

## Book Reviews

# Global Air Power

By John Andreas Olsen

Reviewed by Group Captain Tim Below

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*Given . . . the degree to which military innovation in peacetime is unavoidably nonlinear, contingent, and infected with serendipity, it seems best to avoid theoretical generalizations in probing for answers. . . .*

*. . . [However,] the sharpening of broad intuitions about the nature of war in the early twenty-first century is by no means a futile enterprise.*

Barry Watts and Williamson Murray

*Military Innovation in Peacetime*

### Introduction

**E**ditied by John Olsen, *Global Air Power* is a collection of 9 essays by pre-eminent authors reviewing the geopolitical and sociological contexts which have shaped the development of air power as an instrument of war. Grouped into 3 sections, individual chapters present insights into how the varied yet often thematically common internal and external factors have interplayed in the evolution of air forces across the globe from the most prominent nations possessing the full spectrum of capabilities to some of the smallest players whose forces have been developed to meet unitary and tightly bounded requirements. Through this volume as a whole, Olsen seeks to illuminate universal trends as well as similarities and differences between the world's air forces of today in order to inform effective thought on the future utility and employment of air power in this the second century of manned aviation.

Citing their extensive accumulated combat experience, Section 1 reviews the development of the British, American, and Israeli air forces, with Tony Mason opening Olsen's exposition with a canter through 100 years of UK air operations. After presenting a history of the formation of the Royal Air Force, and Lord Trenchard's key role in its creation as an independent entity in the face of opposition from the Army and Navy, Mason reflects on the importance of strategic bombing in shaping the RAF during the Second World War, before reciting an extensive list of UK air operations, including those conducted by other UK Services, since 1945. During his review of the post-Cold War era, he pulls out as his dominant theme the conflicting balance between economic contraction and an expansion in global commitments. Richard Hallion's outstanding review of the history of US air operations easily relates to Olsen's objective. Setting out from the early days of 'pursuit' and 'attack' aviation roles, Hallion reflects on the Cold War years of nuclear mission obsession, before turning to the evolution of the modern environment of space-dependent precision ordnance-enabled air power heralded by the success of Operation Desert Storm in the 1991 Gulf War. Majoring on inter-Service rivalry, budget allocations, and powerful articulation of the air power message, he draws out the importance of the human element, notably demonstrating the (positive and negative) personal contributions of individual Chiefs of Staff and Secretaries of Defence in the Service's development. Clearly articulating the defining rationale at each evolutionary step, Itai Brun charts the development of Israeli Air Force doctrine since the nation's creation. Employed primarily to assure air superiority in support of ground force manoeuvre during the War of Independence, Brun explains how Israel's peculiar security situation in the midst of the Arab world resulted in the subsequent doctrine of pre-emptive offensive air strike. He goes on to highlight how the reactive catastrophe of the Yom Kippur War directly led to the air force refocusing on the role of territorial air superiority until this philosophy was itself rendered inadequate by the Iraqi scud attacks of the Gulf War which in turn required the adoption of today's offensive/defensive posture.

The second section addresses the Russian, Indian, and Chinese air forces, as 3 examples of Services which have undergone (or in India's case, which need to undergo) significant conceptual change in the last 20 years. In reviewing Russian (*née* Soviet) air power, Sanu Kainikara majors on 2 axes: the dominance of political ideology in defining [Soviet] military doctrine, and the concept of employment of Soviet air power as a supporting element to land forces. Together, these factors contributed to doctrine fundamentally at odds with that of NATO, espousing the importance of superiority in numbers rather than in technology, and rebutting the Western ideal of centralised control decentralised execution with scant regard for air superiority in the nuclear age. Kainikara asserts that it was only the confluence of the evidence of the Gulf War and the change in ideology from Soviet to Russian which enabled the Russian military to recognise the dominant role of air power in the technological age. Jasjit Singh provides an informative and concise history of the emergence of the Indian Air Force from colonialism, and browses its relevant conflicts of the twentieth century. Observing that India's air force of today remains the tactical force which was established by the British, he offers opinions on 2 continuing debates in Indian circles: whether the Indian Air

Force should develop into a strategic component of national power, and whether it should be offensively or defensively postured. Reflecting on the individual and potentially combined threats posed by China and Pakistan, he concludes that strategic transformation is imperative, but that despite the cultural readiness of the air force leadership, realisation of such a change will be dependent on considerably improved resourcing. As presented by Xiaoming Zhang, mirroring and sometimes copying the Soviet model of a primarily defensive air force supporting land forces, the development of any healthy or objective air power theories in China was inhibited by the enduring Maoist 'people's war' theory until the wake-up call which was the Gulf War. However, although China now has both a 30-year strategy and the resources necessary to rejuvenate its air force as a strategic Service, Xiaoming contends that the greatest challenge facing the People's Liberation Army Air Force today is the institutionalisation of a culture which embraces both offensive and defensive capabilities, and the organisation and employment of the Service as an independent and strategic force.

In the final section of the book before an afterword by David Deptula, Alan Stephens addresses the air forces of the Asia Pacific region, James Corum covers those of Latin America, and Christian Anrig's final chapter reviews the key issues in the air power debate since the Gulf War. Situating them within the strategic construct of shape-deter-respond, Stephens examines the development of several Asia Pacific nations' air power models in turn. He illustrates how, despite the common factors of vast maritime distances and recovery from wars of national liberation, socio-political evolutionary variances have predominated, resulting in extremes of effects, from the total stifling of air power development in Indonesia, to the emergence of Singapore as one of the world's leading air powers. Moreover, he observes how air power can be either effective or thwarted according to a nation's peculiar circumstances, respectively citing the highly advanced surveillance capabilities of Australia, and Vietnam's use of 'guerrilla air power' tactics to defeat first the French then the Americans. Reviewing the numerous Latin American conflicts of the last 100 years, Corum observes the responsiveness of air power at a micro level, with small, focussed air 'forces' being created swiftly in response to specific threats, generally in counter-insurgency and counter-narcotics roles. He demonstrates that despite the relatively small scale of many of these operations, and the rudimentary nature of the air forces involved, the fundamental air power tenets of mobility (albeit tactical), surveillance, and firepower (generally in quasi-CAS-type roles, although not always in support of ground forces) have proved as pervasive and decisive as in any larger-scale conventional conflict. Anrig's European analysis of the aftermath of the Gulf War finds that this watershed conflict heralded a new era in strategic air power employment, elevating air forces to being the primary Service in future Western operations while brutally exposing the pressing need for the modernisation of European air forces. Although now largely re-armed with precision weapons, Anrig highlights fears over sovereignty issues in the non-federal continent of Europe, which have resulted in various capability pooling programmes rather than national role specialisation. He also notes that although many European nations were willing coalition partners in Operation Desert Storm, the cultural environment of continental Europe nevertheless favours strategies of gradualism over the more dramatic shock and awe-style campaigns espoused by their American allies.

Having introduced the elucidation of universal trends, similarities, and differences in the development of the world's air forces as his objective, Olsen leaves the reader to deduce them for himself. Targeting his book at the full spectrum of readers as he does, this may be no bad thing, allowing the professional air power theorist to situate the presented evidence perhaps in a different context to that appropriate to his more casual audience. Four interwoven themes pervade the contributory chapters however, which are reviewed here.

The first is the recurrent idea that institutional culture and ideology, along with the personal influence of strong leadership, has shaped (including in some cases to the detriment of their efficacy) the development of the world's air forces through the twentieth century. With the notable exception of Israel, the majority of leading air forces are today independent Services, whose battle to win independence from their sister Services has been hard won in the face of concerted inter-Service opposition. *Global Air Power* illustrates how, from the very days of Trenchard, it has taken men of powerful vision and strong argument to liberate their air arms in every enlightened nation, while those whose culture, whether Soviet, Maoist, post-colonial, or dictatorial, prohibited such a move have seen their national air power constrained to tactical roles in support of notional Clausewitzian ground force encounters, failing to exploit the strategic advantage which technology has conferred upon more modern air forces. Especially among the nuclear capable nations, cultural resistance to the strategic employment of air power for fear of escalation of limited conflicts artificially constrained the employment of air power as evinced by the Chinese from the Korean War to today's standoff over the Taiwan straits. Meanwhile, reticence to employ defensively envisaged forces offensively resulted in the near defeat of Israel in 1973 and the effective total collapse of the previously mighty Japanese Naval Air Force by 1945. Conversely, *Global Air Power* identifies a post-1945 global trend to employ offensive action in support of defensive ideals as part of a wider move to better integrate offensive and defensive strategies, and an associated trend at the operational level among those air forces sufficiently technologically advanced to be capable of it, to reverse the salient of historical air power dominance through platform role specialisation which has characterised the first century of manned aviation in favour of integrating classical characteristics and functions of legacy air platforms into single unified systems which can be employed as a cohesive, networked, survivable whole.

The second theme develops the idea of the strategic capacity conferred upon air power by modern technology to be employed as an independent political tool. The paradigm of the importance of 'boots on the ground' is significantly Clausewitzian, and while by no means irrelevant in the twenty-first century, Anrig perfectly articulates the advent of a new air/land concept which surfaced in Operation Desert Storm in 1991 and which was again witnessed in Operation Allied Force in 1999, whereby air forces were no longer employed in support of land forces, either subserviently or in an integrated concept, but air power was instead invoked to deny territory to enemy ground forces, thereby rendering the air force the primary Service, relegating the land component to follow-on occupation of ground and mopping-up roles. No longer is a modern integrated air force constrained to precursor 'softening up' activities

and combat operations in support of the land component, but air power is today capable of achieving the desired decisive effect, at range, and, in the uncontested aerial environments which have characterised warfare in the second half of the twentieth century warfare at least, with minimal casualties, be they enemy combatants, civilian collateral, or own force body count. Irrespective of primacy, an enduring sub-theme here is the importance of effective interaction between the various arms of a nation's military forces if air power is to be employed to its maximum effect. Attributing its cause to a misplaced fear of escalation, Xiaoming identifies the Chinese failure to approve the employment of air power even when sorely needed by embattled ground forces during the 1979 invasion of Vietnam as a fundamental misunderstanding by the Chinese leadership of the critical role of air power in modern warfare. Meanwhile Stephens cites the failure of the Japanese Naval and Army Air Forces to cooperate as inhibiting Japan from becoming a first rate air power during the Second World War, and the abysmal lack of coordination between the US Navy and Air Force as directly contributing to America's defeat in Vietnam.

The third theme permeating the entirety of Olsen's collection is the worldwide paradigm shift in air power thinking which resulted from the Gulf War in 1991. The contributory authors collectively leave no room for questioning the enormity of the shift in strategic thinking which the success of Operation Desert Storm precipitated around the globe. Although this is the core thrust of Anrig's discourse on European air power, the impact of the US-led 1991 air campaign pervades every chapter of the work to some degree. Moreover, the shift was truly global, its effect not being restricted to coalition participants. For the US it marked the validation of technology-enabled parallel warfare, taking the ability to accelerate Boyd's OODA loop to the extreme on multiple concurrent fronts to create strategic paralysis in the Iraqi military. For British and continental European air forces who several authors assert had become over-comfortable with their Cold War military postures, it exposed their inability to conduct aerial warfare in the dawning paradigm of the post-Cold War era. For the embryonic Russian Air Force, while Hallion challenges Western conventional wisdom that the Cold War advantage was held by the more technologically advanced NATO forces, it nevertheless forced the replacement of entrenched Soviet doctrine of combat superiority through numerical mass to recognise the strategic effect achievable through air power. Even China, which did not participate in combat operations in the Gulf War, was forced to recognise from both the Gulf War and the Balkans experiences that modernisation meant not the establishment of merely defensive forces of overwhelming mass, but the acquisition of high-tech offensive forces and the adoption of a more balanced offensive/defensive posture. Indeed, as Stephens observes, even for the powers of the Asia Pacific region, and the same is true for Latin America, those nations which will be best placed in the modern air power era will be those which promote quality over quantity, eschew complexity, and focus on their specific security circumstances. Yet the US strategy was not the only changing force in the Gulf War. For Israel, the Iraqi scud attacks precipitated doctrinal adaptation to focus on the dual missions of homeland defence and offensive deep strike in response to the ability of modern protagonists to wage war from beyond a nation's immediate borders.

The final theme is the challenge of resourcing modern air forces. Singh is alone among the authors to proffer personal opinions ahead of recanting objective observations, and is explicit in his assertion that India should modernise its air force, and that this must be supported by a substantial increase in resources. As Anrig observes, no nation is immune from the challenge of the seemingly never-ending cost spiral of modern air power. Even the United States' acquisition programme, whose often politically-driven cost control failures are validly critiqued by Hallion, is currently facing harsh cutbacks. Similar budgetary reductions are widespread across European air forces, and Anrig rightly laments the present trend of *ad hoc* role specialisation which is arising piecemeal across Europe according to resource limitations, protesting the case instead for a deliberate and focussed pan-European policy. He also notes with disdain the present and continuing trend for larger and smaller powers alike to prioritise combat firepower ahead of enabling capabilities, a phenomenon mismatched with NATO's strategy of increased global engagement in UN-mandated interventions. Further afield, in Latin America, Corum notes that although many of the forces concerned are several orders of magnitude smaller, the funding difficulties are nevertheless equally challenging for these nations, and while he observes that their forces have historically been funded either largely or at least in some part by wealthier nations engaging in third party or proxy wars, this may prove not be a sustainable funding stream in the future. As part of its 30-year strategy, China is alone among the major air powers, at least at present, to be increasing its defence expenditure according to Xiaoming, and the balanced array of high-tech forces it is developing through this programme is set to provide a genuine challenge to the world's current leading air powers within the coming decade.

Through *Global Air Power*, Olsen's authors demonstrate how technology maturation has enabled the evolution of air power from a tactical supporting element of Clausewitzian warfare as politics by other means into an independent tool of twenty-first century politics. Although in his afterword David Deptula introduces some new ideas, notably that twenty-first century air power engagement will be characterised by contested, if not denied, air environments, he supports the assertion that leading air power nations today perceive the future to be in the employment of this tool to strategic effect through high-tech, network enabled, information aware forces. However, in an uncertain world, our adversaries of the future will include non-air power nations as well as non-state actors, and Olsen is right to caution that the past can not be directly extrapolated to predict the future. The ever-evolving strategic environment continues to demand as strong and visionary leadership as ever, underpinned by an institutionalised adaptive and innovative culture. Olsen's *Global Air Power* provides a balanced and comprehensive insight into historical air power evolutionary trends, and is essential reading for any serious disciple of air power; but especially in an age of fiscal austerity, we should be cautious not to overlook Stephens' lesson from Vietnam whereby even a non-air power nation was able to defeat the might of the French then American militaries without any investment in the air at all.

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