1980

Corporate Lessons?

Reflections on Some of the Myths, Anti-Myths Omissions of Britain's Falklands Air War, 1982[1]

By Dr David Jordan

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Abstract: Although the Falklands conflict ended forty years ago, it is only in recent years that the release of contemporaneous source material has allowed correction of some of the myths and misperceptions relating to the war. The air campaign has been a particular field of contention. This article does not claim to be comprehensive but provides a short review of some of the key issues pertaining to the air war, beginning by considering the nature of the outbreak of the war and the challenges which faced the employment of British air power. It then considers use of Vulcan bombers to attack the runway at Port Stanley airfield in the broader operational context before briefly examining the part played by British carrier-based aircraft and the nature of Argentine air power. It offers a commentary upon aspects of the air war which have been largely missed out from the narrative to date, before concluding with reflections on some of the lessons which emerged from the war, noting that the Falklands conflict demonstrated the risks of a mismatch between the ambition to exercise national power on a wider stage and the capability to actually do so.

Introduction

On 2 April 1982, Argentina invaded the Falkland Islands, a British dependent territory almost 8,000 miles away from London, and a mere 400 miles from the Argentine coast. This was the culmination of a long and increasingly bitter dispute over the sovereignty of the islands. Despite much diplomatic effort by both parties to solve the matter, the short war which followed restored British possession of the islands. Although the war was predominantly a land and naval conflict, air power played a distinct and significant role. The history of the Falklands air war was, for many years, dominated by coverage of the Fleet Air Arm's Sea Harrier fighters, the RAF's Vulcan bomber raids against Port Stanley airport and the work of 'Bravo November', the only one of four Chinook helicopters to survive the sinking of the container ship *Atlantic Conveyor*, and which went on to play a notable part in the advance of British forces towards Port Stanley and the ultimate liberation of the islands.

While these aspects of the air war were significant – and in the case of the Sea Harriers, exceptionally important – it has become clear from the release of the Official History and most of the contemporary files that much of the air war has been subject to misunderstanding and misrepresentation, with other parts overlooked.[2] The most recent scholarship, notably that by John Shields, Santiago Rivas and Mairnao Sciaroni, has helped to craft a more nuanced and comprehensive picture.[3] Nevertheless, even forty years after the conflict, the traditional narrative of the air war which was established in the years following 1982 remains well-established. This article seeks to reflect on some of the 'myths and anti-myths' of the air war, considering how the history of the air war has evolved and some of the misperceptions and misreporting that have emerged.

The article first considers the nature of the outbreak of the war, and the challenges which faced the employment of British air power – particularly carrier-based air power – as a result of past decisions that placed money ahead of capability. It then moves on to address perhaps the most persistent 'myth', that associated with the use of Vulcan bombers to attack the runway at Port Stanley airfield under the auspices of Operation Black Buck. Next, it draws attention to recent research regarding the use of the Sea Harrier and Harrier force, highlighting the role not only of the British carrier-based aircraft, but the role of Argentine air power; it suggests that the popular narrative established after 1982 is too simplistic and creates a misleading impression of how complex counter-air campaigns are, something that is only now being redressed by recent scholarship. The article then provides some commentary upon aspects of the air war which have been largely missed out from the narrative to date. Finally, the piece considers some of the lessons which emerged from the war and their implications for British air power, and for the nation's military power more generally, concluding that the Falklands conflict demonstrated the possible risks of a mismatch between the ambition to exercise national power on a wider stage and the capability to actually do so.

Responding to a (Not-So) Unexpected War

Successive British governments had been well aware that the issue of the sovereignty of the

Falkland Islands was an obstacle to good relations with governments in Buenos Aires, which believed that Las Malvinas (as the Argentines term the Falklands) were Argentine territory, colonised by the British and under illegitimate occupation. While the British position was a firm rejection of the Argentine contention, by the 1980s there had long been a desire to find common ground to remove this significant obstacle to UK-Argentine relations. The challenge for British governments was that the inhabitants of the islands were (and remain) proud of their British connections and proved resolute in resisting any diplomatic efforts which might end with the transfer of sovereignty to Argentina. The illiberal nature of governments in Argentina did nothing to encourage support amongst the islanders for a transfer of Sovereignty. British governments respected the islanders' perspective, regarding sovereignty as a matter of self-determination. No matter how frustrating the failure to reach a settlement with the Argentine government was, the islanders' views took precedence. By the middle of 1981, frustration at the Foreign and Commonwealth Office (FCO) over the matter was high. It appeared that the Argentine government might accept a concept referred to as 'leaseback', under which sovereignty would transfer to Buenos Aires, but Britain would administer the islands for many years, with governance finally transitioning to Argentina at some, as then undetermined, date. The islanders were unimpressed with any notions of sovereignty being transferred. The Minister of State at the FCO, Nicholas Ridley, raised the idea during a visit to the islands in November 1980, but on his return to Britain, his attempt to persuade the House of Commons that leaseback was the way forward, was assailed from all sides.[4] It seemed leaseback had been killed off, but it appeared to be the only viable option available to secure a negotiated outcome.

In June 1981, Ridley convened a meeting of FCO officials to discuss the issue. Anthony Williams, British ambassador to Argentina and John Ure, Assistant Under-Secretary of State at the FCO, both observed that the Argentines were frustrated over the lack of a solution.[5] The Governor of the islands, Rex Hunt, made clear the islanders' opposition to Argentine sovereignty. The archives give the impression of an air of gloom amongst those at the meeting: British public opinion would not support going against the wishes of the islanders (although this was not the intention of the government), but it was obvious that the position was worsening. Aware that the matter provoked nationalist sentiment in Argentina, Ambassador Williams outlined his view that the Argentines would become more intransigent, even venturing that the likelihood of a 'mad General or Admiral' invading the islands was increasing, and although the move to this dramatic situation would take perhaps five or six years to eventuate, the process towards it, once started, 'might be difficult to stop'.[6]

Less than a year after this meeting, Britain had fought and won a war against the 'mad' General who had indeed taken military action against the islands, although 'desperate' might have been a fairer word than 'mad'. The military government in Buenos Aires faced numerous problems: the economy was in a mess, the regime's abysmal record on human rights had not gone unnoticed and public support was in decline. Mass arrests and 'disappearing' of dissenters could not stem this tide. Already seized by the idea of achieving sovereignty by 1983,

the 150th anniversary of Britain taking control of the islands, the Argentine junta saw obvious political benefits of invading Las Malvinas, which became irresistible.

Part of the attraction for the junta lay in the belief that there would be little that the British could, or would, do in response. The defence of the Falkland Islands was not a high priority for the UK, particularly in a period when the main threat came from the Soviet Union. Britain's economy had been in a poor state for some years, and defence spending had been the inevitable target for cutbacks in public expenditure. From the late 1960s, a series of defence reviews had reduced commitments outside the NATO area and focused defence efforts upon Europe. In 1981, the Secretary of State for Defence, John Nott, launched another review, driven by the need to bring an unsustainable defence budget under control.[7] The Royal Navy bore the brunt of the defence cuts, most notably the decision to reduce the number of aircraft carriers from three to two.

By 1981, Britain's recent history when it came to aircraft carriers was perhaps most charitably described as 'unfortunate'. In 1966, the Royal Navy's projected new carrier programme, the CVA-01, had been cancelled as part of a series of defence cuts imposed as part of attempts to address Britain's chronic economic problems. The Defence White Paper announcing the cancellation declared:

> Experience and study have shown that only one type of operation exists for which carriers and carrier-borne aircraft would be indispensable: that is the landing, or withdrawal, of troops against sophisticated opposition outside the range of land-based air cover.[8]

The implication was clear: that the only operation which the carriers were required for was not one that the United Kingdom would carry out, at least not alongside the United States.

After a short hiatus the Royal Navy concluded that it could not operate without some sort of organic air cover. Fortunately, an option existed in the form of exploiting the vertical/short take off and landing (V/STOL) capability of the Hawker Siddeley Harrier which had entered RAF service in 1969. A maritime version of the Harrier was ordered to provide some air cover based aboard 'through deck cruisers'. While these were presented as being an anti-submarine warfare (ASW) asset, cynics referred to the new ships as 'see through cruisers', since they were evidently small aircraft carriers in all but name. The decision to order three of the new ships brought an end to the subterfuge over nomenclature, with the vessels being classified as ASW carriers (CVS). The air wing would consist of a handful of Sea Harriers and Sea King helicopters.

Although the Sea Harrier was relatively limited as an air defence aircraft, with a basic radar, two AIM-9 Sidewinder missiles and two 30 mm cannon, it was thought that this would be quite enough as the *Invincible*-class carriers would operate as part of coalition forces, with the implication being that these would include US Naval air power. It would be the USN carriers

which provided airborne early warning (AEW) and long-range attack capability for this naval force. The new carriers, therefore, offered significantly less capability than their predecessors, but were seen as being adequate for the task. Three ships were ordered to allow two to be at sea, or readily available for deployment at any time, with the third being in overhaul or refit. Nott decided that only two carriers were required. Despite protests that the cuts to the Royal Navy went too far, Nott was unmoved.

Nott also decided that the patrol ship HMS *Endurance* should be withdrawn from service, leaving the South Atlantic without a permanent naval presence. Nott argued that *Endurance* was of little utility as a deterrent since the ship possessed little in the way of credible capability. While *Endurance* had not been withdrawn by early 1982, the decision to remove a permanent naval presence was seen by the Argentine junta as another sign of Britain's lack of interest in defending the islands. The presence of a small garrison of Royal Marines, Naval Party 8901, did not act as any form of deterrent to the Argentines. The only potential alternative to the presence of *Endurance* would have been to extend the airfield at Port Stanley and to station aircraft there on a permanent basis. This would have been a significant expense, almost certainly requiring the RAF to buy more combat aircraft to meet the commitment and diametrically opposed to the intent of using the review to cut costs.

The lack of any form of deterrent capability in or around the Falklands was not seen as an issue as despite the difficult relationship with the Argentines and the concerns expressed at the Foreign Office conference on the future of the islands, there was no evidence that the 'mad general' scenario was going to be fulfilled in the near future, if at all.

The focus of British intelligence agencies was largely on the threat presented by the Soviet Union, and information regarding the Argentines and their intentions was at best imprecise; indeed, Nott did not recall receiving specific intelligence information about the islands until it was far too late to make contingency plans to defend them.[9]

Doubts over British resolve seemed confirmed when a party of Argentine scrap metal merchants made an illegal landing on South Georgia on 20 December 1981, before returning in 19 March 1982.[10] Although the British government made protests and sought to remove the scrap dealers by dispatching a party of Royal Marines to evict them from the islands, the measured reaction to the incident confirmed suspicions that the Argentine forces would not meet with a vigorous response if they took the Falklands and presented Mrs Thatcher's government with a *fait accompli*.

Alarming reports of Argentine shipping movements began to be received in both Port Stanley and London in the final days of March 1982, and it became very clear that the 'mad General' scenario discussed at the FCO meeting in 1981 was about to become reality. Military planning for a response to an invasion began immediately, but the realisation that the distances

involved in despatching armed forces were formidable led to an air of pessimism that anything other than diplomacy could be tried. The Prime Minister, Margaret Thatcher, was not given to indecision, and her initial view was that Britain had to respond, if necessary with force, to evict the Argentines. Some of her advisers felt this to be unrealistic. This was not the case with Admiral Sir Henry Leach, the First Sea Lord who, on the evening of 31 March, returned to London from an event in Portsmouth and found signals on his desk reporting the deteriorating situation in the South Atlantic. Still in full dress uniform, he went to the House of Commons, and found Mrs Thatcher, Defence Secretary Nott and various other officials in the Prime Minister's office debating what to do. Leach informed the Prime Minister that he felt that there was no option for Britain other than to respond militarily, that the Royal Navy could provide the means of response, which could extend to launching an assault to evict the Argentines if diplomacy failed. His cautionary words that 'Britain would be a very different place, a country whose word would mean nothing' were a robust response not forthcoming appealed to the Prime Minister. Although Nott expressed some reservations regarding Leach's analysis, the decision to prepare a Task Force was taken. Yet some of the practical difficulties were still not understood by the Prime Minister. Leach later recalled:

> Amongst a whole host of questions that the Prime Minister put to me, one was, 'How long would it take to assemble the taskforce'. To which I replied that apart from merchant ships…, '48 hours'. She followed that up with a really remarkable question: she said, 'And how long will it take them to get down there?' And I said, 'Three weeks'. And she said, 'Three weeks? You mean three days'! I said, 'No, it is 8,000 miles' and I don't think she had any appreciation of how far off it was and hence how far away from any form of base, and this was a matter of some significance.[11]

The challenges presented by the distance away from the United Kingdom or any forward operating base were significant, particularly for the Royal Air Force.

How, then, was British air power employed during the war?

The Empire Strikes Back: British Air Power at War[12]

The Falklands are approximately 8,000 miles from the United Kingdom, and the nearest RAF airfields to the South Atlantic were to be found in the former British colony of Belize and on Ascension Island, 4,400 and 3,400 miles from the islands respectively. Belize was too far from the Falklands to be of any great utility. Ascension Island was more promising. The airfield had been built under the auspices of the Lend-Lease agreement between the UK and US during the Second World War. British government lawyers pored over the agreement to confirm that the airfield could be used without an American veto, swiftly concluding that it could.[13] Ascension fulfilled the vital role of staging post, and as a base for refuelling tankers, maritime patrol aircraft and as the launch point for attacks by Vulcan bombers, it was essential. Nonetheless, the only means of delivering air power able to operate near the Falklands was via aircraft carriers.

Although Nott's 1981 Defence Review envisaged the withdrawal of HMS *Invincible* and its sale to the Royal Australian Navy in around 1983, he did not intend to leave the Royal Navy without carriers. Something of a post-war myth seems to have evolved in popular narratives about the Nott Review, in which it is held that had the Argentines invaded later in the year, there would have been no carriers to bring air power to bear during the war and that without carrier-based air power, there would have been no possibility of retaking the islands.

In reality, Nott's plan would not have had this effect. The carrier HMS *Hermes*, which had begun life as a conventional aircraft carrier, had been retained in service, initially as a 'Commando Carrier' to support amphibious operations, and then refitted to operate both Sea Harriers and ASW helicopters as an anti-submarine carrier, presaging the role that the *Invincibles* would perform.[14] Under Nott's plan, *Invincible* would be sold when the second CVS (HMS *Illustrious*) entered service in late 1982, while *Hermes* would continue until the third CVS (*Ark Royal*) joined the fleet two years later. *Hermes* would then be retired, and the two-carrier fleet would progress with two almost brand-new ships.

Hermes's great advantage in terms of operating in the South Atlantic in 1982 lay in its being larger than *Invincible*, and thus able to carry more aircraft. This increased the number of Sea Harriers which could be deployed. Although *Invincible* and *Hermes* in fact went to war with more Sea Harriers aboard than had been envisaged, this required the displacement of some helicopters to other ships in the Task Force. More importantly, the small Sea Harrier force available meant that almost all of it had to be despatched to support operations in the South Atlantic.

In the absence of AEW, and with only twenty Sea Harriers immediately available to deploy, the Task Force had to ensure that its key air defence fighter was carefully handled to reduce attrition. This contributed to a desire to avoid exposing the Sea Harriers to unnecessary risks before the Task Force came within range of the Falklands and had major implications for another aspect of the use of air power, namely the decision to use the Avro Vulcan to strike the airfield at Port Stanley.

This decision is perhaps the most persistent and in some ways pernicious myth regarding the war. Portrayed by detractors of the Royal Air Force as being a sign of the RAF's desperation to get involved (despite being heavily involved from the outset), resulting in a series of attacks which burned a great deal of fuel for the sum total of five raids getting a single bomb on target. The nature of the raids has been covered by this author and John Shields in a previous piece in *RAF Air Power Review*, but it is worth examining the reality – the 'anti-myth' – of the background to the raids again to drive home the point that Operation Black Buck was a far more 'joint' approach and that the most enthusiastic proponents of using an aging long-range bomber were initially senior Royal Navy officers who converted a sceptical Chief of the Air Staff to their position.[15]

Hitting Back

The reality of Operation Black Buck lies in the fact that planning for the use of air power in any fighting with Argentina began on 31 March 1982. British planners appreciated the limitations caused by the distance between the UK and the islands, their initial appreciation concluding that reaching the islands using anything other than carrier-based aircraft would be extremely difficult. Only Ascension Island could be used to support land-based air attacks against the Falklands, and this would demand extensive air refuelling just to get a small number of bombers – probably just one – to the islands. Even more tanking would be required to get back to Ascension, and it seemed that the only answer would be to have the attacking aircraft land somewhere in South America. This, of course, was not credible, and the planners concluded that: 'in the likely event of denial of use of airfields in South America, air attacks on Argentine targets are not feasible'.[16] The one feasible – and unintended – benefit which derived from the RAF possessing the Vulcan, even if the type was in the process of being retired, was the doubt sown in the minds of the Argentines after mischievous reporting suggested that there might be raids against the Argentine mainland. A rather harassed sounding British ambassador to Chile, John Heath, reported:

> We have been approached today by a number of reporters…for comments on a story allegedly printed in the 'Daily Star' which talk of a secret Anglo-Chilean deal under which Punta Arenas would be used by RAF Vulcans in return for sales of RAF Hunters to the Chilean Air Force…
>
> …No doubt you will wish to consider whether a word in the right place might discourage similar trouble-making.[17]

As their analysis of the situation unfolded, the Chiefs of Staff agreed that the airfield at Port Stanley was a major threat to operations and that some effort must be made to impede Argentine use of the airstrip, both as a means of flying in supplies, and, more importantly, as a possible base for air attacks against the Task Force. Concluding that the airfield 'constrains all our operations', the Chiefs of Staff considered various means of disrupting the Argentine use of the airfield.[18] It was concluded that bombing the airfield was the best option, although the Chief of the Air Staff, Sir Michael Beetham, pointed out that the chances of shutting the airfield completely were very low.[19] He also suggested that while there were some benefits to employing the Vulcan, the Sea Harrier would be a much better choice for attacking the runway, given its significantly more modern avionics. Beetham was also worried that the Vulcan's relatively basic weapons system meant that there was a risk of bombs landing in Port Stanley itself, rather than within the confines of the airstrip.[20] The need to conserve the Sea Harriers trumped this concern, though, and as Sir Henry Leach pointed out, it was vital to keep the Sea Harriers in reserve to cover the landing operation.[21] The Vulcan was thus chosen as the tool for making the first major riposte to the Argentine forces in the Falklands under the auspices of Operation Black Buck.

Although the first attack was delayed until 1 May 1982, thus coinciding with the arrival of the Task Force within range of the islands rather than preceding it as the Chiefs of Staff had originally planned, a single bomb struck the runway centreline. While it did not close the runway to transport flights, the airfield was denied as a forward operating location for Argentine combat aircraft, and the crater caused by the bomb ensured that the air resupply flights were unable to carry anything other than a relatively light load of cargo as they would otherwise have broken through the top of the in-filled crater as they landed. This might not have been important had the Argentine navy been able to maintain supplies by sea, but after the sinking of the cruiser *Belgrano* on 2 May 1982, the Argentine fleet did not venture out to sea, leaving the Falklands garrison reliant upon the limited aerial resupply.[22] It is important to note that the Chiefs of Staff, thanks to Beetham's explanation of the limitations of the Vulcan, were under no illusions about the chances of closing the runway for the duration of the war. This was reflected in the realistic nature of Air Operation Order 3/82, making clear that Operation Black Buck was to 'impede' enemy operations.[23] Through two bombing raids and two Suppression of Enemy Air Defence sorties, the Vulcans did exactly that.[24]

Controlling the Air

Impeding air operations from Stanley also formed a part of the important effort to ensure that some degree of control of the air was achieved. Without AEW, the risk to the carriers was increased, prompting Admiral 'Sandy' Woodward, commanding the Task Force, to position *Invincible* and *Hermes* as far to the east as he could, at maximum range from the Argentine mainland bases as was practicable. This meant that the Sea Harriers were limited in the amount of time that they could stay on patrol. Some commentators rather waspishly suggested that the carriers were so far to the East that the crews should have been awarded the Burma Star rather than the South Atlantic Medal, although this was intended as banter.

Nevertheless, the need to ensure that the risk to the carriers was reduced as much as possible meant that they were compelled to operate further away than was ideal because of the lack of AEW capability. Although there had been some thought given to the provision of a helicopter-carried AEW system, there had been little progress on the matter, since it did not appear to be a priority. As noted above, thinking held that AEW capability in a war against the USSR would come from the US Navy carriers which the CVS would be operating alongside, while the radar aboard anti-air warfare ships would be sufficient in all other scenarios. This, of course, was disproven during Operation Corporate.

The greatest concern for the British Chiefs of Staff regarding air power lay in the small number of Sea Harriers available. By 21 May 1982, the day of the British landings at San Carlos, two of their number had been lost in a presumed mid-air collision, while a third was shot down by ground fire during an attack on the airstrip at Goose Green. All three pilots were killed.[25] The Sea Harriers had already demonstrated their capabilities on 1 May, shooting down three

Argentine aircraft and damaging two others.[26] More success occurred on 21 May, with seven Argentine aircraft being lost.[27] Nevertheless, concern over the potential fragility of the Sea Harrier force in the face of an Argentine counter-air effort (which did not, in fact, materialise) remained.

In a bid to maintain force size, eight more Sea Harriers were despatched aboard the container ship *Atlantic Conveyor* (sunk by an Exocet on 25 May), as part of the newly-formed 809 Squadron, but these aircraft only flew across to *HMS Hermes* on 18 May. In recognition that this uplift in aircraft numbers might prove inadequate, a contingency plan using the RAF's Harrier GR3s had been drawn up, with the aircraft of Number 1 Squadron being fitted for the carriage of the AIM-9 Sidewinder to allow them to act as fighters.[28] The difficulty here was that the RAF Harriers were used in a purely air-to-ground role, and the pilots had little opportunity to hone their air combat skills before deploying, although some useful training with the French was possible. As it transpired, the lack of a serious Argentine counter-air effort meant that losses to the Sea Harrier force were not as high as feared, and the Harriers were used in their normal offensive support role.

The integration of the Harrier GR3s aboard *Hermes* was not as smooth as it might have been. The pilots of 1 Squadron found that the planning process aboard the carrier was not as effective as that they were used to and that their presence was resented by the ship's captain, who regarded the deployment of the Harriers as 'an RAF publicity stunt'.[29] Also, the number of engineering staff embarked for 1 Squadron was inadequate to meet demand, placing additional burdens upon an over-stretched (but uncomplaining) team of RN aircraft maintainers who had to assist in the generation of Harrier sorties. This created a level of unnecessary tension, as well as creating difficulties in mission planning; although the after-action report by 38 Group was pessimistic in tone, concluding: 'it is remarkable that No [Number] 1 Squadron achieved any success at all', the Harrier GR3s did make some notable contributions to the air war, most notably in providing air support at a critical moment during the Battle for Goose Green.[30]

In some ways, then, the British were fortunate. The Sea Harrier performed far more effectively than some critics had suggested, but the small force size meant that there was little resilience in a critical asset for defending the Task Force. The task was made a little easier – although it was still far from straightforward and called upon all the skills of the Sea Harrier force – by the nature of the air opposition faced.

The Opposition – A Missing Factor?

There is little doubt in the popular perception that the Task Force faced a brave, determined group of Argentine pilots, but they were arguably also a disorganised enemy which failed to use its limited assets to contest control of the air adequately.[31] As John Shields's research in particular demonstrates, the Argentines created needless logistical and technical difficulties for themselves by their basing policy for combat aircraft and a woeful failure in finding the Task Force, thus leading to many sorties simply not locating their intended targets.[32]

Perhaps the greatest challenge facing the Argentines was that they had not expected to be forced to fight for control of the islands. The Junta's vision for de-escalation of the crisis ended with the British reluctantly accepting the change of sovereignty over the islands. While the Malvinas had been a long-standing irritation for successive Argentine governments, no planning had been made to fight the British for control. As observed above, the notion that the United Kingdom would send forces some 8,000 miles to fight over a disputed territory in which they had shown little interest for decades seemed implausible. The junta was left having to fight the air war that it could, rather than the air war which it might have liked.

The Argentine air services, the *Fuerza Aérea Argentina* (FAA) and the *Comando de Aviación Naval* (COAN), possessed ten different combat types in 1982. Intelligence assessments suggested that the squadrons were well-manned, with well-motivated and proficient aircrew.[33] The 1981 annual report from the British Air Attaché in Buenos Aires observed that although FAA and COAN had a number of equipment weaknesses, 'they would make dangerous enemies.'[34]

The mainstay of Argentine air capability was the McDonnell Douglas A-4 Skyhawk. Over 90 had been bought from 1966 onwards, with 16 being employed by the COAN as the main aircraft aboard their carrier, *ARA Veinticinco de Mayo*.[35] By 1982 attrition had reduced the Skyhawk fleet to 49 airframes and only eight of these were in COAN service. All the Argentine A-4s were verging on obsolescence, as a combination of lack of finances and sanctions against the military government had impeded attempts to upgrade the aircraft. The sanctions against the Junta had a knock-on effect in terms of availability of spare parts from the United States, and a number of ejection seats were beyond their specified life, a situation which may well have been responsible for the deaths of several pilots both before and during the conflict as the seats did not function as intended.[36] In numerical terms, the next most important Argentine attack asset came in the form of the 39 IAI Daggers – the Israeli copy of the French-designed Mirage V.[37] While the Daggers were not affected by sanctions, many pilots were relatively inexperienced on type. More problematically for the Argentines, the separation between the responsibilities of the COAN and the FAA meant that the bulk of their attack aircraft were operated by the service which had no responsibility for anti-surface warfare. The FAA Skyhawk and Dagger pilots largely had to learn 'on the job'.

The FAA could also call upon the English Electric Canberra bomber. The Canberra had entered RAF service in the early 1950s and had been a major export success. The Canberra's capabilities had seen the Argentines attempt to purchase the type in 1955, with one eye on the possibility of tensions with neighbouring states escalating into war but concerns that the type might be used against the Falklands or British interests in Antarctica led to the procurement stalling.[38] Twelve second-hand examples were finally procured in the early 1970s, at a time when the RAF were retiring the Canberra in favour of more modern aircraft better able to cope with the likely air defences which would be encountered in a war with the Soviet Union.

The last significant combat aircraft available to the Argentines was the Dassault Super Etendard, the only aircraft in their inventory which could carry a precision attack weapon, in the form of the Exocet anti-shipping missile. In late 1979, the COAN ordered the aircraft to replace the A-4Q as the Skyhawk force numbers declined.[39] The first five aircraft and five Exocet missiles were delivered in November 1981, but the outbreak of hostilities with Britain saw the next batch of five aircraft, along with another five missiles, embargoed by the French government. Tactical training on the aircraft, and particularly in the use of the Exocet was, at that point, relatively limited.[40] In response to these sanctions, the COAN chose to use one aircraft as a spare source to ensure that the remaining airframes would be combat-ready.

The embargo forced the COAN to withdraw one of the five aircraft from use, and to employ it as a 'Christmas tree' to provide spares for the remaining airframes. The Super Etendard/Exocet combination appeared to offer a significant threat to the British Task Force when it arrived off the islands, but the question was whether the small force would be able to make a telling blow with its limited number of weapons. The British government was not prepared to take the chance, and embarked upon an extensive effort to ensure that supplies of more Exocets would not reach Argentina from third parties sympathetic to their cause.

The final aircraft type to be considered when examining the capability of the Argentines to escalate from a *coup de main* occupation of the Falklands to fighting the British is the Dassault Mirage III fighter. They were based near the Argentine capital Buenos Aires and when the conflict began had two primary duties. Argentine concerns that the RAF's Vulcans might hit mainland targets were sufficient to persuade them that 4 Mirage IIIs should be retained for the air defence of the capital, while another 12 were forward deployed. Three of these twelve were retained purely for homeland defence, while the remaining nine were sent to Rio Gallegos from where they would be used over the islands.[41] The Mirage force faced a number of challenges. Its size meant that it lacked resilience, and not all of the aircraft had been modified to use the Matra R550 Magic infra-red homing missile (a French-made equivalent to the AIM-9 Sidewinder used by the Sea Harriers). Those which were unmodified had to rely upon the older Matra R530, a weapon which the Israeli Air Force had employed in combat and found utterly wanting against opposing fighter aircraft. To compound all of these problems, the Mirage IIIs did not have an air-to-air refuelling capability, ensuring that there was little opportunity to loiter over the Falklands in a bid to contest control of the air with the Sea Harriers. The failure to consider the benefits of at least upgrading Port Stanley airfield as a forward operating base was the final limiting factor in reducing the Mirage III's utility.

In addition to the limitations of the various Argentine aircraft, one of the greatest challenges faced was that of obtaining precise targeting information prior to the arrival of the Task Force in San Carlos water. That at least concentrated the British ships in a known location where they could be attacked, but prior to that, the Argentines were at a significant disadvantage. They possessed only a small number of maritime patrol aircraft (MPA), in the form of the Lockheed P-2 Neptune and the Grumman S-2E Tracker, the latter being carrier capable.

Argentine doctrine laid down that the P-2 and S-2, as maritime patrol aircraft, were dedicated only to maritime warfare, which was the responsibility of the navy alone. This ensured that there had been almost no cooperation between the COAN and the FAA to ensure effective integration of the targeting assets (the MPA) and the attack aircraft (predominantly from the FAA). Only two P-2s were airworthy at the start of the conflict, and by 15 May, they had proved so troublesome that the COAN withdrew them from service as a combination of reliability problems and concerns about their vulnerability to the Sea Harrier drove the COAN to conclude that the Neptunes were more trouble than they were worth.[42] Following the sinking of the cruiser *General Belgrano* by *HMS Conqueror* on 2 May, the Argentine Navy chose to remain in port, which at least allowed five S-2Es to be transferred to Rio Grande in a bid to restore the missing reconnaissance and targeting capability. This did not, in reality, avail the Argentines of much.

The Trackers flew three missions on 20 May to the northwest of the Falkland Islands. The sole success occurred on one of these three sorties, when radar emissions from the British fleet were intercepted. Unfortunately for the Argentines, the S-2s were operating at the limits of their endurance and were unable to get within radar range to obtain information which might have allowed an attack against the Task Force to be launched.[43] This lack of capability was understood by the COAN, which managed to obtain two Embraer EMB-111A Banderiante patrol aircraft from Brazil in early May. Although they had greater range than the Tracker, the Banderiantes were only ready for operations on 22 May, the day after the Task Force had entered San Carlos water and landed the British amphibious force. The opportunity to find the British and to attempt to inflict losses on the invasion force before it had landed had been lost.[44] The FAA and COAN were compelled to attack the amphibious force as it put men and materiel ashore, with the concomitant problem that this required delivering unguided ordnance in the face of heavy fire from the ships and with the constant risk of the Sea Harrier combat air patrols intercepting the attacking aircraft; while the landings placed the British ships in a known location, they also mitigated the lack of AEW to an extent, since the Sea Harrier pilots had a very good idea of where they would be likely to find enemy aircraft to engage and could be vectored against targets by the effective fighter direction provided by the RN's warships.

No Sea Harriers were lost in air-to-air combat, and their losses were not as great as had first been feared. The experience of 1 Squadron, with numerous instances of damage to airframes from ground fire and the loss of four aircraft, hinted at 'what might have been'. The decision to deploy the Harriers was, therefore, not a publicity stunt or a mere token, but a sensible piece of planning which bore some fruit. Although the GR3s were not required in the emergency air defence role, their presence removed some of the burden from the Sea Harrier force and brought experienced ground attack pilots to the operational theatre. It was a great pity that a lack of 'jointery' ensured that the Harrier pilots felt that they were mis-tasked and a reflection upon the fact that the series of defence cuts in the late 1960s and up until 1981 ensured that almost no thought had been given to maximising the potential of the Sea Harrier and Harrier GR3 by conducting operations from the RN carriers. Speculation as to what might

have been achieved with greater understanding between the RN and RAF – a casualty of the bitter internecine warfare between the two services in the 1960s – is pointless, but it does not seem unreasonable to suggest that another 'anti-myth' of the war, demonstrated by the Sea Harriers and Harriers, was that Field Marshal Montgomery's contention that 'knitting together' of forces to deliver effective air power was far from misplaced, and that the lesson was 'unlearned' during the Cold War period as the RN and RAF fell into bureaucratic wrangling over budgets and capabilities.[45] A further illustration of the danger of inter-service disputes and parochialism was provided by the Argentines with their clear delineation of service responsibilities, leaving the FAA attack pilots little opportunity to practice attacking enemy shipping.

A Missing Link - Air Mobility

Another of the key factors which is largely omitted from consideration of the air war is that of air mobility. The RAF's use of its VC10 and C-130 Hercules force is largely missing from current considerations of the British air effort in 1982, while the work of the Victor air-to-air refuelling tankers is usually dealt with in terms of support to Operation Black Buck. This is unfortunate, as a number of key lessons emerged from the experiences of the RAF air mobility force and the work of the helicopters of all three British services. A proper analysis of the latter elements is still lacking 40 years after the war, and history is served largely by accounts of the work of the one RAF Chinook (the famed 'Bravo November') to survive the loss of the *Atlantic Conveyor* and a few memoirs.[46] The key lesson from the war in terms of support helicopters is arguably that the demand for their services is always far greater than anticipated, a trend which has eventuated throughout Britain's use of military rotorcraft.[47]

There has also been a tendency to take the work of the air transport force (ATF) for granted, yet the efforts made were impressive. The ATF formed an integral part of Britain's response to the Argentine invasion, with the first movement being on 31 March, with a Hercules flying to Gibraltar with equipment for the Royal Fleet Auxiliary (RFA) *Appleleaf*. The plan changed while the Hercules was airborne, and it flew on to Ascension Island to transfer its cargo to *RFA Fort Austin*. By the end of the conflict, the ATF had carried a payload second only in weight to that flown to Berlin during the airlift in 1948-49 during the course of 600 sorties. The air bridge, flying from RAF Brize Norton (VC10s) and RAF Lyneham (Hercules), staged through Gibraltar, Senegal and Gambia, illustrating the vital importance of diplomacy to obtain the rights not only to use facilities but to accommodate 'slip' crews to operate the aircraft. Within a matter of days, the ATF had set up a routine service from the UK to Ascension, although the experience was far from routine. The volume of traffic to Ascension was considerable, and Wideawake Airfield became packed with aircraft to the point that there was almost no available ramp space on occasion.[48]

The ATF suffered from the fact that defence cuts, particularly those in 1975, had seen a reduction in the transport force and from that, the available flying hours and the number of crews.[49] Number 38 Group, controlling the ATF, was forced to seek former Hercules aircrew from

training establishments and ground tours and to post them back to RAF Lyneham to bolster the number of personnel available to meet the demand for cargo flights.

This demand increased as the Task Force approached the Falklands, and the Hercules force commenced regular air dropping of supplies to various ships of that force. This was at the extreme range of the Hercules, requiring the fitment of long-range fuel tanks in the cargo area, which reduced the amount of supplies which could be carried. This drove the decision to fit the Hercules with air-to-air refuelling probes. The first sortie using air-to-air refuelling (AAR) took place on 16 May, with a plan to move from 3 crews qualified in AAR with 2 probe-equipped aircraft at the start to 6 crews and 3 aircraft on 5 June, with up to 20 aircraft being available by the end of June.[50] This presented a problem as it increased the flying hours for the Hercules fleet and an increased risk of fatigue as the crews flew longer sorties. The demand for air dropping of supplies to the Task Force increased, and the two Air Despatch (AD) crews based at Ascension were working for almost the entire day preparing the supply bundles. A third AD team was despatched, and the decision to 'trawl' for Hercules aircrew to increase the number of personnel proved to be a wise and necessary step.

The Air Mobility Force's VC10s conducted 55 aeromedical evacuations, conveying 237 stretcher cases and 448 'walking wounded' back to Ascension Island thence to the UK during the course of the war, as well as flying supplies to the Task Force and medical supplies. Some of the latter were the source of an embarrassing moment when a VC10 taking over a sortie from one which had gone unserviceable did not offload parts for Shrike Missiles which were intended to be transferred to a Hercules and then dropped to *Hermes* for use by 1 Squadron. This meant that a flight carrying medical supplies for the hospital ship *Uganda* landed in Montevideo, capital of neutral Uruguay. In another example of the importance of diplomacy, the potential difficulties caused by this error were dealt with, but the Shrike parts remained in Uruguay, while the RAF tightened procedures so that a similar error could not occur again.[51]

If seeking to draw conclusions from the use of air mobility assets during the Falklands conflict, the most obvious is perhaps the way in which both fixed – and rotary – winged assets seem to have been taken for granted to a degree in terms of the historiography. We might also reasonably note that while the Falklands was, perhaps, exceptional, issues pertaining to the demand placed upon air transport and the difficulties in chartering civilian airlift were notable and still have resonance today. The risk of reducing the air transport force because of no immediately obvious need to expand capacity at short notice remains one to ponder. Finally, we can also contemplate the importance of diplomatic clearances necessary to ensure that the air transport effort could operate smoothly. The diplomatic aspect was also of considerable importance in addressing the unwelcome arrival of the Vulcan flying Black Buck 6 at Rio di Janeiro airport after its refuelling probe broke, necessitating a diversion; the fact that the Brazilian authorities were prepared to allow the aircraft and crew to depart rather than interning the aircrew and impounding the aircraft illustrates the skill with which the negotiations were conducted.[52]

Final Thoughts

Although the phrase 'you fight with what you have, not what you'd like' has many variations is attributed to a range of individuals and almost verges on cliché, it is apposite when considering the events of 1982 and the way in which air power was employed. The Argentine air services found themselves carrying out operations that they were not configured to conduct against an enemy they had never really expected to fight. The British, while better configured for operations in the South Atlantic, still had to rely upon improvisation and adaptation to deliver successful air operations.

The Argentines' ability to confront the Task Force was limited from the outset, and the decision not to deploy their aircraft carrier after the sinking of the *ARA Belgrano* brought many complications. Even had the carrier been used, the COAN force structure was arguably too small to deliver the required outcomes, lacking aircraft and, even more critically, sufficient Exocet missiles to be able to inflict attrition on the Task Force. The need to generate large numbers of attack sorties against the Task Force, and particularly its amphibious vessels meant that the FAA had to be brought in, despite having no training in the anti-shipping role. Both sides found themselves lacking in terms of information. The Argentines were largely unable to locate the Task Force before it arrived off the Falklands thanks to a lack of maritime patrol aircraft, while the British found themselves unable to defend their ships as well as they would have wished as a result of a lack of early warning. While expedients were adopted to mitigate this issue, they were not sufficient. The deficiencies in provision of early warning were subsequently mitigated by the UK with the employment of the Sea King AEW2 (and later ASaC 7) and the procurement of the E-3 Sentry with an AAR capability that provided much greater flexibility in terms of employment and basing than the Shackleton AEW2 could ever have done. Forty years later, though, the UK finds itself again in a position where observers worry whether the planned purchase of three E-7 Wedgetail aircraft and the relatively short service life intended for the RN's Crowsnest AEW system will leave the country deficient in a vital capability again, even if the potential of uncrewed systems and satellites to act as a force multiplier must now be factored into considerations.

The conflict also illustrated the vital contribution to logistics. The Argentine logistic plan became almost entirely reliant upon aircraft delivering supplies to Port Stanley. The crater caused by Black Buck One, while given a temporary repair, made it impossible for the small transport force operated by the Argentines to bring in enough supplies. While the UK was in a much happier position in terms of airframe numbers, the distances over which the Air Mobility Force was compelled to operate were brought into sharp focus. The provision of AAR capability for the Hercules was a vital addition, but the increase in endurance the probes gave to the aircraft presented a challenge in terms of crew fatigue. The need to have a large enough mobility force to meet demands and a sufficient number of personnel – be that aircrew, maintainers or air despatchers – to operate it was demonstrated most clearly. Forty years on, while the RAF possesses a much greater range of capability thanks to the C-17 and A400M Atlas, airframe numbers have reduced, with the retirement of the remaining Hercules

aircraft potentially creating a situation where the UK finds itself with insufficient assets to meet demand. While the Falklands demonstrated the value of charter aircraft, particularly in the form of the Shorts Belfast (retired from RAF service and sold in 1976 thanks to defence cuts), later experiences which saw nations competing for charter aircraft illustrated the fact that there is a delicate balance to be achieved and possessing a degree of robustness in the transport fleet while not necessarily looking efficient on a balance sheet can be a vital factor when fighting a war.

The war also demonstrated the value of joint planning – recognised by the subsequent formation of Permanent Joint Headquarters – but also of the potential synergies which using carrier and land-based aircraft could bring. This was a lesson which had been demonstrated very clearly during the Battle of the Atlantic, but the poisonous relationship that developed between the RN and RAF in the post-war era over maritime aviation, coupled with budgetary pressures which saw the reduction in the size of the maritime patrol fleet, meant that efficiency and effectiveness were not as they might have been during Operation Corporate. Some of the issues were down to personality – the controversial role of Captain Middleton aboard *Hermes* being most obvious – and a failure to think about the command structure. The lack of an experienced air component commander in theatre to coordinate operations brought unnecessary frictions and highlighted the wisdom of creating a joint command structure subsequently.

Also, when thinking about some of the lessons, it is worth observing that the Falklands conflict demonstrated the importance of training and determination alongside effective planning. While the courage of the Argentine pilots is beyond question, their air effort culminated some days before the end of the fighting, while, despite growing fatigue amongst the Sea Harrier and Harrier crews aboard the two carriers, the British air effort continued.[53] Many of the improvisations forced upon the British by circumstance were successful because of the efforts of those flying and maintaining the aircraft involved. Finally, perhaps the greatest lesson – which can be seen from the experience of both sides, albeit in different contexts – is that the grander the scale of the ambition, the greater the scale and range of capabilities that is required, even in circumstances where working with allies and partners alleviates some of the gaps in capability or capacity that might otherwise result. Nations which have ambitions to use power on a wider stage need to make sure that these ambitions are suitably resourced – and for the United Kingdom, the experience of the Falklands is a clear illustration of this, even allowing for the passage of forty years since the fighting ceased.

Notes

[1] The term 'myths and anti-myths' is based upon the title of John Terraine's *The Smoke and the Fire: Myths and Anti-Myths of War, 1861-1945* (London: Sidgwick & Jackson, 1980).
[2] See Sir Lawrence Freedman, *The Official History of the Falklands Campaign, Volume 1: The Origins of the Falklands War* (London: Routledge, 2005) and *The Official History of the Falklands Campaign, Volume 2: War and Diplomacy* (London: Routledge, 2005), which is the definitive

account of the war, demolishing a number of popular/populist myths which developed in the aftermath of the conflict.

[3] See John Shields, *Air Power in the Falklands Conflict: An Operational Level Insight into Air Warfare in the South Atlantic* (Air World, 2021); Santiago Rivas, *Wings Of the Malvinas* (Hikoki Press, 2012) and *Skyhawks Over the South Atlantic: The Argentine Skyhawks in the Falklands/Malvinas War 1982* (Helion & Company, 2019); Mariano Sciarioni, *A Carrier at Risk: Argentinean Aircraft Carrier and Anti-Submarine Operations against Royal Navy's Attack Submarines during the Falklands/Malvinas War, 1982* (Helion & Company, 2019) and *Handbrake! Dassault Super Etendard Fighter Bombers in the Falklands/Malvinas War* (Helion and Company, 2022).

[4] House of Commons, *Debates* (hereafter '*Hansard*'), Volume 995, Columns 128-134, 2 December 1980.

[5] Margaret Thatcher Foundation, **https://www.margaretthatcher.org/document/118468**, 'Draft record of meeting of FCO officials, Falklands Governor Hunt and UK Ambassador to Buenos Aires' 30 June (accessed 9 April 2019).

[6] Ibid.

[7] See Andrew Dorman, Michael Kandiah and Gillian Staerk (eds), 'The Nott Review', Seminar held 20 June 2001, (Institute of Contemporary British History, 2002, **http://www.icbh.ac.uk/witness/nott/**); Andrew Dorman, 'The Nott Review: Dispelling the Myths?', *Defence Studies* 1:3 (2001), 113-121 and John Nott, *Here Today, Gone Tomorrow: Memoirs of an Errant Politician* (London: Politico, 2002).

[8] Command Paper 2901, *Statement on the Defence Estimates, 1966* (London: HMSO, 1966), 10.

[9] See, *inter alia*, The National Archives (TNA) CAB 292/22, 'Transcript of Evidence by Lord Carrington to the Falkland Islands Review Committee, 29 September, 1982); CAB 292/26, 'Transcript of Evidence by John Nott to the Falkland Islands Review Committee, 4 October 1982 and CAB 292/62, 'Falkland Islands Review Committee, Notes of an Oral Evidence Session', 29 December 1982.

[10] See, for example, 'Scrap Metal Merchant's Show of Defiance helped Spark 1982 Conflict', *The Times* February 17 2010, **https://www.thetimes.co.uk/article/scrap-metal-merchants-show-of-defiance-helped-to-spark-1982-conflict-70nfdhqqc23** (accessed 29 March 2022).

[11] Sir Henry Leach in 'The Falklands War', seminar held 5 June 2002 (Centre for Contemporary British History, 2005), 29.

[12] The second Star Wars film (in the original numbering sequence of the canon), 'The Empire Strikes Back' had been released in 1980 to much popular acclaim, and the phrase was adopted in some quarters as a jokey description of the British response.

[13] TNA, PREM 19/615, American Base on Ascension; memo from West Indian and Atlantic Department, 6 April 1982.

[14] *Flight International*, 22 March 1980, 893; *Flight International*, 7 February 1981, 336.

[15] John Shields and David Jordan, 'The Most Daring Raid?', *Royal Air Force Air Power Review*, Vol 21 No 2, (2018).

[16] TNA, FCO 7/4472, note by Capt JT Lord RN for ACDS (Ops) of 1 Apr 82.

[17] TNA, PREM 19 622, telex from John Heath, ambassador to Santiago 27 Apr 82. The RAF Hunters refers to the Hawker Hunter FGA9, a 1950s-vintage fighter-bomber which was still in

RAF service in 1982 for tactical weapons training and with a secondary point air defence role. Hunters were also a key part of the Chilean Air Force order of battle.

[18] TNA, FCO 7/4472. *Chiefs of Staff Meetings*, 20 April 1982.

[19] See MRAF Sir Michael Beetham, in 'The Falklands War', seminar held 5 June 2002 at JSCSC Shrivenham (Transcript in Andrew Dorman, Michael D. Kandiah and Gillian Staerck (eds), The Falklands War, CCBH, 2005), 3; John Shields and David Jordan, 'The Most Daring Raid?', *Royal Air Force Air Power Review*, Vol 21 No 2, (2018), 92-95.

[20] Ibid.

[21] TNA, FCO 7/4472. *Chiefs of Staff Meetings*, 20 April 1982.

[22] Shields and Jordan, 'Most Daring Raid', 105.

[23] TNA, AIR 20/13046. Operation *Corporate* (Falklands Conflict): Vulcan aircraft operations, including Black Buck operations. The second issue of the Operation Order was released on 27 May and the mission aim became, 'to impede the conduct of Argentine Operations in Falkland Islands Area', rather than just the airfield. TNA, AIR 20/13049, Operation *Corporate* (Falklands Conflict): Vulcan aircraft operations, including Black Buck operations.

[24] Shields and Jordan, 'Most Daring Raid', *passim*.

[25] Lt Cdr John Eyton-Jones and Lt Al Curtis in the collision on 6 May, and Lt Nick Taylor during the attack on Goose Green airstrip.

[26] Shields, *Air Power in the Falklands*, 246-247.

[27] Ibid, 247-248.

[28] See David Jordan and John Shields, 'In at the Deep End: RAF Harrier Operations During Operation Corporate, 1982', *RAF Air Power Review*, Vol.21 No.2, 110-129.

[29] See Bob Marston, *Harrier Boys, Volume One – Cold War Through the Falklands, 1969-1990* (London: Grub Street, 2015), 95; Jerry Pook, *RAF Harrier Ground Attack Falklands* (Pen & Sword, 2007), particularly Chapters 17 and 19; 'Squire, Peter (Oral History)', Imperial War Museum sound archive, **https://www.iwm.org.uk/collections/item/object/80025717**, Reel 6; also Shields, *Air Power and the Falklands*, and Jordan and Shields, 'In At the Deep End', *passim*.

[30] TNA, AIR 20/13126, Operation *Corporate* (Falklands Conflict): reports and articles; Harrier aircraft operations; Major General Julian Thompson, comments at RAF Historical Society Seminar 'The RAF in the Falklands Campaign', *RAF Historical Society. Journal 30 – The RAF in the Falklands Campaign* **https://www.rafmuseum.org.uk/documents/research/RAF-Historical-Society-Journals/Journal-30-Seminar-The-Falklands-Campaign.pdf**, 115 (accessed 17 March 2022).

[31] Shields, *Air Power in the Falklands*, Chapters 3, 4 & 5.

[32] Ibid.

[33] TNA DEFE 58/273, Strike Command Intelligence Branch: Operation *Corporate* (Falklands Conflict): Results of Actions Against UK forces; Argentinian Air Defences, May 1982 – October 1985.

[34] TNA, DEFE 68/473, Argentine force capabilities.

[35] R.A. Burden et al, *Falklands – The Air War* (London: Arms and Armour Press, 1986), 39, 116; Santiago Rivas, *Wings of the Malvinas: The Argentine Air War Over the Falklands* (2010: Manchester, Hikoki Publications, 2012), 28. The A-4Q was a refurbished A-4B.

[36] TNA, FCO 7/4566, Falkland Islands conflict: military planning.
[37] A number of sources demonstrate that the FAA pilots referred to their aircraft as the Mirage V, or M5 Dagger, which can cause some confusion over the nomenclature. In Israeli service, the aircraft was known as the Nesher.
[38] TNA, FO 371/103202, *Argentine Air Force 1952*; TNA, FO 371/114053, *Supply of Canberra*.
[39] Burden, *The Air War*, 34; R. Scheina, "Super Etendard; Super Squadron", *US Naval Institute Proceedings*, Volume 109 (1983), 135.
[40] TNA, DEFE 69/1112, *Air Matters*.
[41] Rivas, *Wings of the Malvinas*, 27, 206; Burden, *The Air War*, 144.
[42] Burden, *The Air War*, 48.
[43] Rivas, *Wings of the Malvinas*, 272.
[44] *Ibid*., 276.
[45] Montgomery was, of course, talking about the 'knitting' of the Army and the Air Force, but the point translates to air power in the maritime arena.
[46] For example, Richard Hutchings, *Special Forces Pilot: A Flying Memoir of the Falklands War* (Barnsley: Pen & Sword, 2008) and Harry Benson, *Scram!* (London: Preface Publishing, 2012). The use of ships' helicopters is even less well served, but see Chris Parry, *Down South: A Falklands War Diary* (London: Viking, 2012).
[47] See John Dowling, *RAF Helicopters: The First Twenty Years* (London: HMSO, 1992). It is perhaps indicative of the coverage of military rotary winged aircraft in the UK that a second volume of history of the RAF's helicopters has not yet appeared.
[48] Air Historical Branch [AHB], *Narrative of RAF Operations During the Falklands Conflict 1982*, 3.16.
[49] TNA, CAB 121/181, 'Statement on the Defence Estimates 1975: Memorandum by the Secretary of State for Defence', I-26-I27.
[50] AHB, 'Narrative', 3.39.
[51] Ibid, 3.20-3.25.
[52] See, *inter alia*, TNA FCO4/4123 'Release of Vulcan Aircraft', 5 June 1982; PREM19/633, 'FCO Telegram 23 to UKDEL Versailles (0335Z), Falklands Diplomatic Sitrep, 5 June 1982; PREM19/651, "MOD Letter to No.10', 11 June 1982.
[53] See Shields, *Air Power in the Falklands*, Conclusion, particularly 210-219.