birmingham, states that his aim is to 'take a hammer to the war's rationale' (p. xiv). Accordingly, the book analyses the grounds on which Britain decided to invade Iraq and how this sowed the seeds for the strategy's eventual undoing. Put simply, Porter argues that 'bad ideas caused Britain's war in Iraq' (p. 1) and that these bad ideas were the true cause of the campaign's subsequent unravelling. Thus, the intervention is described as a blunder, not as a sound idea badly executed, 'but an unsound idea built on unsound assumptions' (p. 186). The core of Porter's analysis focuses on three specific notions that formed the war's intellectual foundation: 'regime change'; 'rogue states'; and the so-called 'blood price'.

The 'regime change' doctrine, Porter explains, was a Western inclination to re-order the world. Based on the idea that security could only be achieved by 'breaking' troublesome states, it also involved occupation and



re-making them in a more liberal democratic model. Porter argues this revolutionary impulse only succeeds in creating new power imbalances and spreads chaos rather than order. He reveals how the history of such endeavours since 1815 is 'an impressive record of failure' (p. 103). Nevertheless, flush with perceived successes in Africa and the Balkans, Britain's decision-making elites were pre-disposed to the perceived truth of this doctrine and were disinclined to re-examine it in the context of Iraq. This failing proved decisive.

Similarly, Porter describes the concept of the irrational and undeterrable 'rogue state' as being 'overblown and self-contradictory' (p. 94). Flaws arise from what Porter calls a 'have-it-both-ways illogic' (p. 99). 'Rogue states' are seen as irrational, undeterrable and, therefore, require military action to make other would-be rogues think twice, despite the fact that acting upon this message would require potential rogue states to think rationally and to feel deterred. Porter also argues that the notion that Iraq's President, Saddam Hussein, was an irrational and undeterrable rogue, keen to transfer nuclear weapons to terrorist groups, was inflated and 'not uniformly the advice that the government received' (p. 97). Assessments from the Joint Intelligence Committee and others stressed that Saddam's principal concern was regime survival, rather than the support of international terrorism, and that any use of weapons technology would ultimately be below a certain threshold.

Porter's clinical demolishing of the 'blood price' concept is arguably one of the most enlightening sections of the book. Only by paying a 'blood price' through active participation in Washington's 'war on terror', so the theory went, could London achieve influence and a role in steering the war's direction. This notion, Porter explains, ignores the complexities of policy-making in Washington, and wrongly assumes America is susceptible to external

influence (p. 146). Porter paints a 'night and day' analogy: at night Americans may venerate the memory of wartime alliances and the ties of blood, language and history; but in the cold light of day these thoughts do not translate into material influence as the 'single-minded pursuit of national interest' predominates (p. 147). Interestingly, just as active British participation did not facilitate exceptional influence, Porter highlights, neither did France's opposition lead to permanent exclusion or punishment (p. 150).

Away from 'bad ideas', *Blunder* contains other notable highlights. Porter's analysis of commonly held explanations for Britain's road to war is illuminating. Thus, the 'inadvertent escalation', 'virtue/vice' and 'poodle' theories are disproved with logic and reasoning (pp. 5-19). Elsewhere, Porter outlines the strongest possible case for war, before dismantling the argument and reasoning why an alternative strategy – 'vigilant overwatch' – would have been a reasonable third way between 'do nothing' and 'regime change' (pp. 187-197). A particular strength lies in Porter's content and style. His text is scholarly and protein rich, but also succinct and efficient. The combined effect is a convincing narrative, widely referenced, that moves at pace and leaves no stone unturned. True, the density of his text and prolific foot-noting might prove heavy-going for some, but overall Porter's argument is as accessible as it is hard-hitting.

As David Betz and Anthony Cormack suggest, Britain's war in Iraq has become like a crazy aunt living in the attic, a familial embarrassment nobody wants to talk about. Despite a nation eager to move on and a military desperate to rebuild reputation, the true issues behind Britain's misadventure in Iraq must be acknowledged first. Porter's book is a crucial step in this process. Porter deftly shows how Britain's war was based on self-deception and delusion and how these misconceptions, still prevalent in military circles and strategic thinking today, were the real

architects of its failure. Importantly, these flawed ideas should not be used to justify future interventions. To do so would be to ignore this tragic blunder that cost billions of pounds and killed or maimed hundreds of thousands. Despite our 'Iraq fatigue', we are not entitled to closure, not yet.

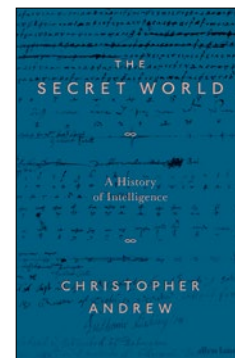
The Secret World: A History of Intelligence

By Christopher Andrew

Publisher: Allen Lane, 2018

ISBN: 978-0-713-99366-0, 960 pages

Reviewed by Air Vice-Marshal Michael Hart



This is a fine, thought provoking and well written book. As a historian of intelligence, founder of the Cambridge Intelligence Seminar and official historian of MI5, Professor Andrew is probably uniquely qualified to write on his subject. He sets out to examine the intelligence aspect of world events over the past three millennia, to show how this 'lost history' affects our understanding of historiography and to demonstrate its continuing relevance to 21st Century intelligence. The underlying argument is that better historical appreciation of how intelligence has been performed across the ages and its relationship with policy, will aid contemporary Western intelligence professionals, policymakers and politicians.

The author more than achieves his intent to recover lost history, not reaching the 20th Century until the 24th of 30 chapters. Exceptional individuals such as Hannibal and Julius Caesar apart, the collection and analysis of intelligence and its effective use (as we know it) require the bureaucratic resource of the modern state. Greeks and Romans were more influenced by seers, diviners and oracles than by an objective assessment of the facts. Sun Tzu was centuries ahead of his time, so much so that Chinese Emperors from the Qin to the Ming dynasties were more influenced by divination and superstition than by the *Art of War*. In 9th Century Baghdad, Al Kindi discovered the frequency principle (some letters occur more frequently than others) as the basis of codebreaking,

but there is no evidence that the Abbasid Caliphs made systematic use of cryptanalysis. The author's deep knowledge of Russian intelligence history shines through. Those dealing with the modern era FSB, SVR and GRU would do well to ponder the fact that they trace their ancestry to Ivan the Terrible's brutal internal security service, the *oprichniki*.

Professor Andrew's major challenge to historiography centres on the significance of cryptanalysis. He charts the shifting balance of intelligence advantage between European States from the 17th to the 20th Centuries, contrasting the formidable French, then later Hapsburg and Russian codebreakers, with a British effort that declined from an Elizabethan high point to a cottage industry, leaving Britain with no strategic Signals Intelligence (SIGINT) capability at the outbreak of the First World War in 1914. Indeed, in Britain, the ability of the Admiralty's cryptanalysts (known as Room 40) to influence the outcome of First World War battles was partially inhibited by mistrust of SIGINT amongst some Admirals. Russia's strategic SIGINT in 1914 was the best in the world, but a complete inability to fuse it together at the tactical level contributed to catastrophic defeat at Tannenberg from which Russia never recovered.

In writing on the precipitant events of July 1914, Professor Andrew could have landed the punch more decisively. The proximate cause of the crisis that provoked

one of the most devastating conflicts in history, the consequences of which resonate today, was an act of state sponsored terrorism, directed by Serbia's uncontrolled and unsupervised intelligence agency, itself linked closely to Russian diplomats in Belgrade.

The chapter dedicated to the Second World War emphasises the importance of Anglo-American intelligence cooperation and the significance of the ULTRA decrypts to the eventual outcome of the War. It also examines Soviet espionage, especially the penetration of the Manhattan Project. Other areas are somewhat neglected, such as the covert aerial photography of Germany before 1939; the vital role of Imagery Intelligence (IMINT) in both the Combined Bombing Offensive and the battle against the V-Weapons. Later chapters might perhaps have given greater prominence to Electronic Intelligence (ELINT) and Intelligence Surveillance and Reconnaissance (ISR). But these are minor points set against the vast scope of intelligence activities covered in the book.

As the author recognises, intelligence agencies are tools of national power. Their relationship with policy and politicians is complex. No modern Western intelligence agency has come close to the relationship between Beria's notorious NKVD (ancestor of the KGB) and Stalin, but there *are* recurring examples of egregious behaviour. For instance, in 1586 the success of Sir Francis Walsingham's intelligence network enabled him not only to obtain and justify the death sentence pronounced upon Mary Queen of Scots, but to deceive and apprehend her accomplices. In 1924, in a blatant attempt to swing a General Election, a group of officials (probably including a senior MI5 officer, Joseph Ball, and Admiral Sir William Hall, former Director of Naval Intelligence) leaked the forged Zinoviev letter to the *Daily Mail*. In 2002 the UK's Joint Intelligence Committee (JIC), published a document

of dubious provenance alleging that Iraq possessed Weapons of Mass Destruction in a manner, and at a time, that suggested an attempt to influence, rather than simply inform political and public opinion.

By concentrating on single source intelligence, the power and importance of fused multi-source intelligence assessment is largely missed. It might be safe to argue that Roosevelt or Churchill was less likely to be presented with what their intelligence services thought they wanted to hear than Hitler or Stalin but bullying and confirmation bias are not the preserve of despots. The interrelationships between Western politics, media and social media today are complex and febrile. It is therefore unsafe to assume that the interaction between politics and intelligence in democracies inevitably results in better-informed leaders making better decisions than autocratic leaders more insulated from the electoral consequences of their actions. It is therefore necessary for intelligence agencies to operate within a legal framework under independent scrutiny. Furthermore, the need for scrupulous accuracy in the communication of intelligence assessments is essential. Churchill is held up by Professor Andrew as something of a role model. While Churchill's enthusiasm for strategic SIGINT is well understood, from a contemporary perspective, a Prime Minister using single-source unassessed intelligence to guide strategy or make policy sits somewhere between the questionable and the downright dangerous.

The Secret World will appeal to both the general reader and the professional. It offers major insights: the most consistent intelligence priority over three millennia is regime or state survival; intelligence offers the greatest potential strategic advantage to a protagonist lacking overwhelming strength in other elements of national power; cultural mirroring has the potential to invalidate intelligence assessment. *The Secret World's* focus on

strategic intelligence agencies in the West and Russia inevitably leaves gaps. More on the successful use of intelligence by terrorists and insurgents, including by Michael Collins' IRA 1919-1921 and 1940s Zionists, would have been welcome. So too would more on economics, particularly in the run-up to the Second World War and during the Cold War. But there is compensation in some brilliant and incisive vignettes, including a striking juxtaposition of the underpinning psychology of the first Inquisition seeking out Cathar heretics in Languedoc and the 1930s NKVD seeking out secular heretics in the USSR and a compelling exposition of how historical ignorance slowed the West's appreciation of the realities of the Iranian Revolution and the threat posed by Islamist terrorism. There is also a sustained exposition of the tension between intelligence collection and analysis, and the instinct of intelligence agencies for executive action.

Only by fusing multiple sources can a reliable intelligence picture be formed. Taken together, artificial intelligence, quantum computing, synthetics, robotics, genetic editing, big data and the international impact of environmental degradation are revolutionary, perhaps unprecedented, developments. Technology is outrunning the state, apart possibly from China, which exerts an iron-grip on such developments. In the West, the Edward Snowden case exemplifies the challenge posed by the ability of individuals to mine data. Bellingcat's exposé of the GRU attempt to kill Sergei Skripal is a fine example of the perils of analogue operations in a digital age. Cambridge Analytica illustrates the potential for state and non-state actors to use personal data to affect individual political choices. Russian behaviours are beginning to be better publicly understood. China has been particularly effective in exploiting big data to Orwellian effect at home and to create commercial and industrial advantage abroad. For the West, the problem is how to compete without betraying its values.

By lifting the lid on the art and exploitation of intelligence across a grand sweep of history, Professor Christopher Andrew has delivered a major and valuable contribution to the canon of literature on the subject. The book raises as many questions as it answers – as intelligence often does – but it is reassuring to learn that the challenges faced by intelligence professionals today can find many instructive parallels from the past.

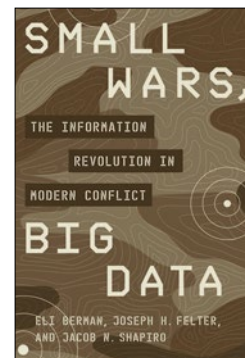
Small Wars, Big Data: The Information Revolution in Modern Conflict

By Eli Berman, Joseph H. Felter and Jacob N Shapiro

Publisher: Princeton University Press, 2018

ISBN: 978-0-691-17707-6, 408 pages

Reviewed by Wing Commander Paul Withers



Small Wars, Big Data takes a rigorous scientific approach to studying asymmetric conflict by drawing upon large sources of data to understand the complex interactions between governments, insurgents, and the civilian population. The central thesis of this fascinating book is the idea that information flowing from non-combatants is the key resource in asymmetric conflicts. The experience of the US and its allies in Iraq and Afghanistan led them to re-think some of the fundamentals of their approach to conflict, resulting in a renewed focus on Counter-Insurgency (COIN) doctrine. The authors argue for taking a 'smarter approach' to the kind of asymmetric conflicts that have been fought since 9/11, based upon the use of new research methods, data science and the analysis of 'big data'.

Berman, Felter, and Shapiro are all former US military officers turned academics. Berman is Chair of Economics at the University of California, San Diego, Felter a senior research scholar at Stanford, and Shapiro a professor of politics and international affairs at Princeton. They came together in Afghanistan as part of General Stanley McChrystal's Counterinsurgency Advisory Assistance Team (CAAT) in 2010 and continue to collaborate under the auspices of the Empirical Studies of Conflict Project. General McChrystal was convinced that civilian casualties undermined strategic goals, and this led him to espouse a policy of 'courageous restraint'. *Small Wars, Big Data* offers a meticulous academic study of

the relationships between civilian casualties, security and service provision, and how they affect levels of violence and success in COIN.

The authors draw together a vast quantity of empirical evidence that is the result of their study of intrastate conflict, primarily in Iraq, Afghanistan and the Philippines. A foundation of their studies was the ability to access Significant Activity (SIGACT) databases, get the valuable data fields de-classified and then painstakingly code them into useable data sets. The authors match a rich resource of SIGACT data points with economic and aid program data, and in doing so confirm the existence of a causal relationship between security and service provision and levels of violence.

After describing the methodology and approach, the authors introduce a vignette about a member of the civilian population, who, on observing insurgent activity near his home, is faced with the dilemma of whether to tip-off government forces. With this dilemma as a starting point, they offer six key propositions that they then test with empirical data throughout the book. They propose that: making tipping-off safer reduces violence; as does appropriately delivered service provision; security and service provision are complementary; economic conditions do not have a consistent relationship with levels of violence; both governments and rebels will provide services when

tips are valuable; and civilian casualties, caused by either side, affect support for combatants and the flow of information to the government (p. 80). The authors devote two thirds of the book to testing these propositions and providing evidence from large data sets to support them. They offer clear explanation of their often-complex analysis, interspersed with anecdotes, such as an ostensibly successful US aid program in Iraq that the civilian populace actually credited to the insurgency (p. 144).

In concluding, Berman *et al.* draw back from the micro-level study of specific conflicts to a more general analysis on the importance of understanding asymmetric conflict. This conclusion stands up on its own as an essay on the thorny problems of counter-insurgency. They maintain that policy – informed by non-partisan research and underpinned by real-world data – is vital, particularly when ‘facts are distressingly lacking’ (p. 301). They also provide an interesting observation on the COIN cliché of ‘winning hearts and minds’, suggesting that at best the military’s role is ‘leasing hearts and minds’ and creating the conditions for a wider political settlement. They argue that the tactical doctrine of COIN is not wrong, but caution that the aggregation of tactical COIN does not win the war – a view shared by other analyses of COIN. They suggest that the current research into reducing violence at the micro level has little to offer those charged with solving the macro challenges of how to ‘repair the country as a whole’ (p. 308). Despite that downbeat assessment, they do offer some optimism in a range of research and policy lessons. For example, they demonstrate that modest aid programs, which are conditional upon cooperation and delivered alongside improved security, are much more effective than large scale aid, which tends to invite corruption. Perhaps most importantly, they offer the lesson that in COIN conflicts information is key and that it is essential to obtain information from citizens.

The book is written, slightly unusually, in a style that mixes informally written narrative and anecdote with the precise technical language usually associated with social science and data science. Up front, the authors warn that some of their concepts rely upon the reader having some statistical knowledge and perhaps some understanding of game theory, albeit they provide ample explanation of the principles throughout. Although parts of the book read like an academic paper, with detailed descriptions of methodology and analytical techniques, the use of narrative and anecdote throughout the text brings the academic investigation to life and makes it an engaging and enjoyable read.

The title of the book succinctly describes the two themes running throughout: the authors’ attempt to explain the cause and effect of asymmetric conflict, coupled with an exploration of large data sets and how big data analytics can be a useful tool in understanding conflict. The authors studied the ‘small wars’ which they had personally experienced and those for which the necessary data were accessible to them. However, the analytical techniques and the correlation of large data sets arguably have much wider applicability.

Small Wars, Big Data, should appeal to a range of audiences. For the general air power audience, it offers compelling insights, based on empirical evidence, on COIN. For commanders, intelligence and operational planning professionals it offers a glimpse at the potential for big data analytics to support informed decision making. This thought-provoking book takes us beyond ‘big data’ as a buzzword to tangible examples of how computational analysis of large datasets can reveal insight. Berman, Felter, and Shapiro argue that ‘future operations should build in good data collection from the start and place high value on consistency’ (p. 324). Reading this excellent book should persuade commanders

that their decision making should be supported by big data analytics in *all* conflicts, whether large or small!

LikeWar: The Weaponization of Social Media

By P.W. Singer and Emerson T. Brooking

Publisher: Eamon Dolan/Houghton Mifflin Harcourt Publishing, 2018

ISBN: 978-1-328-69574-1, 405 pages

Reviewed by Group Captain Clare Muir

Singer's works have previously featured in the Chief of the Air Staff's Reading List, and for good reason. *LikeWar* follows in the footsteps of *Wired for War*, and Singer and Cole's *Ghost Fleet*, both of which contribute to the debate about our use of emerging technologies and highlight, to paraphrase a quotation in *Wired for War*, the difficulty of 'building bridges to the future while standing on them.' Partnering with Emerson T. Brooking, Singer now turns his attention to the latest emerging technology challenge – the social media revolution. If a revolution is defined as 'a dramatic and wide-reaching change in conditions or attitudes,' then Singer and Brooking make a convincing case that this is what we are experiencing, and moreover, as Gil Scott-Heron observed in his definitive song of 1970:

The revolution will not be televised

LikeWar's core argument is that social media is being weaponized. Singer and Brooking describe how the internet is changing war and politics, just as war and politics are changing the internet. They argue that although war is increasingly livestreamed by myriad strategic corporals (now civilians), the relationship also works in the other direction, and that online 'Twitter wars' can produce real world casualties. They also clearly make the case that viral misinformation is more than a tactical irritant and has the potential to deliver strategic effect. The net result is that, 'war, tech, and politics have



blurred into a new kind of battlespace.' It comes as no surprise to note that Clausewitz gets a mention – his trinity shrunk into our smartphones in the palm of our hands.

The revolution will put you in the driver's seat

Singer and Brooking give the reader cause to pause and reflect on the boundaries of this battlespace. As Singer noted in a recent podcast, in recent operations, 'not only could a US soldier follow and "friend" a member of the Taliban who might be online but, in turn, the member of the Taliban could reach out and like and friend and follow not just that soldier but their family members back home.' *LikeWar* shines a light on this new blurring between the home front and the battlespace, and highlights that, irrespective of our interest in the conflicts *LikeWar* describes, they have an interest in us.

The revolution will not be televised

Singer and Brooking press home the speed, reach, agility and ubiquity of social media – characteristics which will sound familiar to advocates of air power – and describe how, 'humans as a species are uniquely ill-equipped to handle both the instantaneity and the immensity of information that defines the social media age.' This book starts to equip us to operate in this information-rich environment.

The revolution will not be right back after a message

The language is, on occasion, dramatic in order to drive home a point. Though there are many who would disagree that, 'media weapons [can] actually be more potent than atomic bombs,' Singer and Brooking may be attempting to be deliberately provocative – mimicking the prevailing tone and tenor of the online discourse they are examining. While sceptics point to the enduring character of war and cling to old paradigms, Singer and Brooking make a convincing argument that war is now, 'more about who controls the information' and that warfare is, 'operating by a new set of rules.'

You will not be able to plug in, turn on and drop out

Beyond the advocates, the converts and the specialists, social media is neither widely nor well-understood in the military. However, fear not. If sock puppets leave you puzzled, and botnet armies leave you bamboozled, you will be in safe hands. Singer and Brooking's target audience is not the digital native; it is those of us who are *uncomfortable* in this space. They deftly deploy metaphors and vignettes as explanatory tools and translate geek-speak so that, by the end of the book, the reader will feel at ease using terms such as: trolling, dangerous speech, digital serfs, memetic warfare, distant fanboys, homophily and astroturfing.

There will be no highlights on the Eleven O'clock News

Information warfare is fast becoming a fertile (perhaps overly fertile) subject matter for academics, journalists and bloggers. So why should the discerning reader choose *LikeWar* over the alternatives? The answer: Singer and Brookings' signature style. We are guided on a journey interlaced with varied and vivid vignettes involving Taylor Swift and *World of Warcraft*. Along the way we meet

curious characters such as the rapper turned jihadist PR czar and the Russian hipsters waging *#infowars* against the West. In all, it makes for a fascinating and engaging read, and this is what makes it stand out from the panoply of books on the same topic.

The revolution will not be televised

My final elevator pitch for reading this ahead of all the other books vying for attention in this list? If you use social media, you should read this. If you don't use social media, you should definitely read this. If you are one of those seniors who dismisses social media, you should seriously, absolutely, read this. Why? Because, as Singer and Brooking exhort: the internet is a battlefield; this battlefield changes how we must think about information itself; we're all part of the battle; and we must take this new battleground seriously. Why read *LikeWar*? Because, as Gil Scott-Heron prosaically observed;

*The revolution will not be televised
The revolution will be live.*

Contents: The Chief of the Air Staff's Reading List 2018

Routledge Handbook of Air Power

By John Andreas Olsen

Publisher: Routledge

The Birth of the RAF, 1918

By Professor Richard Overy

Publisher: Allen Lane

Over the Horizon: Time, Uncertainty and the Rise of Great Powers

By David M. Edelstein

Publisher: Cornell University Press

Aerial Warfare: The Battle for the Skies

By Frank Ledwidge

Publisher: Oxford University Press

The Vietnam War

By Ken Burns and Lynn Novick

Broadcaster: Public Broadcasting Service (PBS)

The Future of War: A History

By Sir Lawrence Freedman

Publisher: Allen Lane

The Cybersecurity Dilemma: Hacking, Trust and Fear Between Nations

By Ben Buchanan

Publisher: Hurst and Company

Shoot, Don't Shoot: Minimising Risk of Catastrophic Error Through High Consequence Decision-Making

By Dirk Maclean

Publisher: Air Power Development Centre (Australia)

War in 140 Characters: How Social Media is Reshaping Conflict in the Twenty-First Century

By David Patrikarakos

Publisher: Basic Books

Air Force Blue: The RAF in World War Two

By Patrick Bishop

Publisher: William Collins

The War in the Air: Being the Story of the Part Played in the Great War by the Royal Air Force

By Sir Walter Alexander Raleigh and Henry Albert Jones

Publisher: Oxford Clarendon Press

Sagittarius Rising: Reminiscences of Flying in the Great War

By Cecil Arthur Lewis

Publisher: Peter Davies

Bomber Harris: His Life and Times

By Henry Probert

Publisher: Greenhill Books

First Light

By Geoffrey Wellum

Publisher: Viking, London

Strategic Air Offensive Against Germany 1939-1945

By Charles Webster and Noble Frankland

Publisher: HMSO

With Prejudice: The War Memoirs of Marshal of the Royal Air Force Lord Tedder

By Arthur William Tedder

Publisher: Cassell

The Right of the Line: The Royal Air Force in the European War 1939-1945

By John Terraine

Publisher: Hodder & Staughton

The Central Blue: Recollections and Reflections

By Sir John Cotesworth Slessor

Publisher: Cassell

The Impact of Air Power: National Security and World Politics

By Eugene M Emme (Editor)

Publisher: Van Nostrand Co.

The Air Campaign: Planning For Combat

By John A. Warden III

Publisher: National Defense University Press

Contents: The Chief of the Air Staff's Reading List 2017

The Fix: How Nations Survive and Thrive in a World in Decline

By Jonathan Tepperman

Publisher: Bloomsbury Publishing

Defense of the West: NATO, the European Union and the Transatlantic Bargain

By Stanley R Sloan

Publisher: Manchester University Press

All the Kremlin's Men: Inside the Court of Vladimir Putin

By Mikhail Zygar

Publisher: Public Affairs

ISIS: A History

By Fawaz A Gerges

Publisher: Princeton University Press

Understanding Modern Warfare

By David Jordan, James D Kiras, David J Lonsdale, Ian Speller, Christopher Tuck and C Dale Walton

Publisher: Cambridge University Press

Airpower Applied: U.S., NATO, and Israeli Combat Experience

By John Andreas Olsen (Editor)

Publisher: Naval Institute Press

Precision and Purpose: Airpower in the Libyan Civil War

By Karl Mueller (Editor)

Publisher: RAND Corporation

The Air Force Way of War: U.S. Tactics and Training after Vietnam

By Brian D Laslie

Publisher: University Press of Kentucky

Space Warfare in the 21st Century: Arming the Heavens

By Joan Johnson-Freese

Publisher: Routledge

Team of Teams: New Rules of Engagement for a Complex World

By Stanley McChrystal, David Silverman, Tatum Collins, Chris Fussell

Publisher: Portfolio Penguin

Contents: The Chief of the Air Staff's Reading List 2016

Red Team: How to Succeed by Thinking like the Enemy

By Micah Zenko

Publisher: The Perseus Book Group

Black Box Thinking: Marginal Gains and the Secrets of High Performance

By Matthew Syed

Publisher: John Murray Publishers Ltd

The New Tsar: The Rise and Reign of Vladimir Putin

By Steve Lee Myers

Publisher: Simon & Schuster

Air Warfare: History, Theory and Practice

By Air Commodore (Retd) Dr Peter Gray

Publisher: Bloomsbury Publishing plc

The Mediterranean Air War – Airpower and Allied Victory in World War II

By Robert S Ehlers

Publisher: University Press of Kansas

Jail Busters: The Secret Story of MI6, the French Resistance and Operation Jericho

By Robert Lyman

Publisher: Quercus Publishing

The Direction of War: Contemporary Strategy in Historical Perspective

By Sir Hew Strachan

Publisher: Cambridge University Press

Blood Year: Islamic State and the Failures of the War on Terror

By David Kilcullen

Publisher: C Hurst & Co

Binary Bullets: The Ethics of Cyberwarfare

By Fritz Allhoff, Adam Henschke & Bradley Jay Stawser

Publisher: Oxford University Press

Ghost Fleet

By P W Singer & August Cole

Publisher: Houghton Mifflin Harcourt

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.

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<https://medium.com/RAF-CAPS>