

Chapter 1

1

Aerospace Doctrine

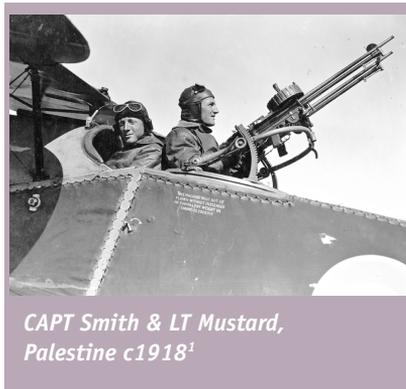
INTRODUCTION

Aerospace power represents the ability to project military force in the third dimension by or from a platform above the surface of the earth. Aerospace power does not just use the air environment as a medium for transit (as does a bullet or other projectile), but also for manoeuvre, concealment and surprise.

Fundamentals of Australian Aerospace Power is the culmination of several years work to distil the essence of *The Air Power Manual (3rd Edition)* and meld it with the new thoughts and ideas on how aerospace power might be applied most effectively by the ADF. This publication is both a record of the development of aerospace doctrine

in the Australian context and a forecast of what might be. It reflects those principles that have stood the test of combat but it also highlights the uncertainty of conflict and the rapidly changing nature of aerospace combat. It is this rapid change that sets the development of aerospace doctrine apart from the doctrines of land warfare and maritime warfare.

Land and maritime warfare between structured military forces have been a part of history for several thousand years. However, it was not until the 19th Century that Jomini, Clausewitz and Mahan produced comprehensive works that could be considered the foundations of doctrine for war on land and sea. By comparison, aircraft have now been in military operations for just over 90 years and capabilities have gone from the technology of wire and fabric contraptions to stealth, precision weapons, Uninhabited Combat Aerial Vehicles (UCAVs) and satellites. While *Fundamentals of Australian Aerospace Power* reflects a range of dynamic influences on doctrine it also highlights durability of principles forged in the first few years of air operations.



INTRODUCTION

Aerospace power represents the ability to project military force in the third dimension.

Rapid changes in aerospace combat sets the development of aerospace doctrine apart from the doctrines of land warfare and maritime warfare.

Aerospace doctrine reflects both dynamic and durable influences on doctrine.

Aerospace power expanded combat beyond the immediate battlefield.



Crashed German Aircraft c1918 ²

The term 'paradigm shift' is overused but the introduction of aircraft into combat was undoubtedly a paradigm shift of significant proportions. Even the relatively primitive aircraft of 1914 represented a serious threat to ground forces because they

provided the combatants with a panoramic view of the battlefield, removing, or at least reducing the opportunity to gain tactical surprise. With the improvements in airborne weapons came the opportunity to use aircraft to attack ground targets whether they were forces in action, reinforcements well behind the front, or targets deep in enemy territory. Suddenly combat had expanded beyond the immediate battlefield and armies were no longer the sole determinants of the outcome of a conflict. The threat could not be ignored.

The advent of aircraft gave commanders an additional dimension of war to consider.

The problem for the generals was that the job had become much more demanding and they needed new tools to do their job. Their forces lacked the capacity to counter aircraft, but enemy aircraft had to be stopped from harassing their forces and penetrating deep into their territory to attack key installations and population centres. At the same time, the generals had to take advantage of the aircraft's capabilities to attack the enemy.

Enemy aircraft required doctrine for their use; that is, for control of the air.

The first tentative engagements between aircraft over the trenches showed that they might provide a counter to this new threat, but the actions were uncoordinated and largely focussed on one aspect, breaking the controlling link between air and ground forces. What was required was an approach that would prevent the enemy from using aircraft effectively while giving friendly forces freedom to act. What was required was control of the air.

Control of the Air

Control of the air aimed to deny enemy action while facilitating action by friendly forces.

Control of the Air

Control of the air would provide relief from attack by the enemy and allow the enemy's forces to be



FLG0FF Wilson and Crew, 454SQN ³

attacked wherever they might try to hide. In simple terms, control of the air would do two things. Firstly, it would allow land and maritime forces to operate free from air attack. Secondly, it would allow unfettered operations by friendly air forces against the enemy. Control of the air then became, and remains, the first principle of aerospace doctrine.

There are many degrees of control of the air. Air supremacy or total control would be ideal but impractical on most occasions and, as the US experience in Vietnam demonstrated, it does not lead automatically to victory. At the other extreme, the absence of control of the air does not equate automatically to defeat for land



Friendly losses are likely to be high in the face of an enemy with a capable air force.

and maritime forces. Nor does the lack of control of the air preclude aerospace operations in all of the roles described in Chapter 7. But without control of the air losses are likely to be high in the face of an enemy with a capable air force. What remains essential is that aerospace power is able to deliver control of the air at times and places of our choosing sufficient to allow successful military operations by all ADF units.

Control of the air was essential to every major military operation. Control of the air allowed surface vessels to sail the seas as far as that control extended, even within range of enemy land-based airplanes. Control of the air permitted amphibious landings at any point where that control could be assured. Control of the air permitted close air support to ground forces, the effectiveness of which was decisive wherever fully employed. Control of the air over lines of communications [blocked enemy interdiction of them] and preserved them to ourselves. Control of the air over the Japanese home islands permitted the destruction by long-range bombers of such of her industries and cities as we chose to attack. The first objective of all commanders in the Pacific War, whether ground, sea or air, whether American, Allied or Japanese, was to assure control of the air.

Major General Orvil A. Anderson, USAF⁵

It is now more than 50 years since Major General Anderson wrote those words. Today, the view that control of the air is essential has become an axiom, a self-evident truth, a fundamental principle for the conduct of military operations. For those in the Australian Defence Force whose task is the effective application of aerospace power in combat (and that means all of us) the

The first objective of all commanders in the Pacific War was to assure control of the air.

principle has become a part of our doctrine along with a host of other ideas, traditions and procedures. But how did this view come to be part of our doctrine? And what is doctrine and why is it important?

What is Doctrine?

When doctrine is accepted to be true without question, it becomes dogma.

Doctrine is authoritative and prescriptive but not directive: doctrine requires judgement in its application.

What is Doctrine?

DOGMA

If you refer to a belief or system of beliefs as dogma, you are criticising it for expecting people to accept that it is true without questioning it. ⁶

Doctrine is a complex concept as it can mean different things to different people. Many equate it to dogma. Doctrine, as it is used by the Air Force, never strays into dogma. Instead, doctrine is the foundation for an air force able to deliver effective aerospace power today and to continue to do so in a rapidly changing world. With that in mind we will start by defining exactly what we mean by doctrine.

The Macquarie dictionary defines doctrine as *1. A particular principle taught or advocated or 2. That which is taught; teachings collectively or 3. A body or system of teachings relating to a particular subject.*⁷

The Australian Defence Force Publication 101 (Glossary) defines doctrine as *Fundamental principles by which military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgement in its application.*⁸



Captain Richard Williams c1915 ⁹

Together these definitions encapsulate doctrine as it is perceived in the Air Force today. On the one hand there is this sense of fundamental principles, or the foundations on which an independent air force is built. On the other is the idea of teaching and perhaps more importantly, of learning, and of the application of those principles, not in a dogmatic or doctrinaire way but in a considered way in support of a specific outcome.

DOCTRINE - A DEFINITION FOR OUR AIR FORCE

In defining doctrine for our force, we must consider three key elements as follows:

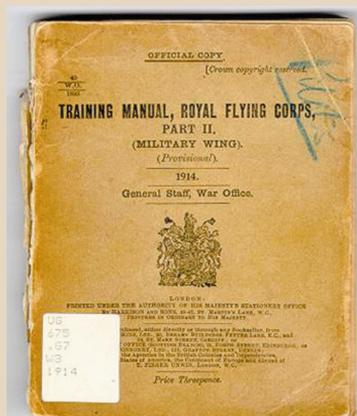
- Doctrine is **Prescriptive**. Doctrine describes what it is that our force should be able to do and is drawn from those lessons and experiences of the past to create a roadmap for the future. This means that our doctrine should contain future capabilities to which we may aspire.
- Doctrine is **Authoritative**. Doctrine does not exist as a coffee table publication. It is issued on the authority of the Chief of Air Force, and encapsulates the very culture and beliefs of the organisation.
- Doctrine is **NOT Directive**. Doctrine does not provide a list of 'shall do', rather it creates a flexible framework in which the force can operate. Doctrine encourages initiative and lateral thinking. Doctrine requires all members of the forces, through education, training, and experience, to exercise judgement in the application of aerospace power.

Doctrine is not a statement of national policy or even military strategy; it is nothing more than a set of beliefs based on historic precedent that forms a framework for military action. Doctrine is not law and never intended to be used as such. Doctrine reflects the very essence of what an Air Force is, and why it forms a fundamental component of our military power.

THE FIRST AIR FORCE DOCTRINE MANUAL

In 1989, the then Chief of the Air Staff, Air Marshal Ray Funnell, commissioned the first edition of the RAAF's *Air Power Manual*. Released in August of 1990, it was a definitive work encapsulating the RAAF's doctrine for the first time. However, while it was the RAAF's first doctrine manual, it was not the first time that air power doctrine had been recorded.

In 1914, the Royal Flying Corps released a two-part Training Manual (Part II shown here) in which a number of the basic tenets of air power were recorded, tenets that became the basis of our Air Force doctrine today. The original two-volume set is now held in the ADFA Library.



RFC Manual c1914 ¹⁰

COMPONENTS OF DOCTRINE

Where did doctrine come from?

COMPONENTS OF DOCTRINE

What is missing from these stark definitions is any sense of the origins or components of doctrine. Where did these 'fundamental principles' come from and are there particular streams of thought on which doctrine is based?

AIR VICE-MARSHAL HENRY WRIGLEY CBE, DFC, AFC



*AVM Wrigley, CBE, DFC, AFC*¹¹

Between the two World Wars, Air Vice-Marshal Henry Wrigley CBE, DFC, AFC established himself as Australia's foremost air power theorist. While his ideas were never formally published, his works (dairies and papers) should not be underestimated. Even while a number of 'classical' theorists were establishing themselves, Wrigley had identified, summarised and recorded opinions on the theory and practice of air power.

FURTHER READING

The Decisive Factor by Alan Stephens and Brendan O'Loghlin (eds)¹²

Air Vice-Marshal Henry Wrigley is recognised as one of Australia's greatest airmen. This book is a collection of essays and notes from his personal notebooks, dating from the 1920s, establishing him as Australia's first authoritative commentator on air power.

Doctrine is only effective if applied correctly by expert practitioners who understand:

- *History*
- *Theory*
- *Culture*
- *Technology*
- *Context*

There is an important dimension to doctrine, one that is often overlooked. Doctrine is only effective if applied correctly by expert practitioners who understand the:

- lessons of history
- contribution of the theorists
- influence of culture
- implications that new technology may bring to bear on the task at hand
- context in which these new practitioners are required to operate

History

History does not repeat itself - but it rhymes.

Attributed to Mark Twain¹³

There is an historical dimension to doctrine and those with a keen interest in the origins of military doctrine in general would do well to study a wide range of conflicts, their origins, the political issues which caused them and the military campaigns in support of those political objectives. The aim of such study should be to identify what lessons were learned by those involved and by those who observed, and how their doctrine was changed as a result.

History is only one ingredient of doctrine. To understand what doctrine is we must understand the contribution of other factors. Only then will we be able to make valid judgements on how fundamental each of these 'fundamental principles' might be in any particular situation. Finally, and this is the most important product of a sound understanding of doctrine, we will be able to make considered judgements in the application, or rejection of a particular tenet of our accepted doctrine.



Palestine c 1918¹⁴

History

A study of history provides lessons learned and their linkages to changes in doctrine.

History is only one ingredient of doctrine.

The Theorists

In considering the contribution of theorists, it is insufficient to look just at the Western world or to confine the effort to air power theorists. One might start with the writings of Sun Tzu and Clausewitz but there are many other sources, not all of them so well known and not all individual contributors. The Frunze Academy is one that is often ignored and useful ideas may be found in the combined works of other military establishments. Air power enthusiasts could also benefit from study of Douhet, Trenchard, Slessor, *et al*, but in so doing great care must be taken to understand the context in which these early air power theorists were writing. To do otherwise would rightly brand us as doctrinaire or those who try to apply some doctrine or theory without a sufficient regard to practical considerations.

The Theorists

Great care must be taken to understand the context in which these early air power theorists were writing.

THE FRUNZE ACADEMY

The Frunze Academy is the senior Russian military academy. Established in 1918, the academy was named after Mikhail Vasilyevich Frunze, a revolutionary who became Commissar for the Army and Navy. Frunze, Tukhachevsky, Svechin and Yegorov were important figures at the Academy, and in key positions in the Soviet Army, during the development of concepts such as the operational art and the deep strike. It was some 60 years before similar concepts appeared in US thinking on war.



General Mikhail Frunze ¹⁵

Unfortunately Frunze was to die under mysterious circumstances on the operating table in 1925 and Tukhachevsky, Svechin and Yegorov were all to perish in Stalin's purges. With their deaths (and the deaths of some 523 officers who were brigade commander and above) Soviet doctrine development and implementation was to suffer severely, as was the Soviet Army during the first years of World War II. Clearly, in some organisations those who espouse new doctrine are often unpopular because new doctrine challenges the status quo. Equally clearly, those who shoot the messenger do so at their peril!

FURTHER READING

The Strategists by Hugh Smith ¹⁶

The Strategists is a collection of essays examining the ideas of some of the leading strategists in history about what can be achieved on land, at sea and in the air. From Sun Tzu in ancient China to the speculations of nuclear strategy, important themes emerge about the nature of strategy and of strategists.

Culture

Different cultures provide different lenses for viewing important conflicts.

Culture

In extending study beyond the Australian, British or US experience it should be possible to see how different cultures provide a different lens for viewing important conflicts. These different lenses often produce quite different – sometimes radically opposed – interpretations, different lessons learned and

consequently different doctrine. Understanding of this cultural dimension is a key element in the development of our own doctrine and in recognising why other groups, organisations and countries may have developed a very different list of fundamental principles.

Technology

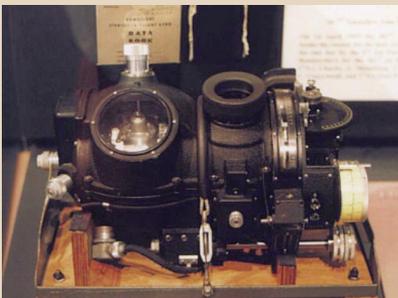
For air power, more so than for any other form of combat, the rate of change of doctrine has been matched or exceeded by the rate at which new technologies have appeared. In just less than one hundred years the heavier-than-air contraption has been transformed and its capabilities enhanced such that it is being declared by many as the weapon system of first choice. Many view air power, and now aerospace power, as being driven by these advances in technology. Others believe that the 'fundamental principles' should be so robust that technology is adapted to meet those principles. Again, the challenge is, and will remain, how to make the considered judgements that will create the right doctrine in the light of changing technology.

Technology

Advances in technology influence doctrine. The challenge is how to make the considered judgements that will create the right doctrine in the light of changing technology.

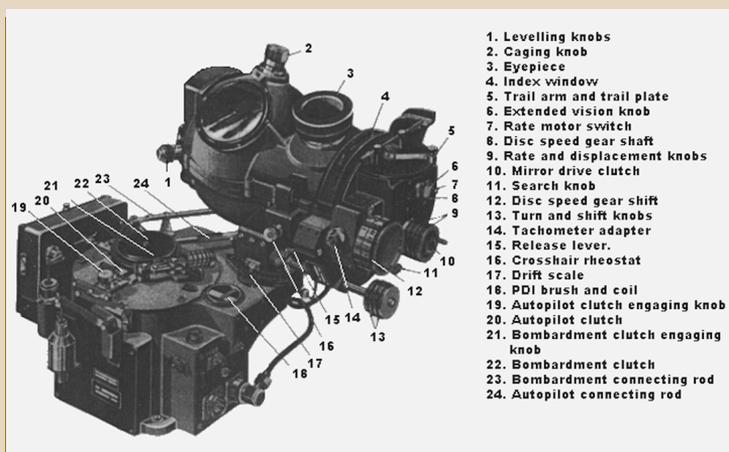
THE NORDEN BOMBSIGHT

At the start of World War II, bombing was more of an art than a science. To place enough ordinance on target to be effective, bombers were required to go low. This put the bombers at a disadvantage since it was easier for enemy fighters to intercept and manoeuvre for a kill. Anti-Aircraft Artillery was also deadlier for low flying aircraft. The British were experiencing heavy casualties in daylight raids and decided to try night bombing runs. Unfortunately, the dark worked to the advantage of the target as well. However, things would change when the US entered the war.



Norden Bombsight ¹⁷

In 1921 the US Navy drafted specifications for a bombsight that would allow bombing from high altitude. Carl Norden developed a gyro-stabilised bombsight in 1923 and delivered the Mk. 3 to the Navy for trials. The first model was effective only against stationary targets. The next model was a gyro-optical device delivered in 1924 (Mk. 15).



Components of the Norden Bombsight ¹⁸

This version had a timing device which told the bombardier when to drop the bombs. By 1931 the Navy had completed testing and achieved impressive results. The USAAF was also impressed and placed their own orders. The Mk. 15 was literally a bombsight with a plane attached to it. The bombardier was allowed to take lateral control from the pilot to line up the sight for the bombing run.

In 1943 the Norden M-series was delivered to the USAAF. It is estimated that this version was 6 to 8 times more precise than the RAF Mk XIV bombsight. It is estimated that the RAF was capable of putting only 5 per cent of its ordinance within a mile of their aiming point under combat conditions. In contrast, the 8th Air Force was believed to be able to put 24 per cent of their bombs to within 1000 yards of their targets. By 1944 this figure would rise to 40 per cent to within 500 yards. The Norden bombsight enabled Forts [B-17 Flying Fortresses] to fly above the flak and still hit their target with reasonable accuracy. The daylight bombing strategy became a viable option to take the war to Germany and bring the war to a quick end.¹⁹

[While the introduction of the Norden Bombsight clearly provided a technological advantage to the USAAF, the substantial improvements in bombing successes can also be attributed to other significant factors such as the introduction of long range allied fighters which extended air superiority into enemy territory.]

Context

Context

CONTEXT

The context of an idea or event is the general situation that relates to it, and which helps it to be understood. If something is seen in context or if it is put into context, it is considered together with all the factors that relate to it.²⁰

When faced with a conflict, the commander will draw together intelligence and experience to create an understanding of the context of the situation and to plan the necessary response. In doing so, the commander considers many things including the nature of the conflict, the political and social objectives, the geography of the battlefield, the resulting threats and vulnerabilities (both of the allies and the enemy) and the capabilities of the force. Clearly, the resulting plan is very much linked to the context of that particular conflict and, regardless how successful, cannot be blindly reapplied to each and every subsequent conflict scenario. Lessons drawn from history, technology and culture can only be of use if we understand the context in which they existed.

Lessons drawn from conflict must be considered in the context of when they were experienced.

THE CONTEXT OF WAR

A declaration of war is recognition that, with respect to a certain group of people in a certain context, normal ethical rules do not necessarily apply. A declaration of war must also contain two additional criteria:

- the moral justification for making the declaration
- the conditions under which the suspension of normal ethical rules will end

It is important to note that the moral validity of the declaration is to be judged against the specific justifications given for making it. If those justifications are found wanting, the declaration cannot be a legitimate basis for suspending certain ethical rules. It is for this reason that an unjustly declared war would be an initiation of force, and in itself actionable. It is also the basis for the prosecution of the leaders of such initiations of force as 'war criminals'.

A declaration of war is also a warning to third parties: they must join us in our actions to restore a positive value context (become allies in the fight), step out of the way and not interfere in any way (become neutral and remove themselves from the battle lines entirely), or become enemies by association. This warning applies not only to organisations and nations, but to individuals as well. It says, in effect, we are going to take strong action against our enemies, and anybody who doesn't want to get hurt needs to either get behind us or move aside. If third parties (including even 'innocent' citizens of an enemy regime) do not remove themselves entirely from the battle lines, they take their chances that they might come to harm in the conflict.

During the prosecution of a war, we should surely seek to suspend as few ethical restrictions as possible. Just because we have declared war does not mean that all bets are off and anything goes - condoning the worst sorts of barbarism and perfidy. Declaration of war is not a blanket approval of atrocity, nor even a glorification of vendetta. It is, however, an acknowledgement that in certain emergency contexts our highest values cannot be protected without taking actions that would otherwise be ruled out by normal ethical restrictions.²¹

LEVELS OF DOCTRINE

- *Strategic Doctrine*
- *Operational Doctrine*
- *Tactical Doctrine*

Strategic and operational doctrine exists to define joint operations.

DI(G) ADMIN 20-1 details the ADF doctrine framework.

Strategic Doctrine

Some aspects of strategic doctrine will be prescriptive and structured; others will be broad in scope and little more than advice to the wise.

LEVELS OF DOCTRINE

What are the levels of doctrine and what should they look like? To answer the question it is worth looking at the accepted levels of command in conflict. Australian military forces have accepted the proposal (a fundamental principle) that there are three levels of command in conflict as follows:

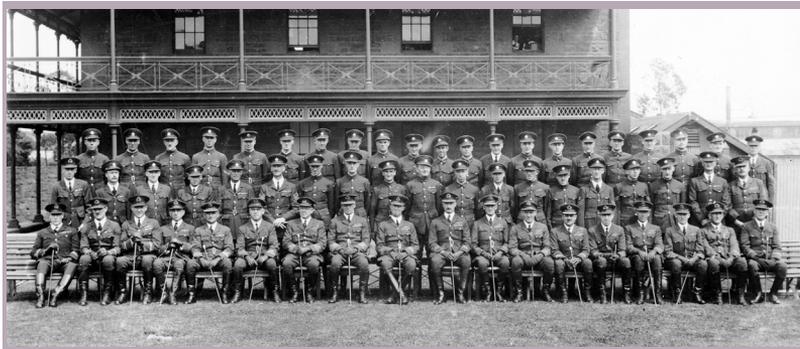
- The strategic level of command is focussed on the overall conduct of a conflict.
- The operational level deals with the planning and execution of campaigns through the sequencing of operations in a theatre.
- The tactical level deals with the direct engagement of forces, normally in combat.

The strategic level focuses on the overall conduct of the war, with doctrine more concerned with national security and government policy. The operational level involves considerable planning to translate strategic guidance into a workable concept of operations to guide tactical commanders. Strategic and operational doctrine therefore exists to define joint operations, as clearly no campaign can be prosecuted independently by a single service. Conversely, the tactical level is largely functional and doctrine at this level generally relates to the performance of those functions within the single service.

For the ADF, Defence Instruction (General) ADMIN 20-1 (Joint Operations Doctrine) details the framework for the management and control of Australian Defence doctrine including the relationship between ADF and single service doctrine.

Strategic Doctrine

At the strategic level commanders are concerned with 'the art and science of employing national power'. So strategic doctrine is that collection of fundamental principles associated with the application of military force as part of a national effort. Those developing and using strategic doctrine must recognise that war at this level is both an art and a science. Some aspects of doctrine will therefore be prescriptive and structured; others will be broad in scope and little more than advice to the wise. Much of the doctrine will be implicit and based on the extensive experience, education and training of the commanders concerned.



RAAF Headquarters Personnel (March 1930) ²²

Implicit doctrine at the strategic level of command presents the greatest challenge for it is here that we see a potential clash of environmental cultures. Senior commanders, attempting to contribute to the employment of national power, are, on a daily basis, exposed to the doctrines of other government organisations. The government of the day, together with its supporting bureaucracy, has its doctrine on which the political party is founded and on which it bases its approach to all matters of national importance, including war. Differences in implicit doctrine can be overcome by communication whether it is by documentation or by working together on a regular basis.

Strategic doctrine must be codified to form the basis of the Defence relationship with other organisations and to provide the basis for the development of other ADF doctrine. DI(G) ADMIN 20-1 designates the Australian Defence Doctrine Publication - Doctrine (ADDP-D) *Foundations of Australian Military Doctrine* as the ADF capstone doctrine publication. The development of strategic level doctrine is the responsibility of CDF.

FURTHER READING

Australian Defence Doctrine Publication - Doctrine (ADDP-D), Foundations of Australian Military Doctrine ²³

The ADDP-D provides the capstone ADF doctrine and the structure from which all Single Service doctrine is subsequently drawn and authorised.

Differences in implicit doctrine can be overcome by communication.

Communication is the key to successful employment of doctrine.

ADDP-Doctrine is the ADF capstone doctrine publication.

Operational Doctrine

At the operational level commanders develop doctrine so that subordinate commanders are able to understand how the commander is likely to conduct a campaign, what forces are likely to be employed and in what capacity, and

Operational Doctrine

Operational level doctrine is usually more prescriptive than is strategic doctrine.

how they would be expected to operate. Operational level doctrine is usually more prescriptive than strategic doctrine. However, it still aims to allow subordinate commanders flexibility and encourage them to use their initiative whenever possible. Here we see what might be called implicit doctrine, doctrine that is unwritten but which is understood by all involved because of their common backgrounds, education, training and experience.

Implicit doctrine is unwritten but is understood by all involved because of their common backgrounds, education, training and experience.



The advantage of this implicit doctrine is that it may be so ingrained that the individuals concerned are able to work with others almost without direction, anticipating requirements and acting unilaterally if necessary to achieve the desired outcome. When understood by all concerned this implicit doctrine can be a very powerful tool.

It is astonishing how obstinate allies are, how parochially minded, how ridiculously sensitive to prestige and how wrapped up in obsolete political ideas. It is equally astonishing how they fail to see how broad-minded you are, how clear your picture is, how up to date you are and how co-operative and big-hearted you are. It is extraordinary.

*Field Marshal Sir William Slim*²⁵

Implicit doctrine will fail if commanders fail to communicate their intent to subordinates.

A disadvantage is that those outside the 'inner sanctum' may not be aware of these 'fundamental principles', may not agree that they are fundamental and, as a result, may not be able to make an effective contribution. While this problem is most likely to arise when working with foreign forces unfamiliar with our doctrine, it can occur within the ADF if commanders fail to communicate their intent to subordinates.

Those imbued with this implicit doctrine could have difficulty recognising the merit of new approaches to doctrine.

A second disadvantage is that those imbued with this implicit doctrine may become unable to recognise that their views are fixed. In that case they would be unable to step back and challenge the relevance of their approach in new circumstances and they would have difficulty recognising the merit of new approaches to doctrine. If doctrine is the ever-evolving product of history combined with the theorists' contributions and technology, and our views on doctrine remain calcified, then our doctrine becomes irrelevant and we have no real 'fundamental principles' on which to base our operations.

Operational level doctrine for the ADF is reflected in the procedural series of Australian Defence Doctrine Publications (ADDPs). This doctrine will be influenced by joint warfighting, joint logistics and similar strategic level concepts. The development of operational level doctrine rests with:

- 0 Series (Executive) sponsored by Vice Chief of the Defence Force
- 1 Series (Personnel) sponsored by Head Defence Personnel Executive
- 2 Series (Intelligence and Security) sponsored by Deputy Secretary Intelligence and Security
- 3 Series (Operations) sponsored by Commander Australian Theatre
- 4 Series (Logistics) sponsored by Commander Joint Logistics
- 5 Series (Plans) sponsored by Head Strategic Command
- 6 Series (Communications and Information Systems) sponsored by Head Knowledge Systems
- 7 Series (Doctrine, Training and Interoperability) sponsored by Commander Australian Theatre

Operational level doctrine is reflected in the procedural series of ADDPs.

Tactical Doctrine

At the tactical level direction and guidance is provided through a myriad of orders and instructions. Most of these are directive, that is, subordinates are required to follow orders. Conversely, even at the tactical level commanders are likely to give subordinates considerable rein whenever possible (perhaps another fundamental principle of our doctrine). For example, Standing Instructions could include a range of tactics that might be employed together with some encouragement to those engaged in combat to use their initiative. This material is prescriptive and authoritative but not directive. It allows subordinates some flexibility. It is doctrine.



Palestine c1918 ²⁶

Tactical Doctrine

At the tactical level direction and guidance is provided through a myriad of orders and instructions.

Tactical doctrine allows flexibility and encourages initiative.

All of these publications provide the framework for the operation of small units and the guidance for its members to ensure they understand their role and the way in which other units can be expected to operate in conflict. In essence, these publications are an attempt to reduce the 'fog of war' when individuals with limited experience are exposed to combat. Even guidance may be very detailed leaving little room for independent action. Particularly where predictable action is more important than the use of initiative these documents may be very explicit. Bench-Level Instructions for a maintenance activity is an example. In this case the material is prescriptive, authoritative and directive. It is rigid. It is not doctrine.

Tactical doctrine is normally generated at the Command, Force Element Group, Wing and Squadron level.

Australian Aerospace Power Doctrine

Aerospace power is projected through a unique environment.

Australian Aerospace Power Doctrine

Aerospace power forms a fundamental part of the overall national power capability for Australia. Such power is projected through a unique environment. This environment must be understood thoroughly by all aerospace practitioners to ensure that they can make the best contribution to joint operations. This particularly applies to those commanders who find themselves responsible for the conduct of aerospace operations.

Aerospace power doctrine is not a formal part of the doctrine hierarchy.

Aerospace power doctrine is not a formal part of the doctrine hierarchy detailed above, yet it informs and continually influences that hierarchy. This document provides the detailed environmental knowledge that will enhance the reader's understanding of aerospace power.

Advancing Aerospace Power Knowledge

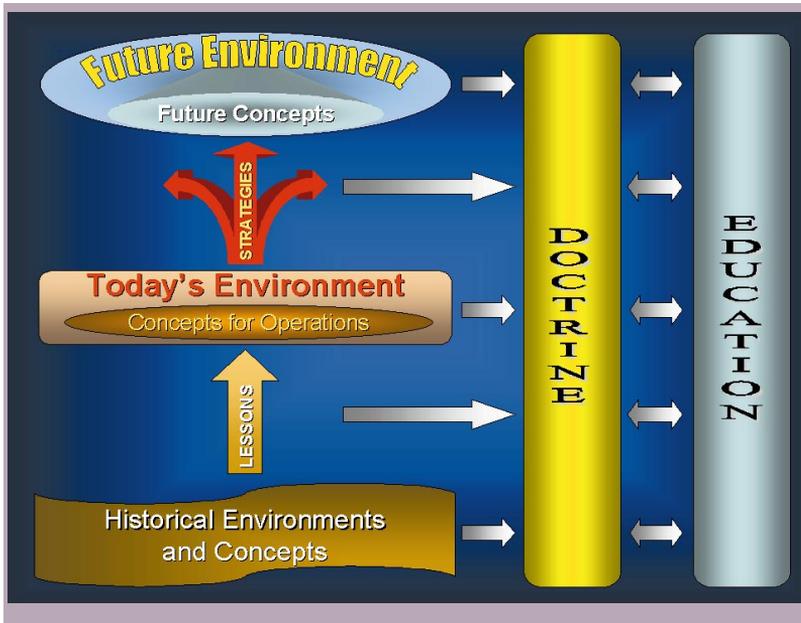
Doctrine must be much more than a body or system of teachings related to a particular subject.

Advancing Aerospace Power Knowledge

If I always appear prepared, it is because before entering on an undertaking, I have meditated for long and have foreseen what may occur. It is not genius that reveals to me suddenly and secretly what I should do in circumstances unexpected by others; it is thought and preparation.

*Napoleon*²⁷

In a sense, to be useful, doctrine must be much more than the simple definition: 'a body or system of teachings relating to a particular subject.' It may be all of those things but that is not enough. The words 'guide' and '...authoritative but requires judgement in its application' in the definition of military doctrine highlight another facet of doctrine. That is the need for people to make



educated decisions about the applicability of their current doctrine to the military challenge that faces them at the time.

The key is a program of education that builds on professional training and experience to explore the successes and failures of doctrine, the contribution and the failures of the theorists, and the ways in which technology has driven doctrine or doctrine shaped technological development. There is more. That education needs to equip our people to exercise that judgement, to understand when the 'authoritative' doctrine is no longer relevant and to choose the course of action which, in these new circumstances, will lead to success in joint military operations.

The key is a program of education that builds on professional training and experience.

Professional Mastery

Professional Mastery

PROFESSIONAL MASTERY

The discipline and culture through which the RAAF strives to achieve a special level of proficiency at all times in preparing for and - when directed - conducting and sustaining, air operations to support Australia's security and interests.²⁸

Training is light and lack of training is darkness. The problem fears the expert. The trained man is worth three untrained; that's too little - say six; six is too little - say ten to one...

*Alexander Suvorov, Marshal of Russia*²⁹

Each individual, each unit, each Service, and the ADF as a whole must demonstrate a high level of professional mastery.

If the ADF is to meet the challenge of producing robust and flexible doctrine then each individual, each unit, each Service, and the ADF as a whole must demonstrate a high level of professional mastery. At the lowest level professional mastery requires that each individual has a comprehensive range of skills to be effective in his or her own part of the profession of arms. This is much more than a technical competence for it encompasses an understanding of the part that individual expertise, in concert with the expertise of others, plays in generating the combat power of the unit, the Service and the ADF. It also includes an understanding of the fundamental principles, the doctrine that forms the framework on which military operations are based.

VIETNAM AND THE GULF WAR

During the Vietnam War it could be argued that allied air power did not fail, but professional mastery did. More than enough capability was available, and the individual competence and courage of air and ground crews and units were beyond question. But until the Linebacker II campaign in December 1972, the available air power was employed incorrectly in exhausting battles of attrition rather than as an instrument of decisive warfare. If political considerations militated against the decisive application of air power over North Vietnam, then perhaps it should not have been used.



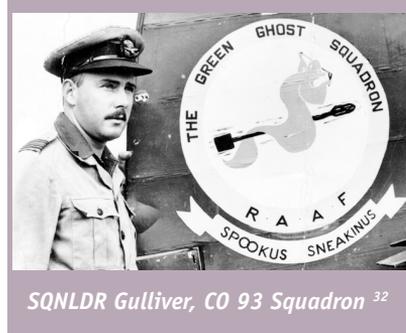
The success of the air campaign in the Gulf War is testament to professional mastery and a benchmark for the development and application of air power doctrine based on insightful interpretations of past failures and successes, on analysis of rigorous theory, and on advanced technology.³¹

Professional mastery requires a clear understanding of the strengths and limitations of aerospace power.

For exponents of aerospace power professional mastery is also the discipline of striving continually to achieve the most appropriate, effective and efficient aerospace power for Australia's security. It requires a comprehensive understanding of the body of knowledge, the ability to apply the knowledge in the pursuit of a mission and a willingness to apply that knowledge to the development of new and innovative ways to employ aerospace power. Particularly at senior command levels professional mastery also requires a clear understanding

of the strengths and limitations of aerospace power and the ability to imbue in others an understanding of those characteristics. In the absence of that understanding we risk misapplying aerospace power in ways reminiscent of Vietnam.

Finally, professional mastery includes a willing acceptance of the values of the organisation as a whole. For every Air Force member that means making a contribution that allows the Royal Australian Air Force to be, and remain, a professional, highly motivated and dedicated team.



Professional mastery includes a willing acceptance of the values of the organisation as a whole.

[A young officer should] take General de Gaulle's advice ... the education of a general should be directed to any subject except the military, because by the time he's considered for higher leadership position it should be assumed he's professionally qualified - but in this world a general can't make a decision unless he's aware of the political, economic, and social factors which also influence his decision. So he should broaden the field he's studying.

General Lauris Norstad, USAF³³

FURTHER READING

Dereliction of Duty by H.R. McMaster³⁴

Dereliction of Duty clarifies what happened, and why, and who was responsible for the decisions that led to the direct US military intervention in the Vietnam War.

The Challenge

...whatever doctrine the armed forces are working on now, they have got it wrong. The objective is not being too badly wrong and having the flexibility to adapt quickly as the shooting starts.

Sir Michael Howard³⁵

The challenge then is to produce and use aerospace doctrine that is:

- robust and flexible
- a fine balance between explicit, written doctrine and implicit doctrine
- understood by subordinates so that they are able to command effectively at the operational and tactical levels

The Challenge

Our doctrine must be open to challenge and review.

- complementary to the doctrines of other organisations
- accepted by those organisations with which the elements of the ADF must work

Doctrine must have sufficient stature to command respect and compliance but there must be both formal and informal avenues to challenge the status quo.

The work must have sufficient stature to command respect and compliance but there must be both formal and informal avenues to challenge the status quo. Indeed, if anything is to be enshrined (or calcified) in our doctrine it must be this principle that our doctrine is open to challenge and review. This then is the template for our *Fundamentals of Australian Aerospace Power*.

1 Notes

- ¹ Photograph: *CAPT Smith & LT Mustard Palestine 1918*, Commonwealth of Australia, RAAF Museum, Victoria, Australia
- ² Photograph: *Crashed German Aircraft c1918*, Commonwealth of Australia, RAAF Museum, Victoria, Australia
- ³ Photograph: *FLGOFF Wilson and Crew, 454SQN*, Commonwealth of Australia, RAAF Museum, Victoria, Australia
- ⁴ Photograph: *A-58 Spitfire*, Commonwealth of Australia, RAAF Museum, Victoria, Australia Reference Number: 000-148-226
- ⁵ Major General Orvil A. Anderson, USAF, Deputy Director for Operations, Eighth Air Force, in World War II.
- ⁶ *Collins Cobuild English Dictionary*, Harper Collins, Great Britain, 1995, p. 489
- ⁷ *The Macquarie Concise Dictionary; Third Edition*, Macquarie Library, New South Wales, 1998, p. 327
- ⁸ Australian Defence Force Publication 101, *Glossary*, Department of Defence, p. D-8
- ⁹ Photograph: *CAPT Richard Williams, Australian Flying Corps, c1915*, Commonwealth of Australia, RAAF Museum, Victoria, Australia, Image Reference Number: 000-147-998
- ¹⁰ *Cover of Training Manual Royal Flying Corps*, Commonwealth of Australia, Australian Defence Force Academy Library
- ¹¹ Photograph: *Air Vice-Marshal H. N. Wrigley, CBE, DFC, AFC*, Commonwealth of Australia, RAAF Museum, Victoria, Australia
- ¹² Hugh Smith, *The Strategists*, Australian Defence Studies Centre, Canberra, 2001
- ¹³ David Hackett Fischer, *The Great Wave*, Oxford University Press, 1996, p. 3
- ¹⁴ Photograph: *Learning Through Our Mistakes (Palestine 1918)*, Commonwealth of Australia, RAAF Museum, Victoria, Australia: Sir Richard William's Photo Album
- ¹⁵ Photograph: *General Mikhail Frunze*, Air Command and Staff Course Notes, Maxwell AFB, 2000
- ¹⁶ Hugh Smith, *The Strategists*, Australian Defence Studies Centre, Canberra, 2001
- ¹⁷ Photograph: *Norden Bombsight*, USAF 486th Bombardment Group, <http://www.486th.org/Aircraft/B17/Norden/Norden.htm>, accessed 4 April 2002

- ¹⁸ Photograph: *Components of the Norden Bombsight*, USAF 486th Bombardment Group, <http://www.486th.org/Aircraft/B17/Norden/Norden.htm>, accessed 4 April 2002
- ¹⁹ *The Norden Bombsight*, 486th Bombardment Group, <http://www.486th.org/>, accessed 4 April 2002
- ²⁰ *Collins Cobuild English Dictionary*, Harper Collins, Great Britain, 1995, p. 353
- ²¹ John Gregory Wharton, *The Context of War*, <http://www.axiomatic.net/ragnar/declarationofwar.html>, accessed 4 April 2002
- ²² Photograph: *RAAF Headquarters Personnel (March 1930)*, Commonwealth of Australia, RAAF Museum, Victoria, Australia: Sir Richard William's Photo Album
- ²³ Australian Defence Doctrine Publication - Doctrine, *Foundations of Australian Military Doctrine*, Department of Defence
- ²⁴ Photograph: *F/A-18 in Formation with a MiG-29*, Commonwealth of Australia, <http://defweb.cbr.defence.gov.au/airforceimages/>, accessed on 4 April 2002
- ²⁵ Field Marshal Sir William Slim quoted in LT COL Charles M. Westenhoff, USAF, *Military Air Power: The CADRE Digest of Air Power Opinions and Thoughts*, Air University Press, 1990, p. 164
- ²⁶ Photograph: *Cleaning Aircraft after Flight (Palestine c1918)*, Commonwealth of Australia, RAAF Museum, Victoria, Australia: Sir Richard William's Photo Album
- ²⁷ Napoleon Bonaparte as quoted in Air Force Doctrine Document 2, *Organisation and Employment of Aerospace Power*, United States Air Force, 17 February 2000, p. 85
- ²⁸ Ian MacFarling, *Air Power Terminology, 2nd Edition*, Aerospace Centre, Canberra 2001, p. 105
- ²⁹ Alexander Suvorov, Marshal of Russia, quoted in LT COL Charles M. Westenhoff, USAF, *Military Air Power: The CADRE Digest of Air Power Opinions and Thoughts*, Air University Press, 1990, p. 145
- ³⁰ Photograph: *B-52 Delivering Its Payload*, Office of the Secretary of Air Force, http://www.af.mil/photos/images/bombers_b52_0008.jpg, accessed on 4 April 2002
- ³¹ *Air Power Manual (3rd Edition)*, Air Power Studies Centre, Canberra, 1998, p. 5
- ³² Photograph: *SQNLDR Gulliver, CO 93 Squadron*, Commonwealth of Australia, RAAF Museum, Victoria, Australia
- ³³ General Lauris Norstad as quoted in Lt Col Howard D. Bolote, *Once in a Blue Moon: Airmen in Theatre Command*, The CADRE Papers, Air University Press, Alabama, 2000, p. 62
- ³⁴ H.R. McMaster, *Dereliction of Duty*, Harper Collins Books, New York, 1997
- ³⁵ Sir Michael Howard, 'Military Science and the Age of Peace' in *Journal of RUSI for Defence Studies*, Vol 119, Mar 1974, p. 7