

***FROM PAST TO FUTURE:
THE AUSTRALIAN EXPERIENCE OF LAND/AIR OPERATIONS***

***THE URGENCY OF WAR:
THE DEVELOPMENT OF CLOSE AIR SUPPORT DOCTRINE
IN THE SECOND WORLD WAR***

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Introduction

During the Second World War, Australia's close air support (CAIRS) doctrine was largely derived from that of the Royal Air Force (RAF). An examination of how RAF CAIRS doctrine evolved and functioned is therefore essential to an understanding of Australian land/air operations in this period. Although CAIRS had been an important feature of the combined arms battles on the Western Front during 1918, in the inter-war period the growth of an independent air force and rapid changes in aeronautical technology made the inter-relationship between land and air warfare a highly contentious issue for both services. After the Second World War, Field Marshal Viscount Slim, a soldier with a sound understanding of land/air operations, believed that, while the Burma campaign had been a triumph of land/air warfare, its successful execution had been dependent upon the utmost co-operation between soldiers and airmen.¹ In particular, he was aware of the way the mechanics of interservice rivalry affected the level of co-operation between land and air forces.² He further observed that 'In peace, the function of tactical air support of land operations is apt to fade, but in war its urgency will increase'.³ This paper explores the problems surrounding the development of CAIRS doctrine during the 1920s and 1930s and the early years of the Second World War. It examines air/ground operational thinking in the British Army and the RAF, with particular attention to how inter-service rivalries and tensions had a serious impact on CAIRS doctrine as the army and air force underwent the difficult transition from peace to war.⁴

'A Poor, Undeveloped, Cinderella of a Thing'

In June 1941, General TA Blamey, who was then both Deputy Commander-in-Chief Middle East and Commander of the 2nd AIF, sent a letter to the Minister for the Army, FM Forde, on the subject of air support for the AIF. 'I wish', wrote Blamey, 'to state in the most emphatic terms that it is essential to have an air component of bomber and fighter aircraft as part of the organisation of an army Corps'.⁵ The disastrous evacuation from Greece and Crete was fresh in his memory.⁶ The Australians and New Zealanders had been roughly handled by the Germans and Blamey was concerned that, 'they have been literally blasted off the ground and machine gunned from the air without seeing any effort in reply. It must be anticipated that they will go into action against the Germans next time with an exaggerated opinion of the German Air Force'.⁷ Blamey wanted Forde and the Australian War Cabinet to press the British so that air support provided by the RAF would begin to match the 'unity of action' which the Wehrmacht and Luftwaffe had demonstrated so effectively in Greece.⁸

The reason for the AIF's dependence on the RAF for air support was that the Royal Australian Air Force (RAAF) was only a small 'tactical' force—comprising at the beginning of the war only 12 squadrons of obsolescent aircraft.⁹ Throughout the war, the commitment of all Australian Governments to the Empire Air Training Scheme kept the RAAF small and meant that 'thousands of young men were "surrendered" to the control of the RAF, and fought their war over ... Germany'.¹⁰ In the 1920s and 1930s, the RAAF, like its British counterpart, had faced many threats to its independence.¹¹ During this period Alan Stephens believes that the 'Army was concerned more with the place and control of air power in the defence of Australia than with the size of the RAAF'.¹² At the heart of the request which Blamey put to the Australian War Cabinet was the question of who should control air assets.

While it is possible to see in Blamey's letter the perpetuation of the pre-war inter-service rivalries, it is also worth examining the AIF'S experience in Greece to understand why air support had become such an issue for the senior Australian commander. The small RAF forces in the Middle East could commit only eight squadrons—80 aircraft—to the campaign in Greece, though 23 squadrons were promised to support a ground component of 58,000 (mainly Australian and New Zealand) troops.¹³ In early April 1941, when the Germans attacked with 15 divisions (approximately 255,000 troops and over 1000 aircraft), the RAF's strength in Greece was still only nine squadrons. The size and frequency of attacks by the Luftwaffe were in marked contrast to the performance of the RAF.¹⁴ In the absence of any response by friendly aircraft, Blamey supposed that the RAF 'must be doing good work elsewhere', while the British commander, Sir Henry Maitland Wilson, later admitted that "'by some misunderstanding" he had left Cairo with the impression that more aircraft would be available'.¹⁵

Indeed, the RAF squadrons committed to Greece acquitted themselves well under very difficult circumstances.¹⁶ However, as a service, the RAF in Greece was often doctrinaire and uncooperative.¹⁷ The RAF Commander in Greece, Air Vice Marshal D'Albiac, believed that 'direct support to the Army was not "a proper use of air power"'.¹⁸ Just as in France and Norway the year before, the RAF did not see its task as engaging battlefield targets; this despite the fact that, apart from a few Wellington bombers, the aircraft in Greece, mainly Blenheim MkIs, Gladiators, some Blenheim MkIVs and Hurricanes, could have done useful service in co-operation with the ground forces. Following his experiences in Greece, Sir Iven Mackay stated in a report to the Australian Government that,

There is certainly provision, on paper, for co-operation between the Air Force and the Army. There has been considerable co-operation in reconnaissance and to a lesser extent in Close Support. In fact, however, compared with other efforts of the Army and Air Force, this co-operation is a poor, undeveloped, 'Cinderella' of a thing and in the eyes of the Army, help from the Air Force is given only grudgingly.¹⁹

To understand how this situation had developed, it is necessary to review the development of RAF doctrine and the state of Army/Air Force relations in the two decades between the end of the First and the beginning of the Second World War.

'The Air Staff's View'

During the inter-war period, and especially under the leadership of Sir Hugh Trenchard from 1919-1929, the doctrinal focus of the RAF was strategic bombing. This was, in part, a response to its own struggle for survival as an independent service. In strategic bombing the RAF had found a concept of operation and a mission which not only sustained its claims to autonomy, but, increasingly in the 1930s, also enjoyed widespread support from both politicians and an electorate which believed that bombers represented a credible deterrent to Nazi Germany.²⁰ Under Trenchard, the RAF had become a strategic force, based on bomber aircraft. However, for most of the period, the lack of a credible threat meant that strategic bombing and deterrence remained largely theoretical propositions.²¹

In 1937, despite the evidence available from the Spanish Civil War, where the use of aircraft on the battlefield was a common practice, the Chief of the Air Staff, Sir Cyril Newell, felt confident in saying that the employment of air power in this role was a 'gross misuse of air forces'—words echoed in Greece by D'Albiac.²² Indeed, even after the Germans had demonstrated the effectiveness of close co-operation between land and air forces in Poland, a memorandum of November 1939 stated that,

the Air Staff's view—which is based on a close study of the subject over many years—is as follows: The true function of bomber aircraft in support of an Army is to isolate the battlefield from reinforcement and supply, to block and delay the movement of reserves, and generally to create disorganisation and confusion behind the enemy front, but neither in attack nor in defence should bombers be used on the battlefield itself, save in exceptional circumstances. All experience in war proves that

such action is not only very costly in casualties, but normally uneconomical and ineffective, compared with the results of the correct employment of aircraft on the lines above.²³

This memorandum describes a mission referred to today as Battlefield Air Interdiction (BAI). BAI is well suited to bombers and does not require the detailed integration of land and air forces necessary for CAIRS. Even so, the official RAF view held that CAIRS tactics, if required, needed no specialised training. In 1939 the Assistant Chief of the Air Staff claimed that 'fundamentally, all bomber training was the same and that the nature of the objective had little effect on the methods employed'.²⁴ Despite such assurances, after one Army/Air Force exercise, conducted just six months prior to the outbreak of war, Wavell felt that the poor bombing results showed how little consideration the RAF had given to the problem of support of ground operations. In fact, he doubted whether the pilots had been trained for CAIRS.²⁵

The Lessons of the Great War

The Army, for its part, was not blameless in neglecting interservice co-operation. In the 1920s and 1930s, the Army returned to its pre-war role of imperial policing. Brian Bond and Williamson Murray believe that the regimental system was both the great strength of the British Army during the inter-war period and its Achilles' Heel. Although it engendered great unit loyalty and cohesion—important qualities on the battlefield—it created a 'them and us' syndrome, which made it impossible to standardise doctrine and training, and achieve the close tactical integration of arms and,

If there was little conception of inter-arms cooperation, there was virtually no preparation in the army to integrate the other services into tactical doctrine. The army was scarcely more interested in close air support than was the RAF.²⁶

Certainly, one RAF officer with pre-war experience in Army cooperation matters wrote, 'it was quite impossible to make the Army believe that we could contribute anything worthwhile to the land battle.'²⁷

During a combined exercise in 1928, Wing Commander Leigh-Mallory was approached by some lieutenant colonels with a request to carry out low level attacks. He did so, and as a result '[h]is cooperation earned him a formal complaint from the Army Council to the Air Council. The attacks he made, according to this ... document, "were so excessively low ... that the morale of the troops, especially the infantry, was badly shaken by his head scraping and ear splitting dives".'²⁸ The full ramifications of these words seem to have been lost on the respective staffs and all Leigh-Mallory got for his trouble was a dressing down from the Air Staff. In fairness to the authorities, it should be said that peacetime exercises stress safety over realism—perhaps another reason why during peace the 'function of tactical air support of land operations is apt to fade'.

The ambivalence of official Army opinion to close air support may best be judged by a sentence in the 28-page pamphlet, *Notes on Lessons of the Great War*, published in 1934. On the subject of cooperation between land and air forces in the attack, it stated: 'The addition of low flying assault fighters as maintained by some foreign countries is also worthy of consideration'.²⁹ Nothing highlights the poor state of interservice relations better than the tone of this sentence, which carries the implication that 16 years after the war the British, who pioneered and refined close air support, had come to view it as a 'foreign' practice.

The Duality of Army and Air Force'

This poor record of practical cooperation was not entirely universal and, despite hostility and indifference on both sides, in the 1920s and 1930s individual RAF and Army units worked closely together in various parts of the Empire. However, even here the two services had engaged in rivalry. In 1922, when warning leaflets and a few bombs subdued a tribal rising in Iraq for the modest sum of £10,000, Trenchard had been quick to use this victory to advance the cause of RAF autonomy.³⁰ Politicians, eager to reduce the costs of imperial policing, were keen to substitute large military garrisons with RAF units. In the 1920s, when the defence budget was so meagre, this policy of air control was not popular with the Army.³¹ In practice, the bombing and strafing of villages from the air was not sufficient to deter the most rebellious tribes and many such operations were combined Army/ RAF affairs. Of one such expedition on the North West Frontier in 1935 the RAF's air power theorist, Wing Commander JC Slessor, later wrote that it anticipated some of 'the principles of land/air warfare which crystallised in the Desert fighting of 1942 and 1943'.³²

This statement was perhaps true only with the benefit of hindsight. On his return to England, where he co-authored a manual entitled *Employment of Air Forces in the Field (EAF)*, Slessor used very little of his colonial experience.³³ For example, while *EAF* concedes that 'low flying attacks' could have valuable morale and material effects (they were often used with great effect on native insurgents in Iraq and the North West Frontier of India), it goes on to state that 'Troops deployed are not a suitable target for fighters, nor should fighters be used to attack objectives which can be engaged by artillery or machine guns'.³⁴ Indeed, the single most important influence on *EAF* (which was published in September 1938) was Slessor's major work on air power theory, *Air Power and Armies* (1936), which was a study of land/air warfare in the European context.

After 1925, the provisions of the Treaty of Locarno compelled the British to begin considering the role of air power in supporting the expeditionary force they were obliged to send to the Continent to guarantee the borders of France, Germany and Belgium. The prospect of this contingency placed greater emphasis on combined operations. *Air Power and Armies* was based on lectures which Slessor had given as an instructor at the Army Staff College, Camberley. Its aim was to consider the specific circumstances in which it would be 'necessary to send an Army and an Air expeditionary force to fight in an overseas theatre of war'.³⁵ In keeping with the doctrinal focus of the RAF, *Air Power and Armies* stresses the role of a 'resolute bombing offensive' against enemy cities and industry to achieve victory. Slessor argued against the dedication of specific air assets to the land battle, because he believed that the inherent flexibility of air power allowed it to be concentrated at the decisive point, which in the RAF's view would generally be found beyond the battlefield.³⁶

Indeed, he says that '*the aeroplane is not a battle-field weapon*' (italics in the original).³⁷ While he does concede that, 'There are, of course, exceptions to this rule', he qualifies this in words which anticipate *EAF*:

... the general rule holds good. In theory a sound economy of force should require that a highly mobile weapon like an aeroplane should not be used to engage targets which can equally well be taken on by other less mobile weapons on the ground.³⁸

Air Power and Armies gave the air force view of how 'combined' operations ought to be conducted. Essentially, it was an analysis of the role of the strategic Independent Air Force in the First World War. Higham calls it 'a textbook' designed to teach the conduct of tactical air operations.³⁹ The intended student was the Army!⁴⁰

In a 1923 memorandum Trenchard had pointed out, with reference to the First World War, the differences between RAF and Army doctrine:

The Army policy was to defeat the enemy Army—ours to defeat the enemy nation. The Army only defeated the enemy Army because they could not get at the enemy nation. We must avoid our policy being affected by the policy of the Army.⁴¹

Like other air power theorists of the inter-war period, Trenchard clearly believed that air power could win a war on its own, by attacking the infrastructure of the enemy nation.⁴² *Air Power and Armies* is an interpretation of this doctrine at the tactical level.⁴³ Although it made considerable progress towards a philosophy for combined land/air operations, its focus was on attacking enemy communications and logistics, ie targets behind the battlefield. In this, it should rightly be seen as the intellectual antecedent of *EAF* and, like that document, it established a sound theoretical basis for general principles of inter-service co-operation. However, while *EAF* addressed the problems of command and control, the types of air force missions required by the Army and orders for air action, its weakness, from the Army's viewpoint, lay in its failure to deal with such practical matters as the co-location of air and land commanders throughout the chain of command and an almost complete lack of provision for CAIRS. In any case, *EAF* could alter neither the force structure of the RAF, nor the considerable ill feeling and mistrust which had built up between the two services over 20 years.⁴⁴ The British official history notes that in 1939, 14 years after Locarno, the RAF had made almost no '*provision for air participation in large scale land operations or for the dispatch of large mobile air forces overseas*' (italics in the original).⁴⁵

In Norway, France and Greece the failure of air support to the ground forces was almost total. It was a failure which can be directly attributed to the neglect of joint doctrine and a corresponding deficiency in joint training. Wavell, as Commander-in-Chief of the hard pressed British and Commonwealth forces in the Middle East, found that he had neither land nor air forces sufficient to meet operational requirements in this huge theatre. In a signal to Sir John Dill, the new Vice Chief of the Imperial General Staff, Wavell stressed that he had 'never ceased to state the principal requirement in this part of the world is a stronger Air Force; and I have no doubt that it is realised, and will be remedied as soon as possible. Also the duality of Army and Air Force in this theatre raises all sorts of complications as regards to planning ... but I see no remedy to this at present.'⁴⁶

The Urgency of War

The defeats in Greece and Crete had further strained the already tense relationship between the RAF and the Army.⁴⁷ British soldiers had taken to calling the RAF 'the Royal Absent Force' but the Australians had a far worse interpretation for this acronym!⁴⁸ In the Middle East, senior Army officers such as Blamey demanded the allocation of air assets to Army formations. On 9 July 1941 the Australian War Cabinet discussed the command and control of air assets in the light of Blamey's reports on the fighting in Greece. They decided, on the basis of his reports, that fighters, bombers and reconnaissance aircraft should be placed under the direct command of Army Corps and a strongly worded cablegram to that effect was despatched to the Dominions Office in London.⁴⁹ The reply from London contained a restatement of the requirement for the RAF's independence, which pointed out that the proportion of aircraft allocated to any operation was determined by the prevailing circumstances in the Middle East. The third paragraph of this cablegram listed very cogent reasons why, in order to make the most effective use of the RAF's limited resources, this centralised control of air assets was necessary. Significantly, the message ended by pointing out that the question of air support to the Army was at present under active consideration'.⁵⁰

In Britain, 'active consideration' was taking place at the level of the service chiefs. Portal (Chief of the Air Staff) and Brooke (Chief of the Imperial General Staff). The debate was acrimonious, as both men had been operating under the misapprehension that the British and Commonwealth forces in the Middle East enjoyed great air superiority over the Axis forces.⁵¹ In May, BREVITY, an operation designed to relieve the Axis siege of Tobruk, failed. That month, Longmore (the senior RAF officer in the Middle East), was sacked and replaced by his deputy, Tedder. In June another attempt, BATTLEAXE, suffered the same fate. Although air support was not the key reason for these two failures, frustration heightened the tensions between the services. In the opinion of one airman, 'The Army's scapegoat for all their failures was "lack of air support" ... [their familiar request was] ... "If you can keep the enemy air off our backs that's all we ask, we can cope with the rest!"'⁵² In July, Wavell became Churchill's scapegoat for the recent operational failures and was replaced by Auchinleck. At about the same time, Air Vice Marshal Coningham assumed command of the Western Desert Air Force.

Under these new commanders, the duality which had characterised Army/RAF operations in the Middle East during 1940 and early 1941 was transformed into a unity of action. It should also be noted that, between July and the end of the year, their material situation was considerably improved over that of their predecessors, with both the Army and the RAF receiving reinforcements and replacements. Significantly, on the air support front these included the first Hurricanes equipped as fighterbombers. However, together with these quantitative improvements came crucial progress in the quality of the relationship between the Army and the RAF. In outline this development was attributable to four main factors:

1. Firm political direction. In September, Churchill broke the impasse concerning the control of air assets. His was a compromise solution which allowed the RAF the flexibility to apply maximum force at the most critical point. Never more', said Churchill, 'must the ground troops expect, as a matter of course, to be protected against the air by aircraft'.⁵³ This gave the RAF the unity of command it required to win the air superiority battle. For its part, the Army received a commitment that it would have a say in the targets which the air force attacked both before and during battle.

2. Closer command relationships. This occurred through initiatives which helped to develop a greater sense of corporate purpose. Churchill had stated that, 'As the interests of the two Cs-in-C are identical it is not thought that any difficulty should arise.'⁵⁴ With the changes in command, the relationship between the two services improved through closer contacts at all levels in the chain of command. Auchinleck and Tedder enjoyed good relations from the start⁵⁵ Coningham and Ritchie (GOC Eighth Army) formed a joint headquarters, which allowed both services to process requests for air support with a minimum of delay. The appointment of Army Air Liaison Officers (ALOs) to RAF units enabled both services to get a better idea of the respective difficulties of operations on land and in the air.⁵⁶

3. Improved communications. This factor is closely related to the developments in closer command relationships. It greatly facilitated the handling of requests for air support, with minimum delays via dedicated radio networks. These made the whole process faster and enabled timely intervention of aircraft in the land battle, thus significantly improving opportunities for the coordination of RAF and Army efforts.

4. Experimentation with procedures for CAIRS. This had occurred in England, East Africa and the Middle East.⁵⁷ In Egypt, during August and September 1941, in a series of joint training exercises, various close support practices were regularised into a CAIRS system which included, for the first time, a definition of 'Direct Air Support', rules for establishing bomblines and standardised methods for target indication and recognition of friendly forces. The whole process was completed by late September, when a joint Army/RAF pamphlet entitled Direct Air Support was published.

In the long term, the outcome of this process was a closer relationship between the two services, based on mutual confidence and an understanding of their dependence upon one another. However, the immediate effect of these measures was the creation of an effective CAIRS doctrine, which continued to evolve throughout the remainder of the war.⁵⁸ For the Army, the designation of a category of air support as Direct Air Support was a major victory.⁵⁹ It also signalled the end of the RAF's refusal to become engaged directly on the battlefield. The RAF, for its part, was freed once and for all from the fear of dispersion of its limited assets or 'penny packeting' to Army formations.

The role of personalities in this process was also important and deserves further comment. While Coningham is credited (quite justifiably) with making the process work by 'getting out and getting on with' the Army, the role of Churchill deserves some mention.⁶⁰ By sacking both Longmore and Wavell, Churchill not only opened the way for 'fresh blood' to consider the problems of air support, but also gave their successors warning of what they could expect, should they too fail to meet his expectations.⁶¹ Likewise, Tedder deserves mention as an airman with an appreciation of the requirements of joint operations, a factor which would carry him to the highest levels of Allied command.

Conclusion: 1941

In late September, Blamey cabled Menzies, saying on the subject of air support:

Great advance in this in last two months. Attitude of Air force here now most co-operative ... Details of cooperation organisation completely worked out and being implemented. All suitable air squadrons to be trained in Army cooperation and joint control organisation for field cooperation being set up. During operations, specific air units to be allotted to military organisations under control of Army Commander with Air Controller on his staff. Arrangements completely satisfactory.⁶²

Blamey portrays the new arrangements as an Army victory over RAF intransigence. Tedder felt that the RAF had succeeded in curing the Army of the idea that air support was merely a matter of providing the means for soldiers to 'immediately summon a pet aeroplane by radiotelephone to deal with the opposition' whenever they were in difficulties.⁶³ That leaders of both services could see this compromise as a victory for their own service was an indication of its success and shows that the problem of inter-service cooperation was essentially a political one. Indeed, Roger Spiller believes that developing doctrine is a continuing process of negotiation and reconciliation between interests within an armed service, the objective of which is the triumph of one over the other.⁶⁴ In 1941, a professional arbitrator reviewing the outcome of this process would have been happy with the result. By early 1942, close air support was based on a sound but adaptable doctrine (its fundamental points being adapted to the needs of other theatres such as Burma and the South West Pacific Area), a command structure that was responsive laterally across the services and a system of joint training. Nevertheless, even with the urgency of war and the realities of failure on the battlefield to spur it on, it had taken two years for this adversarial process to lead to the development of an effective CAIRS doctrine.

Conclusion: 1995

Clausewitz wrote that, 'While history may yield no formula, it does provide *an exercise for judgement*' (italics in original).⁶⁵ In keeping with the theme of this conference, from the past to the future, the development of CAIRS doctrine in the Middle East provides an exercise for judgement which highlights a number of issues of contemporary relevance. In the transition from peace to war, joint doctrine—to secure the effective cooperation of land and air forces—has its foundations in compromise. The challenge of peacetime is to develop doctrines and training which are 'realistic'. War demands adaptability and flexibility, but the restraints of peacetime mitigate against such characteristics. Training is apt to become pedestrian and repetitive. The criteria for success are measured by detached, political and economic factors, rather than by the subjective, often intangible factors which Clausewitz believed count so much towards success in war—the psychological and emotional aspects which govern human behaviour.⁶⁶

Developing doctrines, force structures and training is, therefore, not just an intellectual matter of deciding 'what must be done', but also a political matter of arranging 'how it will be done'. In peace, when the routine administrative activities of military organisations resemble more those of bureaucracies than fighting organisations, the frictions which give rise to interservice rivalry are the products of institutional pressures within and between services. These can be driven by a range of factors, from competition over the allocation of funding to personal animosities. During the inter-war period the parochialism of the British Army and the RAF led each of them to develop doctrines that were *a priori* concepts of warfare. The Army, when it thought of inter-service cooperation at all, planned in terms of the First World War, a time when it had controlled air power; the RAF, for its part, thought of winning the next war with very little assistance from the Army. The idea of operating together, as equals, was anathema to officers of both services who had been 'blooded' in the bitter inter-service rivalries of the 1920s and 1930s. The deficiencies of pre-war doctrine and training were a product of this hostile environment and took two years to amend.

In 1941, neither the British Army nor the RAF was fighting in the location or the manner for which each had prepared. The multipolar international scene of the 1930s has some parallels with the 1990s. In the aftermath of the Persian Gulf War, it is difficult to imagine a future conflict in which air operations will not make a substantial contribution to the land battle. However, the problem which confronts Australian defence planners is the question of both the scale and location of that conflict. Current strategic guidance is that it will most likely be on, or very near to, our own continental land mass and all services are developing their doctrine towards meeting that contingency. However, the existence of *ADFP1—Joint Force Operations Doctrine* notwithstanding, the Australian Defence Force has a strong tradition of single service doctrine.⁶⁷ Within this tradition, inter-service cooperation is generally optional and often *ad hoc*. Indeed, the quality of each service's contribution has, in the past, varied due to its own operational preferences.⁶⁸ In this regard, the experiences of the British Army and the RAF in the 1930s and early 1940s are germane. Beaumont has observed: 'Like schools of thought in art, the intensity of partisanship on issues of jointness has sometimes approached the level of emotion held toward foes in war, for it touches closely on the critical bonding and cohesion that lie at the heart of military institutions and their predisposition to see the world in "them-us" terms'.⁶⁹ These are points that the Australian Defence Force on the eve of the 21st century cannot afford to ignore.

Endnotes

1. W Slim, *Defeat into Victory*, London, 1956, p 543.
2. The Battle of the Admin Box, during the Arakan Campaign of 1944, provides an excellent example of the importance of air power to land operations. At issue in Arakan were airfields. The British needed the Akyab airfields to support a seaborne invasion of Burma, the Japanese had only to deny them this strategic position on the Bay of Bengal and the British push into Burma would have to rely on the considerably more difficult overland route. The Arakan Campaign is a testimony to the vital importance of obtaining and maintaining air superiority. During the siege of the 'Admin Box' at Sinzweya, the use of air power in the form of air re-supply enabled the British to adopt what one Japanese study of the battle has called cubic tactics. See L Allen, *Burma: The Longest War*, London, 1984, p 170ff. 3. Slim, *Defeat into Victory*, p 544.
4. A contemporary example of such inter-service tensions is the debate over roles and missions between the army and air force taking place in the US Congress.
5. A[ustralian] A[rchives] (Vic), MP729/7, File No 37/42/419, Air Support: Letter from General Blamey to the Minister for the Army, 14/6/41'.
6. Both Blamey and Menzies had been misled by the British over the commitment to Greece. See J Grey, *A Military History of Australia*, Melbourne, 1990, pp 156-57. This may account for the following comment about Churchill made by Menzies: 'Only Churchill's magnificent and courageous leadership compensated for his deplorable strategic sense.' Quoted in B Fergusson (ed). *The Business of War: The Narrative of General Sir John Kennedy*, New York, 1958, p 115.
7. Letter, Blamey to Forde, 14 June 1941.
8. At this stage of the war the Royal Australian Air Force (RAAF) had only one squadron (No 3—equipped with obsolete Gladiator bi-planes) in the Middle East and the RAF was a small, largely obsolete force. The saving grace of the allies in 1940 was that their enemy, the Regia Aeronautica, also had obsolescent equipment and was poorly led See J Terraine, *The Right of the Line*, London, 1985, pp 301ff.
9. Due to government economies, the force structure of the RAAF did not reflect the variety of roles it performed. Only in the late 1930s did it acquire some types for specialist roles such as Army or Navy cooperation, air combat and bombers. See C Coulthard-Clark, *The Third Brother*, Sydney, 1991, pp 186ff. Also A Stephens, *Power Plus Attitude*, Canberra, 1992, chapter 2.
10. Grey, *Military History of Australia*, p 143.
11. See J McCarthy, *Australia and Imperial Defence 1918-1939*, St Lucia, Queensland, 1976, pp 34-43.
12. Stephens, *Power Plus Attitude*, p 35.
13. For the RAF's numbers see Terraine, *The Right of the Line*, p 331. The figure of 23 squadrons was put in a cable drafted by Rowell and sent to the Australian Government on 9 and 10 March 1941. Cable AD 466/G, A[ustralian] W[ar] M[emorial], AWM 534/1 /29, and Blamey Papers 2A7.
14. I Chapman, *Iven Mackay: Citizen and Soldier*, Melbourne, 1975, p 224, gives figures for German air attacks on Australian positions at the Servia Pass totalling 215 sorties for one day between the hours of 6.30 am and 7.30 pm.
15. *Ibid*, pp 224-25.
16. The British novelist, Roald Dahl, then a young RAF fighter pilot, records his experiences in Greece in *Going Solo*, London, 1986.
17. Terraine, *The Right of the Line*, p 331.

18. Ibid, p 332.
19. AA (Vic), MP 729/7, File No 37/42/419, 'Air Support For The Army, 20/9/41'.
20. For a discussion of this period see RJ Overy, 'Air Power and the Origins of Deterrent Theory Before 1939', *Journal of Strategic Studies* 15: 1 (March 1992), pp 73-101.
21. See P Kennedy, 'British "Net Assessment" and the Coming of the Second World War, 1935-41', in A Millett & W Murray, *Calculations: Net assessment and the Coming of World War II*, New York, 1992, p 35. Such a multipolar international milieu made strategic assessment difficult. Military thinking is conditioned by the nature and capabilities of identified threats, which become the basis for planning force structures, doctrine and training. For example, from the mid-1930s, following the emergence of Nazi Germany, the British developed radar and fast interceptor fighters against the perceived threat of the Luftwaffe and air defence became an important factor in RAF doctrine and force structure.
22. B Bond, *British Military Policy between the Two World Wars*, London, 1980, p 322.
23. P[ublic] R[ecord] O[ffice], CAB 21/903, 'Bomber Support for the Army', 18 November 1939, cited by W Murray, *Luftwaffe*, London, 1985, p 294.
24. Bond, *British Military Policy*, pp 322-23.
25. Cited in J Connell, *Wavell: Scholar and Soldier*, London, 1965, pp 204-5. Bond, *British Military Policy*, pp 322-23, provides evidence to support Wavell's impressions, noting 'Air Vice Marshal Capel recalled that, during his time as Commandant of the School of Army cooperation at Old Sarum from 1936-38, there was very little if any instruction in close support tactics. Nor did he recall any pressure being brought to bear by the Air Ministry or the War Office for the provision of such instruction'.
26. B Bond and W Murray, 'The British Armed Forces, 1916-39', in A Millett & W Murray, *Military Effectiveness: The Inter-War Period*, London, 1988, p 122.
27. Cited by M Dean, *The Royal Air Force and Two World Wars*, London, 1979, p 305.
28. D Divine, *The Broken Wing*, London, 1966, p 207.
29. Bond, *British Military Policy*, p 323.
30. AJP Taylor, 'Boom and Bombs', in C Wrigley, *Front the Boer War to the Cold War*, London, 1995, p 373. A military expedition would have cost £500,000.
31. See G Till, 'The Strategic Interface: The Navy and the Air Force in the Defence of Britain', *Journal of Strategic Studies* 1 (September 1978), p 183. The Chief of the Imperial General Staff at this time, Sir Henry Wilson, referred to air control operations as a policy of 'Hot Air, Aeroplanes and Arabs'. 32. J Slessor, *The Central Blue*, London, 1956, pp 128-32.
33. See C Carrington, *Soldier at Bomber Command*, London, 1985, p 4. The other author was, appropriately, an Army officer, Lieutenant Colonel Nye.
34. The War Office, *The Employment of Air Forces with the Army in the Field*, London, 1938, p 38. European troops, unlike colonial insurgents, would generally be dug in.
35. J Slessor, *Air Power and Armies*, London, 1936, p vii.
36. Ibid.
37. Ibid, p 90.
38. Ibid, pp 90-91.
39. R Higham, *The Military Intellectuals in Britain: 1918-1939*, Westport, CT, 1966, p 207.
40. The Army, for its part, was not keen on the Continental commitment. Liddell Hart's *The British Way in Warfare* (London, 1932) was a plea against such a commitment.
41. PRO, AIR 5/416, Air Staff Memorandum, 19 July 1923, cited by H Montgomery-Hyde, *British Air Policy Between the Wars*, London, 1976, pp 137-38.
42. It may not be strictly correct to call Trenchard a theorist, but he was not alone in this belief. The primacy of air power as 'a war winner' was the major thesis of air power theorists such as Douhet and Mitchell.
43. Higham, *Military Intellectuals*, p 206, says that Slessor had worked for Trenchard at the Air Ministry in the late 1920s as a writer.
44. For much of the inter-war period the bulk of the RAF's resources were allocated to bomber aircraft. The force structure of the RAF in 1938 comprised 149 squadrons. Forty-nine of these were bomber squadrons and a further 29 were based throughout the empire. See Terraine, *The Right of the Line*, p 67. For the ill feeling between the services see Bond, *British Military Policy*. For example, p 325 notes that Slessor, ironically one of the authors of *EAF*, believed that when the soldier talks about cooperation between the Air Force and the Army, he really means the subordination of the Air Force to the Army'.
45. L Ellis, *The War in France and Flanders, 1939-40*, London, 1953, pp 2-3. 46. Connell, *Wavell*, p 227: signal from Wavell to Dill, 28 April 1940.
47. The loss of Crete can be attributed to the Army's insistence on defending the beaches, when in fact, the island's vital airfields had been the key to German success.
48. R Hallion, *Strike From the Sky*, London, 1989, p 151. At the level of soldiers and airmen there is some evidence of bitterness between the services. For example, among POWs in German camps it was the custom for new inmates to introduce themselves by name and date of capture. When an RAF squadron leader was admitted to a camp hospital later in the war he introduced himself and said 'Greece 41', only to be met by derisive cheers of, 'Hooray! We've met one at last!' See Chapman, Mackey, pp 236-37.
49. AA (Vic), MP 729/7, File No 37/401/362, Cablegram 432 of 10 July 1941.
50. Ibid, Cablegram 518 of 29 July 1941.

51. Connell, *Wavell*, pp 466-87.
52. Air Chief Marshal K Cross, cited by J Johnson & P Lucas, *Courage in the Skies*, London, 1992, p 69.
53. Cited by A Tedder, *With Prejudice*, Boston, 1967, p 169.
54. *Ibid*.
55. Tedder's relationship with Wavell had been clouded by the conflict over air support early in June 1941. However, Wavell had considered Longmore a trusted friend'. See Connell, *Wavell*, p 486.
56. ALOs were selected from experienced officers from the artillery, infantry or armour, who could interpret Army requirements for the air force. See AWM54 85/8/6 Tactical Bulletin No 8, *Army Co-operation Work in the Middle East*, ALO Section, para 56.
57. See Carrington, *Soldier at Bomber Command*, pp 61-71, and Terraine, *The Right of the Line*, p 346.
58. Various diagrammatic representations of this system have been produced. For example, see Hallion, *Strike from the Sky*, p 155, or Terraine, *The Right of the Line*, p 348.
59. Middle East Training Pamphlet (Army & RAF) No 3, *Direct Air Support*, para 3, stated: 'Direct Air Support implies air action having an immediate effect on the action of our ground forces in battle. It can be divided into:
- (a) Pre-arranged support.
 - (b) Impromptu support'.
60. For Coningham's role in this process, see V Orange, *Coningham*, Washington, DC, 1990, chapter 7.
61. Churchill was a difficult, and at times unrealistic task master. Wavell and Longmore also suffered from the weakness of their forces and the difficulties of conducting operations in such a huge theatre as the Middle East. Nevertheless, their removal in rapid succession permitted both the RAF and the Army to make the 'cultural' changes necessary for air support to work.
62. AA (Vic), AA37/421 /419, Cablegram 19258 of 27 September 1941.
63. Tedder, *With Prejudice*, p 123.
64. R Spiller, 'The Tenth Imperative', *Military Review* LXXIX (April, 1989): 2-13.
65. K Clausewitz, *On War*, trans M Howard & P Paret, Princeton, NJ, 1976, p 517.
66. *Ibid*, pp 134, 136.
67. Current RAAF doctrine is strategically oriented, in the classic air power mode. Even a cursory reading of *The Air Power Manual* and the publication *The Leading Edge* will confirm this view. It is not unreasonable that the air force of an island nation should adopt a strategic outlook, but the influence of this outlook is pervasive in RAAF doctrine. The RAAF, correctly, sees itself in the front-line of any battle for Australia, defending the air-sea gap. As para 4.39 of *The Air Power Manual* says, 'Control of the Air is the prime campaign of the RAAF. First and foremost, the RAAF must be capable of opposing and defeating an air threat Once Control of the Air is achieved. then other priorities can be considered ... [another strategic mission. Air Strike, is then listed with the third and last priority is given to] Air Support—that is, support for land, sea and other air operations'. The problem here is not the thrust of RAAF doctrine, it is the force structure of the RAAF What assets does the air force have which can realistically be expected to be committed to providing CAIRS for the land battle? Royal Australian Air Force, Air Power Studies Centre, *The Air Power Manual*, 2nd ed, Canberra, 1994, p 63.
68. The air re-supply of D Company 6 RAR at Long Tan is sometimes given as an example of the best of inter-service cooperation. The No 9 Sqn resupply action took place in defiance of a ban by 'higher authorities' on the use of aircraft in insecure areas. These 'higher authorities' were the Air Board. The air support of D Company 6 RAR thus took place in defiance of official RAAF policy. It is difficult to believe that the ADF should be at war and one of its services should be operating under a set of regulations framed for peacetime, but that was the case. Another indicator that there was some problem with the degree of cooperation between the services in Vietnam was that RAAF HQ was located 20 kilometres from the HQ of 1 Australian Task Force. See D Horner, *Australian Higher Command in the Vietnam War*, Canberra, 1986.
69. R Beaumont, *Joint Military Operations: A Short History*, London, 1993, p xv.