

Historic Book Review

The Air Campaign

By John Warden

Reviewed by Air Commodore Neville Parton

And so we come to the second United States Air Force (USAF) officer to have a profound impact on air power theory since the World War II, Colonel John A. Warden III, and one of the most spoken-about, but perhaps least-read, books of recent times on this subject, *The Air Campaign*. As with all in this series, we shall begin by considering the man himself before moving on to the book, and considering the part that it has played in our recent understanding of air power.

John A Warden III was born just before Christmas 1943, into a family that had significant military connections. It was an uncle, Colonel 'Pete' Warden, who provided the link into the USAF, with his tales of combat experience in the Philippines, and post-war involvement in the bomber programme that would give rise to the B-52. Warden's decision to enrol as a cadet at the USAF Academy in 1961 probably did not therefore come as a surprise to his family. However, from the start it became apparent that Warden was perhaps slightly out of tune with both his classmates, and the general orientation of USAFA. Academically he was far more inclined to military history than the engineering and science subjects which formed the core of the USAFA syllabus, and on the social front his more formal dress-

style and reserved manner singled him out from his classmates.¹ After completion at the Academy, Warden was posted onto an F-4 Phantom squadron, and as was standard at the time, began his career in the rear-seat of the aircraft. Although the squadron deployed operationally to South Korea within a few months of his joining, Warden found the posting unchallenging, and, seeing how long the upgrade programme to the front seat was, volunteered to become a Forward Air Controller flying the OV-10 Bronco. It was in this capacity that he would gain his direct combat experience, operating from 1969-1970 in both close air support (CAS) and interdiction roles. Offered a training post afterwards, Warden elected to return to the F-4, and, having rapidly completed his front-seat upgrade whilst based at Incirlik Air Base in Turkey, began to think more deeply about the role in which the USAF was engaged in Europe. In particular, he was interested in what he saw as an over-focus on the CAS role combined with a lack of interest in the gaining of air superiority, which led to him submitting his thoughts in writing for the first time.²

Warden's interest in strategic matters coalesced in 1974, when he spent a year undertaking a master's degree at Texas Technical University, with a dissertation based on an

examination of decision-making at the grand strategic level. This was to be followed by Warden's first tour in the Pentagon, where he began work in the Directorate of Plans, in the Middle East and Africa Division. Here he began to understand how the 'system' worked, and also impressed his superiors with his originality of thought and ability to express himself with clarity – and confidence in front of his superiors. Promoted to lieutenant colonel in 1978, he was hand-picked to work in the office of the Chief of Staff of the USAF. A just reward for his five years of staff work was conversion to the F15 and a posting to the 33rd Tactical Fighter Wing at Eglin Air Force Base (AFB), where he was responsible for preparing the wing for inspections. During this tour *Planning to Win*, his first published piece of work, appeared in the *Air University Review*. Two more command detachments were to follow in short order – to Moody AFB as Deputy Commander for Operations and to Decimomannu in Sicily as the permanent Detachment Commander, before the by-now Colonel Warden was selected to attend the National War College in Washington in the autumn of 1985.

The NWC provided Warden with an unparalleled opportunity to further his thinking, and it was during this period of academic reflection that the thesis which would soon become *The Air Campaign* was based. The worth of the work was recognised immediately, with the NWC commandant having the thesis initially published by the National Defense University (NDU) press. This success was followed by Warden's posting to Bitberg AFB in Germany,

as the Wing Commander for the Thirty-Sixth Tactical Fighter Wing. This posting has been the subject of much speculation, almost from the moment it ended, and it is hard to separate fact from fiction. What is clear is that whilst introducing many worthwhile initiatives, and succeeding in ensuring the Wing passed all necessary inspections, Warden's reputation as a commander took a battering – and when, unlike his ten predecessors, Warden did not leave on promotion, others were quick to draw the lesson that this tour had been a failure. Yet the following few years would see Warden's approach vindicated on the world stage, as he moved back into the Pentagon, albeit initially into what was perceived at the time to be a dead-end job.

Shortly after Warden's return to the Pentagon though, his unquestioned intellectual ability again brought him to the attention of some influential generals in the USAF, and he was soon appointed as the Director for Warfighting Concepts, which included the now-famous Checkmate Division. During this time the concepts inherent in *The Air Campaign* were refined to produce the *Five Rings Model*, which in turn would form the basis for the campaign plan that Warden would present to General Schwarzkopf in August of 1990 as *Instant Thunder*. Unfortunately space precludes going into detail regarding the way in which senior command relationships played out, and the consequent distancing of the Checkmate team from the operational theatre – but no-one can deny the unmistakable influence of Warden's ideas on the final campaign plan.

The last few years of Warden's career could have been an anti-climax after the Gulf War, but, following a period as Special Assistant to the Vice President, appointment as the Commandant at the Air Command and Staff College gave Warden an unequalled opportunity to cement his thinking into the USAF's future development. Warden recast the entire venture into one aimed at producing Air Force campaign planners, and along the way developed an institution that gained new respect from within the defense community. Promotion perhaps would have been expected for such a run of success, but previous events had stayed in the minds of those at the top, and John Warden retired from the USAF in 1995.

Like John Boyd before him, Warden had become regarded as something of a maverick by the USAF establishment – and it is notable that both of these men, despite having contributed enormously to the field of air power thinking, never achieved general rank. Of course Warden was a very different personality from Boyd, being in many ways the antithesis of a fighter pilot, but both shared a common sense of righteousness in their cause, backed by total self-belief. John Warden's activities post-retirement have focused on applying his ideas about strategy to a broader field, and he established a company, Venturist Inc., which delivers his ideas about both the development of strategy, and its importance, for companies and government departments. A 2001 publication, *Winning in Fast Time*, captured his ideas for a more-business orientated audience, and

this has been recently replaced by *Strategic Thinking and Planning*, which was published in 2008.³ He does still engage on the air power front, however, and some *Air Power Review* readers may have been privileged to hear him when he addressed the 2008 RAF Centre for Air Power Studies (RAFCAPS) conference on 'Air Power and Strategy : Challenges for the 21st Century' as the keynote speaker. Having come right up to date, our attention now needs to be turned to the publication itself.

The Air Campaign is actually a rather diminutive book, running out at 160 pages, and addresses one specific subject – namely the use of air power at the operational level of war. It may come as a surprise to some readers that no trace is to be found of Warden's 'Rings' within the publication – they were to come later – but the clear genesis of his ideas as related to the air campaign against Iraq can be readily identified. In outline, the book consisted of ten short chapters which aimed, after providing a short introduction, to consider all of the major areas that an air commander should be aware of when drawing up a campaign plan.⁴ The first chapter introduced the concept of air superiority, and argued that this was '... crucial to success ...' by way of a number of historical examples.⁵ It also brought in an analytical framework for air superiority which underpinned the remainder of the work, based upon five different cases. As these are fundamental to the rest of the book, a summary of the cases are outlined in the table opposite.⁶

Two additional variables were also considered, namely the availability

Case	Description	Example
1.	Both sides have the capability and will to strike at each other's bases	Pacific theatre early in World War II, when both Allied and Japanese forces could strike bases/targets behind each other's lines
2.	One side can strike anywhere, whilst the enemy is limited to reaching the battlefield only	Mainland Europe after 1943, when Allied air forces could attack Germany without fear of any militarily significant riposte
3.	Reverse of case 2 – enemy can strike anywhere whilst other side is limited to the battlefield	Battle of Britain, when the RAF was unable to strike effectively at Luftwaffe bases in either France or Germany
4.	Neither side can operate against rear areas or air bases, and air action is confined to the battlefield	Korean War – US forces constrained by political limitations, Communist forces by inability to attack US bases effectively
5.	Neither side uses air power – either due to political constraints or because neither side possesses any	Great power proxy combat where air power is not provided, or conflict between two poor countries

of skilled personnel and material, which were assigned values of either 'limited' or 'unlimited' – and this combination of factors combined to form the basis of reference for all analysis of the various aspects of the many campaigns considered.

The second chapter considered the ways in which air superiority could be obtained, concentrating on the differences between offensive and defensive campaigns, and looking at the Case 1 scenario of both sides being in a roughly equivalent position. Perhaps not surprisingly, Warden comes out strongly in favour of a strong offensive, although he does recognise that in some cases this may not be practicable, at least, given various constraints, and a defensive approach may be required initially before an offensive campaign can be effectively mounted. The risk identified is that going on the defensive initially presupposes factors that will allow the offensive to take place in the future, or as Warden more elegantly describes it: 'In other words, the commander who adopts the defense ... is betting heavily on a future that might not happen as he thinks it will.'⁷ The

value of concentration of force is highlighted, with particular reference to the Pacific campaign of World War II, as is the importance of accurate intelligence and the need to consider alternate ways of attacking air defence systems. In this latter area, the 1973 Arab-Israeli conflict was used to demonstrate that a combination of indirect attack and the use of ground and naval forces to outflank and penetrate enabled the most to be made of the inherent flexibility of air power when contrasted with the general rigidity of land-based air defence systems.

The third chapter, the longest in the book, is based around the Case 2 exemplar, which Warden identified as being the '... commander's dream ...', where friendly bases are effectively immune from enemy action whilst all elements of the enemy's system are open to attack.⁸ This was seen as providing the opportunity for decisive air action – so decisive that theoretically the war could be won from the air. The issue was therefore the selection of the correct centre of gravity, and then determining how to attack this most effectively. Areas such as equipment, logistics,

personnel and command and control were considered, in relation to both geography and doctrine, and with an emphasis on understanding the nature of the enemy's forces – and the way that he thinks about using them. However, a cogent warning was also sounded regarding the need to consider carefully what should *actually* be done with the forces at a commander's disposal, in order to prevent dissipation of effort. This was summarised in the closing paragraphs as follows:

*Careful consideration of enemy centres of gravity, assisted by analysis of enemy doctrine, is the first step to success. The second step is concentration of effort. Especially in the situation where one seems to have numerical superiority, there is a tendency to try to do everything. In all likelihood, the net result will be that nothing is done as efficiently as it should be.*⁹

The next chapter examines the opposite position, where the enemy is almost invulnerable, and a defensive approach is not a matter of choice. Warden identifies that in this position the possibility of 'winning', at least in a conventional military sense, is not feasible, and the strategic aim has to be limited to 'not losing'. Having also pointed out that being on the defensive in the air does not confer the same advantages in the air that it generally does on the ground, a potential difference is identified in that an attacker is likely to be more sensitive to loss rates than the defence – and hence imposing high enemy losses is likely to be the most successful strategy. Again the importance of concentrating force is emphasised, with an understanding that links back to Lanchester's analysis

during the First World War, in terms of the need to employ defending forces intelligently so as to outnumber the attackers in any given engagement.¹⁰ The use of reserves in defence is also highlighted, with the RAF's approach during the Battle of Britain cited, and this area is specifically returned to later on. The case of limited options is then considered in a particularly short (five page) chapter, with the emphasis on how to win an air battle in the case where an enemy air force can only be met in the air. The use of fighter screens, in the defensive case, and fighter sweeps or close escort for the offensive, are outlined, with a constant reminder of the need to use air power's mobility to ensure concentration of force – in Warden's own words: 'No simpler nor more often ignored – principle exists than this one. The commander who concentrates his forces either wins or staves off defeat. The commander, who doesn't, loses or wins by accident.'¹¹

That summary effectively concluded the examination of air superiority, and led onto two chapters that considered the air to ground environment, looking at interdiction and close air support (CAS) respectively. On the former front, particular mention is given to the benefits that can be obtained from combining an effective interdiction campaign with a ground offensive, in a synthesis which had its roots in Slessor's thoughts on the subject in the 1930s.¹² Consideration was also given to the role that air power could play in either destroying or defending a retreating force, before moving on to the links between the temporal nature of different types of interdiction – or in other

words, the time lags inherent in particular target sets before they produce results, balanced against the scale of the results that can be obtained. Lastly, the question of balancing competing demands is considered, particularly between air superiority and interdiction missions. Unusually for Warden, he suggests a compromise by looking for those targets which support both, with fuel supply being given as a cogent example. The thorny area of close air support begins with a definitional issue – what exactly is meant by CAS? In this understanding, CAS is defined as any air operation which could be done by ground forces if there were enough of them. The problem, as outlined, is that by its very nature CAS is almost always of use to the soldier on the ground, and therefore that it should be considered as analogous to an operational reserve on the ground – only to be committed when the advantage gained is likely to be significant. It is suggested that the most advantageous use will only come in dynamic warfare, and that enabling or preventing breakthroughs, or covering a flank, are tasks which CAS can accomplish – again, backed up with a number of examples. Perhaps the most important element is the constant stress on the need to consider the ‘opportunity costs’ of CAS, in terms of what else could be achieved with the air power committed in this manner.

The eighth chapter dealt with a subject not often specifically mentioned in air power texts, regarding the use of reserves at the operational level, which the author considered to be of particular importance. The utility of reserves is examined by introducing their

Clausewitzian origins, where they were seen as a way of enabling a commander to deal with some of the effects of ‘friction’ at the battle front. Perhaps, unsurprisingly, the main effort underpinning the message is that if reserves are to be maintained, they should not be used in a piecemeal fashion, and that they are at their most effective in a situation of near-equal strength.

The last two chapters covered topics that were extremely closely linked, namely the orchestration of war, and how to plan an air campaign effectively. A great deal of stress is laid on the Vietnamese and Japanese conflicts, and particularly the need to link military objectives to the desired political end state, as well as considering the need to introduce an element of surprise into the planning process – or challenging orthodoxy. For this to work, the absolute need to identify the enemy’s centre of gravity, and then strike it, in any of the cases outlined, is reaffirmed. Orchestration (in musical terms) is used as an analogy, with the conductor (theatre commander) bring responsible for using all the instruments within the orchestra, at the right time, and in the right order, to produce the desired effect. In terms of the air campaign itself, the need for a clear ‘plan’ which outlines the air centres of gravity, phasing of operations and resources required is stressed, with guidance on the division of effort amongst the roles, and an explanation of how the air campaign fits into the larger picture. The primary importance of air superiority is reinforced, followed by an enumeration of the factors to be considered when deciding whether to commit forces to CAS or interdiction, and then the need to

ensure concentration of effort. Oddly, the subject of deception is introduced right at the end of the final chapter, almost as an afterthought, before pointing out again the need to use reserves decisively. Finally, the need for a commander to have perspective, and to be certain in the command and control system that he is going to use to fight the campaign are covered, together with the need to have trained to fight as you intend to fight. Warden finishes with a note that (referring to the commander): 'The rest is up to him.'¹³

The Air Campaign is an extremely worthy book on at least two levels: firstly it provides an excellent (and very readable) overview for anyone wishing to understand the issues involved in the employment of air power above the tactical level, and secondly it allows an insight into the individual who, arguably more than any other, shaped the use of air power in the first Gulf War. It is not a deeply academic book,

although it is clearly based upon a great deal of research and thought, and in some ways it is surprising that it is so highly regarded as there is nothing particularly new or remarkable in the ideas contained within it. However, it does represent a very different understanding of air power by the USAF than that which had immediately preceded it, and it presents that understanding in a very straightforward and logical manner – to argue the case for the author's beliefs about the way in which that power should be used. Given the subsequent influence that Warden would have on the USAF's approach to the Gulf War of 1990-91, based upon this understanding, this book clearly deserves its place on the shelf of air power history.

Anyone seeking to understand the John Warden story in more detail should read John Olsen's meticulously-researched and eminently-readable book, "John Warden and the Renaissance of American Air Power" – details given below. This

Air Superiority Cases¹⁴

Case	Blue Air Fields and Rear Areas*	Battle Lines**	Red Air Fields and Rear Areas
I	Vulnerable	Reachable	Vulnerable
II	Safe***	Reachable****	Vulnerable
III	Vulnerable	Reachable	Safe
IV	Safe	Reachable	Safe
V	Safe	Unreachable	Safe

* Blue and Red fields encompass supporting infrastructure such as power, fuel, and command and control facilities.

** Normally the ground front, but could be a border.

*** Safe means that the fields are not likely to be hit either because the enemy is unable to hit them, or chooses not to do so, or they are protected by political constraints.

**** When *Case II* progresses to its logical conclusion, Red will probably be unable to reach even the battle lines.

appeared on the 2008 CAS Reading List, and copies should therefore be available on most units' libraries. "The Air Campaign" is also fairly accessible, as it has been reprinted on a number of occasions – again, details given below. Finally, Warden's 'Five Rings Model' can best be understood by seeking out a copy of 'Global Strategy Outline', copies of which can be found online.

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Notes

¹ John Andreas Olsen, *John Warden and the Renaissance of American Air Power* (Washington D.C.: Potomac Books, Inc., 2007), pp. 13-17.

² 'Employment of Tactical Air in Europe', *Ibid.*, p. 23.

³ John A. Warden III and Leland A. Russell, *Winning in Fast Time* (Montgomery, Alabama: Venturist Publishing, 2001). and John A. Warden

III, *Strategic Thinking and Planning* (Montgomery, Alabama: Venturist Publishing, 2008).

⁴ When we say short in this context we mean it – Chapter 1 is only ten pages long, and Chapter 2 only twelve.

⁵ John A Warden, *The Air Campaign* (Washington: Pergamon-Brassey's, 1989), p. 13.

⁶ A copy of the original table is shown at the end of the article.

⁷ Warden, *The Air Campaign*, p. 24.

⁸ *Ibid.*, p. 33.

⁹ *Ibid.*, p. 54.

¹⁰ Lanchester was an aeronautical engineer who provided the first mathematically-based analysis of air combat. See F.W. Lanchester, *Aircraft in Warfare : The Dawn of the Fourth Arm* (London: Constable and Company Limited, 1916), pp. 39-66.

¹¹ Warden, *The Air Campaign*, p. 70.

¹² J C Slessor, *Air Power and Armies* (London: Oxford University Press, 1936).

¹³ Warden, *The Air Campaign*, p. 140.

¹⁴ *Ibid.*, p. 17. For the benefit of younger readers the use of a blue force/red force scenario was commonplace during the Cold War to identify 'us and them' without specifically saying so!

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